



Australian Government

UEGNSG021 Maintain multi-stage, multi-run pressure control devices

Release: 1

UEGNSG021 Maintain multi-stage, multi-run pressure control 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 maintain multi-stage and multi-run gas flow and pressure measuring and regulating device of gas distribution and transmission facilities in accordance with relevant legislation, codes of practice and regulations.

It includes maintenance of gas station to equipment which includes non-supervisory control and data acquisition (SCADA) operated multi-stage and multi-run systems, control valves, regulators and meters.

This unit applies to the following types of gas stations, subject to 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
- meter stations and customer meter sets
- scraper stations
- gas storage facilities
- non-SCADA main line valves.

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

Pre-requisite Unit

UEGNSG040 Use a portable detector to locate a combustible gas escape

UEGNSG022 Maintain single stage, single run pressure control devices

Competency Field

Pressure Control Discipline

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 multi-stage and multi-run gas flow and pressure measuring and regulating device

- 1.1** Workplace safety, environmental and sustainable energy practices for the site are identified, obtained and understood
- 1.2** Job requirements are obtained and interpreted from plans, specifications and instructions
- 1.3** Relevant job requirements and workplace procedures for work activities are discussed with relevant person/s, including third parties, to determine and confirm work schedule and respective responsibilities
- 1.4** Hazards are identified, workplace safety and environmental risks are assessed, and control measures are prioritised, implemented and monitored in accordance with workplace procedures
- 1.5** Scope of responsibility under the relevant job requirements, including all work permits and/or relevant notifications, is determined and confirmed to access the services and perform work in accordance with job requirements and workplace procedures
- 1.6** Equipment, tools and personal protective equipment (PPE) needed to carry out work activities are identified, obtained and checked for correct operation and safety in accordance with workplace procedures and manufacturer instructions
- 1.7** Materials, plans, diagrams, drawings and resources required for work are confirmed and obtained in accordance with workplace procedures

2 Maintain multi-stage and multi-run gas flow and pressure measuring and regulating device

- 2.1** Workplace safety and environmental risk control measures, schedule of work and workplace procedures for carrying out work are followed
- 2.2** Gas detectors are used to determine worksite gas concentration level and to locate and pinpoint any escaping gas and supervisor advised immediately if site

is unsafe in accordance with workplace procedure

- 2.3 Appropriate materials, tools and equipment are selected and used safely in accordance with manufacturer instructions and workplace procedures
- 2.4 Hazardous activities are conducted safely in accordance with regulatory requirements and workplace procedures
- 2.5 Work is completed within agreed timeframe and to industry standards in accordance with job requirements and workplace procedures
- 2.6 Alarms, codes and hazard warnings are correctly recognised, and the correct response strategy is selected and applied in accordance with workplace procedures
- 2.7 Data on system performance and usage is collected, reviewed and reported in accordance with workplace procedures
- 2.8 Gas station venting and purging operations are undertaken in accordance with workplace procedures
- 2.9 Regulator and meter runs and components are set up and operated, and system is purged and pressurised in accordance with workplace procedures
- 2.10 Faults and operational conditions of the components are identified, repaired or replaced, and reported in accordance with organisational job requirements
- 2.11 Unplanned events are referred to the relevant person/s for directions in accordance with workplace procedures

3 Complete work and relevant documentation

- 3.1 Workplace safety risk control measures for work completion are followed
- 3.2 Quality and safety checks of the work are conducted in accordance with job requirements, workplace procedures and community and industry standards
- 3.3 Worksite is cleaned, reinstated and made safe in accordance with workplace procedures
- 3.4 Tools, equipment and any surplus resources/materials are cleaned, checked and securely stored in accordance with workplace procedures
- 3.5 Incidents are reported and followed up as required in

accordance with workplace procedures

- 3.6 Relevant person/s is notified of work completion in accordance with workplace procedures
- 3.7 Work completion documentation is completed accurately and provided to relevant person/s 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.

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG805 Maintain multi-stage and multi-run gas flow and pressure measuring and 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 UEGNSG021 Maintain multi-stage, multi-run pressure control devices

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 and performance criteria on at least two separate occasions and include:

- applying relevant workplace safety requirements, including:
 - applying workplace procedures and practices
 - using 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, codes of practice, regulations and workplace procedures
- completing required documentation and reporting
- dealing effectively with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- identifying and interpreting drawings, diagrams, schedules, workplace procedures and manuals relevant to the work to be undertaken
- purging and venting gas components
- replacing, operating, fault finding, adjusting and maintaining gas valves, filters, regulators and pressure relief devices
- replacing, operating, fault finding, adjusting/testing, and maintaining pressure measurement, control, boosters and relief devices
- selecting correct materials, equipment, tools, personal protection equipment (PPE) and measurement devices.

Knowledge Evidence

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

- gas distribution and transmission station, including types, principles of operation and components
- gas flow and pressure measuring and regulating device operation and maintenance
- gas flow control fault finding, repair and/or replacement
- gas flow control, including principles, component types and operation and maintenance
- gas flow measurement equipment, including:

- types
- positive displacement meters
- turbine meters
- operation
- maintenance
- fault finding, repair and replacement
- gas monitoring equipment, including types, principles of operation, components, maintenance and fault finding, repair and/or replacement
- gas pressure control equipment, including:
 - types
 - pilot loaded diaphragm and sleeve regulators
 - slam shuts
 - pressure relief valve (PRV)
 - principles of operation
 - multi-runs and stage systems, inter-stage and active/monitor
 - maintenance
 - fault finding, repair and replacement
- gas station valve types, operation and maintenance
- gas station venting and purging operations
- multi-stage gas flow and pressure control and measurement maintenance
- relevant legislation, standards, codes of practice and regulations
- relevant manufacturer specifications, manuals and procedures
- relevant safe work method statements (SWMS)/job safety analysis (JSA) or risk mitigation processes
- safe working practices for carrying out work in a gas industry environment
- safe working practices, techniques and practices for hazardous activities, including:
 - lifting, climbing, working in confined spaces, excavations, trenches, working aloft, and use of power tools
- relevant workplace safety requirements, including:
 - legislated work health and safety (WHS)/occupational health and safety (OHS) requirements
 - legislated industry/technical specific requirements
 - workplace safety procedures
 - manufacturer requirements
- relevant workplace policies and procedures.

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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable 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, facilities, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, environmental regulation, work practices, regulations, codes of practice and operation manuals.

Links

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