



Australian Government

UEGNSG504 Monitor and control gas infrastructure using Control Centre systems

Release: 1

UEGNSG504 Monitor and control gas infrastructure using Control Centre systems

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 use Control Centre systems to monitor and control gas infrastructure.

It includes operating Supervisory Control and Data Acquisition (SCADA) and other Control Centre information systems, including outage management systems, alarm management systems, site security and communications systems, and telemetry to effectively manage gas industry infrastructure.

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

Pre-requisite Unit

Not applicable

Competency Field

Control Centre Discipline

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan to use Control Centre systems to monitor and control gas infrastructure

PERFORMANCE CRITERIA

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

1.1 Work schedules, plans and job requirements are obtained and analysed to determine the preparation work required for planning and coordination

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| | <ul style="list-style-type: none">1.2 Relevant person/s are consulted and work is prioritised and sequenced for completion within agreed timeframes and to industry standards in accordance with workplace procedures1.3 Work health and safety (WHS)/occupational health and safety (OHS) and environmental risk assessments are conducted1.4 System constraints for gas infrastructure are identified and communicated1.5 Operational and commercial requirements of gas infrastructure are communicated1.6 WHS/OHS and sustainable energy policies and procedures related to the work are obtained1.7 Communication with authorised person/s, authorities and clients is conducted and work coordinated in accordance with work schedule and workplace procedures |
| 2 Monitor and control gas infrastructure using Control Centre systems | <ul style="list-style-type: none">2.1 WHS/OHS policies and procedures and safe work practices are followed2.2 Work is coordinated and performed in accordance with workplace procedures, operating conditions and nominations2.3 Alarms and out-of-specification conditions are responded to in accordance with workplace procedures2.4 Operating conditions are monitored and action taken to address any shortfalls or abnormal events encountered in accordance with workplace procedures2.5 Gas infrastructure SCADA systems are monitored to ensure quality is observed in accordance with industry standards2.6 Unplanned events and non-routine problems are identified and actioned in accordance with workplace procedures |
| 3 Complete procedures for monitoring and controlling gas infrastructure | <ul style="list-style-type: none">3.1 Work undertaken is checked for conformance with job requirements, anomalies and proposed solutions are identified and documented in accordance with workplace procedures |

- 3.2 Shift handover is conducted and gas infrastructure detail is relayed and confirmed with relevant person/s in accordance with workplace procedures
- 3.3 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG515 Use control centre systems to monitor and control gas infrastructure.

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 UEGNSG504 Monitor and control gas infrastructure using Control Centre systems

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:

- achieving nominated energy flow targets within system constraints
- applying sustainable energy principles and practices
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - following emergency response procedures
 - hazard identification and reporting
 - implementing risk control measures
- applying relevant legislation, standards, regulations and codes of practice
- communicating effectively with relevant stakeholders
- dealing with unplanned events and situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- evaluating, responding and reporting threats to pipeline systems operation
- extracting data and pre-formatted reports from the SCADA system
- identifying SCADA system anomalies
- monitoring and controlling gas infrastructure using Control Centre systems
- operating communications equipment
- operating Supervisory Control and Data Acquisition (SCADA) and other associated information systems
- participating in handover
- planning to use control centre systems to monitor and control gas infrastructure
- reporting faults and incidents
- responding to alarms and out-of-specification conditions.

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:

- communication in the workplace
- Control Centre systems and relevant system, including:
 - alarm management systems
 - communications systems
 - outage management systems
 - SCADA
 - site security systems
- emergency/incident procedures
- gas industry products, processes and characteristics
- handover procedures
- hazard identification and reporting
- pipeline operational parameters
- pipeline systems
- problem-solving techniques
- relevant industry standards, guidelines, codes of practice, legislation and regulations
- relevant manufacturer specifications
- relevant safe work method statements (SWMS), job safety assessments or risk mitigation processes
- relevant WHS/OHS regulations, policies and procedures
- relevant workplace policies and procedures
- relevant workplace reports and documentation
- station functions, including identification of abnormal conditions of stations and reporting
- sustainable energy requirements, principles and practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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 personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications,

regulations, codes of practice and operation manuals.

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