



Australian Government

UEGNSG904 Inject hydrogen gas into distribution networks

Release: 1

UEGNSG904 Inject hydrogen gas into 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 inject hydrogen gas into distribution networks in accordance with relevant legislation, codes of practice, industry standards, regulations and workplace procedures.

It includes following procedures to carry out the work correctly and safely, using appropriate materials, tools and equipment.

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 Prepare to inject hydrogen into distribution networks

PERFORMANCE CRITERIA

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

1.1 Job requirements and workplace procedures for the work are obtained and discussed with relevant person/s to establish and confirm the work schedule

- 1.2 Work health and safety (WHS)/occupational health and safety (OHS), environmental and sustainable energy policies and procedures for the work are obtained and applied
 - 1.3 Hazards and WHS/OHS risks are identified and prioritised and control measures implemented and monitored
 - 1.4 Equipment, tools and personal protective equipment (PPE) required for the job are obtained and checked for correct operation and safety in accordance with workplace procedures
 - 1.5 Work area is prepared to minimise risk and damage to property, commerce and individuals in accordance with job instructions, work schedule and workplace procedures
- 2 Inject hydrogen into distribution networks**
 - 2.1 WHS/OHS risk control measures and policies and procedures are followed in accordance with workplace procedures
 - 2.2 Hazardous activities are performed safely in accordance with job instructions, regulatory requirements and workplace procedures
 - 2.3 Hydrogen storage tank is positioned safely for injection
 - 2.4 Connection between tank and pipelines is leak tested to ensure gas tightness
 - 2.5 Blending equipment is installed and operated correctly in accordance with workplace procedures
 - 2.6 Potential hazards and safety risks are identified and reported to authorised person/s for directions in accordance with workplace procedures
 - 2.7 Purging is conducted in accordance with workplace procedures
 - 2.8 Hydrogen gas is injected into distribution networks correctly and safely according to job requirements, regulatory requirements, industry standards and workplace procedures

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| | 2.9 | Unplanned events are dealt with or referred to authorised person/s for directions in accordance with level of responsibility and workplace procedures |
| | 2.10 | Quality and safety checks of the work are conducted in accordance with job requirements, industry standards and workplace procedures |
| 3 Complete work and relevant documentation | 3.1 | Work area is cleaned up and made safe in accordance with job instructions and workplace procedures |
| | 3.2 | Tools, equipment and any surplus resources and materials are cleaned, checked and returned to storage in accordance with workplace procedures |
| | 3.3 | Relevant person/s are notified of work completion in accordance with workplace procedures |
| | 3.4 | Work completion records and report forms are completed in accordance with job instructions and 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 UEGNSG904 Inject hydrogen gas into 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 procedures and response actions
 - hazard identification and reporting
 - implementation of risk control measures
 - selection and use of correct personal protective equipment (PPE)
 - safely working with hazardous materials and equipment
- applying sustainable energy and environmental principles and practices
- accessing and handling hydrogen container
- communicating with relevant stakeholders, including:
 - authorised persons
 - authorities
 - clients
 - landowners
 - tenants
- completing work and relevant documentation
- 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
- following workplace procedures
- injecting hydrogen into distribution networks
- purging the injection line
- obtaining and using relevant equipment and tools, including:
 - alarm and communication equipment
 - fittings
 - gas analysis equipment

- hand tools
- leak detection
- measuring equipment
- testing equipment.

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:

- emergency procedures, including shutdown procedures
- gas industry drawings, plans and material lists
- hydrogen characteristics
- hydrogen container status, including:
 - inventory
 - pressure
 - temperature
- permit to work systems for a hydrogen environment
- plant and equipment in a hydrogen environment, including:
 - alarm and communication equipment
 - fittings
 - gas analysis equipment
 - gas analysis equipment
 - hand tools
 - leak detection
 - measuring equipment
 - testing equipment
- 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 stakeholders, including:
 - authorised persons
 - authorities
 - clients
 - landowners
 - tenants
- relevant WHS/OHS legislated requirements, including:
 - applicable emergency equipment and procedures
 - hazards, risk assessment and control measures
 - environmental and sustainable energy principles and practices

- relevant workplace documentation
- quality and safety checks
- relevant workplace policies and procedures
- technical drawings for the hydrogen environment
- working safely in a hydrogen environment.

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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