



Australian Government

UEGNSG312 Inject gas into underground storage

Release: 1

UEGNSG312 Inject gas into underground storage

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 gas into underground storage in accordance with relevant regulations, codes of practice and workplace procedures.

It includes following procedures to correctly inject gas at the required flow rates, temperatures and pressures to protect above ground equipment and reservoir storage.

This unit of competency can be applicable to those working in the field or a control room environment.

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

Transmission

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 to inject gas into

1.1 Job requirements and workplace procedures for injection

underground storage	are obtained and discussed with relevant person/s
1.2	Work health and safety (WHS)/occupational health and safety (OHS), environmental and sustainable energy policies and procedures for injection are obtained
1.3	Hazards and WHS/OHS risks are identified and eliminated or control measures implemented and monitored
1.4	Equipment, tools and personal protective equipment (PPE) required for injection are obtained and checked for correct operation and used in accordance with workplace procedures
1.5	Work site is prepared to minimise risk and damage to above and below ground equipment and individuals in accordance with work instructions, work schedule and workplace procedures
1.6	Pre-start checks of injection equipment, pipelines and wellheads are undertaken in accordance with regulatory requirements and workplace procedures
1.7	Isolating and/or deisolating equipment, where applicable, is undertaken according to workplace procedures
2 Inject gas into underground storage	
2.1	WHS/OHS risk control measures and policies and procedures are followed
2.2	Hazardous activities performed safely in accordance with work instructions, regulatory requirements and workplace procedures.
2.3	Wells and above ground equipment are started up and monitored in accordance with plant operating specifications and parameters
2.4	Gas is injected into the underground storage correctly and safely according to flow rate, pressure and temperature requirements and in accordance with workplace procedures
2.5	Potential hazards and safety risks are identified and reported to authorised person/s for directions in accordance with workplace procedures
2.6	Unplanned events are dealt with or referred to authorised person/s for directions in accordance with level of

	responsibility and workplace procedures
	2.7 Quality and safety checks of the work are conducted in accordance with job requirements, industry standards and workplace procedures
	2.8 Emergency shutdowns are responded to in accordance with workplace procedures
3 Complete work and relevant documentation	3.1 Equipment shutdown is performed in a controlled manner and in accordance with workplace procedures
	3.2 Isolating and/or deisolating equipment, where applicable, is undertaken according to workplace procedures
	3.3 Work area is cleaned up and made safe in accordance with job instructions and workplace procedures
	3.4 Tools, equipment and any surplus resources and materials are cleaned, checked and returned to storage in accordance with workplace procedures
	3.5 Relevant person/s are notified of work completion in accordance with workplace procedures
	3.6 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 UEGNSG312 Inject gas into underground storage

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) and environmental requirements and codes of practice, including:
 - emergency procedures and response actions
 - hazard identification and reporting
 - implementing risk control measures
 - selecting and using correct personal protective equipment (PPE)
- communicating with relevant person/s
- completing work and relevant documentation
- 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, including:
 - controlled and emergency shutdown procedures
 - gas compression procedures
 - gas injection procedures
 - gas pressurisation and balancing flow procedures
 - gas temperature controlling procedures
 - plant inlet procedures
- isolating/deisolating equipment
- injecting gas into the underground storage correctly and safely according to flow rate, pressure and temperature requirements and in accordance with workplace procedures and industry standards
- obtaining and using relevant equipment and tools, including:
 - compressor systems
 - fittings
 - gas cooling exchanges
 - gas sampling equipment
 - hand tools

- leak detection
- 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:

- above and down hole well configuration, including:
 - Christmas tree or well head
 - formation characteristics
 - intermediate casing
 - production casing
 - production tubing
 - underground storage characteristics
 - well surface casing
- chemicals in the workplace, including:
 - gas chemicals used for gas treatment
 - hazardous substances and dangerous goods
- gas characteristics and hazards
- gas industry drawings, plans and material lists
- organisational health safety and environmental requirements
- plant and equipment in an underground storage facility environment, including:
 - dehydrators
 - fittings
 - gas sampling equipment
 - hand tools
 - heat exchangers
 - leak detection equipment
 - prime movers
 - separators
- plant operating specifications and parameters, including:
 - equipment minimum and maximum pressures
 - minimum and maximum storage volumes
 - reservoir minimum and maximum pressures
 - temperatures
 - injection rates
- preservation of underground storage
- quality and safety checks
- regulations, legislative requirements and codes of practice
- relevant permit to work systems

- workplace procedures, including:
 - gas pressurisation procedures
 - controlled and emergency shutdown procedures
 - gas compression procedures
 - gas flow control procedures
 - gas pressure control procedures
 - gas temperature controlling procedures
 - plant inlet procedures
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant stakeholders, including:
 - authorised persons
 - authorities
 - emergency personnel
 - permit holders
- relevant WHS/OHS legislated requirements, including:
 - applicable emergency procedures
 - environmental and sustainable energy principles and practices
 - hazards, risk assessment and control measures
- relevant workplace documentation
- relevant workplace policies
- transmission pipeline operating parameters and requirements.

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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