



Australian Government

UEGNSG905 Monitor and control hydrogen in gas distribution networks

Release: 1

UEGNSG905 Monitor and control hydrogen in gas distribution networks

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 hydrogen in gas distribution networks.

It includes operating supervisory control and data acquisition (SCADA) and other control centre information systems to monitor hydrogen in gas distribution networks.

The application of the skills and knowledge described in this unit may require a licence/registration to practise in the workplace.

Other conditions may apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

Not applicable

Competency Field

Hydrogen

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 hydrogen in gas

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

distribution networks	for planning and coordination
	1.3 Relevant person/s are consulted and work is prioritised and sequenced for completion within agreed 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 distribution networks are identified and communicated to relevant person/s in accordance with workplace procedures
	1.6 Operational and commercial requirements of gas distribution networks 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 and clients is conducted and work coordinated in accordance with work schedule and workplace procedures
2 Monitor and control hydrogen in gas distribution networks 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 deviations encountered in accordance with workplace procedures

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| | 2.6 | Gas distribution networks operation systems are monitored to meet 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 hydrogen in gas distribution networks | 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 distribution networks 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 UEG Gas Industry Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit.

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 UEGNSG905 Monitor and control hydrogen in gas distribution networks

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

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - emergency response procedures
 - sustainable energy and environmental principles and practices
 - hazard identification and reporting
 - implementation of risk control measures
- communicating effectively with relevant stakeholders, including:
 - authorised persons
 - authorities
 - market operators
 - producers
 - users
- completing procedures for monitoring and controlling gas distribution networks
- completing relevant documentation, reports and records
- complying with regulations, industry standards, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- 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 hydrogen in gas distribution networks using control centre systems
- operating associated information systems
- operating communications equipment
- participating in handover
- planning to use control centre systems to monitor and control gas distribution networks

- 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 and performance criteria 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
- effective operation of gas industry systems
- emergency and accident situations
- emergency/incident control procedures
- environmental and sustainable energy requirements
- gas industry reports and documentation
- handover procedures
- hydrogen characteristics
- hazard identification and reporting
- network operational parameters, including:
 - blending requirements
 - monitoring points
- pipeline systems
- problem-solving techniques
- regulations, industry standards, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- 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
- quality and safety checks
- relevant stakeholders, including:
 - authorised persons
 - authorities
 - market operators
 - producers

- users
- station functions, including identification of deviations and reporting.

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.

Links

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