
UEGNSG984Y Perform liquefaction of natural gas

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 perform liquefaction of natural gas in an liquified natural gas (LNG) storage facility.

It includes following and applying relevant workplace and emergency response procedures, using appropriate materials, tools, and equipment; and completing relevant documentation.

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

1 Prepare to perform liquefaction of natural gas

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

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| | <p>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</p> <p>1.3 Work area is prepared to minimise risk and damage to property, commerce and individuals in accordance with job instructions, work schedule and workplace procedures</p> <p>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</p> <p>1.5 Work is prioritised and sequenced for completion within acceptable timeframes following consultation with relevant person/s in accordance with workplace procedures</p> <p>1.6 Communication with authorised person/s and authorities is conducted and work coordinated in accordance with work schedule and workplace procedures</p> <p>1.7 Pre-start checks are undertaken in accordance with regulatory requirements and workplace procedures</p> <p>1.8 Hazard warnings, and safety signs are recognised, hazards and WHS/OHS risks assessed and reported to authorised person/s for directions in accordance with workplace procedures</p> |
| <p>2 Perform liquefaction of natural gas</p> | <p>2.1 WHS/OHS risk control measures and policies and procedures are followed in accordance with workplace procedures</p> <p>2.2 Liquefaction of natural gas is performed correctly and safely according to workplace procedures and job requirements and using sustainable energy principles</p> <p>2.3 Plant inlet and storage start-up are established correctly and safely according to workplace procedures and job requirements</p> <p>2.4 Equipment is operated and process parameters are monitored according to plant operating specifications</p> |

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| | 2.5 | Systems are monitored and actions taken in response to alarms in accordance with plant operating standards |
| | 2.6 | Unplanned events are responded to in accordance with levels of responsibility and emergency response procedures |
| | 2.7 | Emergency shutdowns are responded to in accordance with workplace procedures |
| | 2.8 | Quality and safety checks of work are conducted in accordance with work instructions and workplace procedures |
| 3 | Complete work and relevant documentation | |
| | 3.1 | Work undertaken is checked against work schedule for conformance and anomalies reported in accordance with workplace procedures |
| | 3.2 | Incidents and injuries are reported in accordance with requirements and workplace procedures |
| | 3.3 | Equipment shutdown in a controlled manner is performed in accordance with workplace procedures |
| | 3.4 | Work completion records and reports 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 - LINK POPULATED ON PUBLICATION

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Assessment Requirements for UEGNSG984Y Perform liquefaction of natural gas

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 industry standards, guidelines, codes of practice and regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, 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:
 - plant inlet commissioning procedures
 - liquefaction operation procedures
 - gas temperature controlling procedures
 - controlled and emergency shutdown procedures
 - gas emergency depressurisation procedure
 - gas flow regulation and control procedures
 - equipment shutdown procedures
- obtaining and using relevant equipment and tools, including:
 - testing equipment
 - gas analysis equipment
 - fittings
 - hand tools
 - gas leak detection
 - alarm and communication 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:

- plant and equipment in an LNG storage facility, including:
 - heat exchangers
 - LNG tanks
 - control valves
 - gas analysis equipment
 - testing equipment
 - fittings
 - gas leak detection equipment
 - alarm and communication equipment
 - gas treatment equipment
 - LNG supply pumps
 - flame and fire detection equipment
 - fire suppression systems
- gas characteristics
- gas industry drawings, plans and material lists
- emergency procedures, including:
 - plant inlet commissioning procedures
 - liquefaction operation procedures
 - gas compression procedures
 - gas temperature controlling procedures
 - controlled and emergency shutdown procedures
 - gas emergency depressurisation procedure
 - gas flow regulation and control procedures
 - equipment shutdown procedures
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- chemicals in the workplace, including:
 - hazardous substances and dangerous goods
- relevant stakeholders, including:
 - authorised persons
 - authorities
 - emergency personnel
 - internal and external clients
- relevant WHS/OHS legislated requirements, including:
 - applicable emergency equipment and procedures

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- hazards, risk assessment and control measures
 - environmental and sustainable energy principles and practices
 - relevant workplace documentation
 - relevant workplace policies and procedures

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

UEG - Gas Industry Training Package Companion Volume Implementation Guide at: [sector webpage link here]