



Australian Government

UEGNSG515 Use control centre systems to monitor and control gas infrastructure

Release: 1

UEGNSG515 Use control centre systems to monitor and control gas infrastructure

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

MSS402061 Use SCADA systems in operations

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

- 1.2 Shift handover detail is obtained and confirmed in accordance with workplace procedures
 - 1.3 Relevant person/s are consulted and work is prioritised and sequenced for completion within acceptable timeframes and to industry standards in accordance with workplace procedures
 - 1.4 Hazards are identified, work health and safety (WHS)/occupational health and safety (OHS) and environmental risks are assessed and control measures prioritised, implemented and monitored in accordance with workplace procedures
 - 1.5 Relevant system constraints for gas infrastructure are identified and communicated to relevant person/s in accordance with workplace procedures
 - 1.6 Operational and commercial requirements of gas infrastructure are communicated to stakeholders in accordance with workplace procedures
 - 1.7 WHS/OHS, environmental and sustainable energy policies and procedures related to the work are obtained to ensure safe systems of work are followed
 - 1.8 Communication with authorised person/s, authorities, clients and land owners is conducted and work coordinated in accordance with work schedule and workplace procedures
- 2 **Monitor and control gas infrastructure using control centre systems**
 - 2.1 WHS/OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents and hazards
 - 2.2 Work is coordinated and performed in accordance with work schedule, workplace procedures, operating conditions and nominations
 - 2.3 Alarms and out-of-specification conditions are responded to in accordance with workplace procedures
 - 2.4 Hazards and WHS/OHS risks are identified and incidents actioned in accordance with workplace procedures
 - 2.5 Operating conditions are monitored and action taken to address any shortfalls or abnormal events encountered in accordance with workplace established procedures

- | | | |
|--|------------|---|
| | 2.6 | Gas infrastructure SCADA systems are monitored to ensure completion in agreed timeframes and to quality standards in accordance with job requirements and workplace procedures |
| | 2.7 | Unplanned events and non-routine problems are identified and actioned in accordance with workplace procedures |
| | 2.8 | Quality and safety checks of the work are conducted in accordance with job requirements, workplace procedures and community and industry standards |
| 3 Complete procedures for monitoring and controlling gas infrastructure | 3.1 | Work undertaken is checked against work schedule for conformance with job requirements and anomalies and proposed solutions identified and reported 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.

- gas infrastructure systems must include at least three (3) of the following:
- compressor stations
 - regulator stations
 - power generation stations
 - custody transfer stations
 - odourant stations
 - valves and actuators
 - heaters
 - meter stations

- gas quality equipment
- system fringe location
- complex analysis modelling systems
- corrosion protection systems
- filtration systems
- pipeline inspection gauges (PIGs)
- telemetry and data communications systems

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG515A 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 UEGNSG515 Use control centre systems to monitor and control gas infrastructure

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 environmental and sustainable energy principles and practices
- applying planning skills
- applying problem-solving skills
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - following emergency response procedures
 - maintaining a safe and clean workplace
 - working safely with hazardous materials and equipment
 - hazard identification and reporting
 - implementing risk control measures
- applying relevant legislation, standards, regulations and codes of practice
- communicating effectively with relevant stakeholders
- completing procedures for monitoring and controlling gas infrastructure
- completing relevant documentation, reports and records
- conducting quality and safety checks
- dealing with unplanned events/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
- following workplace procedures
- identifying system constraints
- 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 and following up on faults and incidents
- responding to alarms and out-of-specification conditions

- work safely in the gas industry by reducing risk.

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:
 - SCADA
 - outage management systems
 - alarm management systems
 - site security systems
 - communications systems
- effective operation of gas industry systems
- emergency and accident situations
- emergency/incident control procedures
- environmental and sustainable energy requirements
- gas industry products, processes and characteristics
- gas industry reports and documentation
- 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 documentation
- relevant workplace policies and procedures
- station functions, including identification of abnormal conditions of stations and reporting.

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.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in 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.

Links

Companion Volume Implementation Guides are found in VETNet -

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