
UEGNSG971Y Control gas processing, storage and reinjection operations in a Liquefied Natural Gas storage facility

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 control gas processing, storage and reinjection operations in a Liquefied Natural Gas (LNG) storage facility. It includes planning, monitoring and controlling LNG storage and processing operations and shutting down operations in the event of an emergency.

It also includes using relevant resources and equipment, identifying faults and completing relevant reports and 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.

PERFORMANCE CRITERIA

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

1 Plan gas processing, storage and reinjection operations

- 1.1** Work schedule/s, drawings, plans, job requirements, standard operating procedures (SOP) and material lists are obtained, analysed and site inspection conducted, as required, to determine the preparation work required for planning and coordination
- 1.2** 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
- 1.3** Hazards and work health and safety (WHS)/occupational health and safety (OHS) risks are identified and prioritised and risk control measures implemented and monitored
- 1.4** WHS/OHS, environmental and sustainable energy policies and procedures related to the work are obtained to ensure safe systems of work are followed in accordance with workplace procedures
- 1.5** Relevant work permit/s are obtained to coordinate the work in accordance with job/regulatory requirements and workplace procedures
- 1.6** Appropriate equipment, tools and personal protective equipment (PPE) required for the job are identified, scheduled, obtained and checked for correct operation and safety in accordance with workplace procedures

2 Control gas processing, storage and reinjection operations

- 2.1** WHS/OHS risk control measures and policies and procedures are followed in accordance with workplace procedures
- 2.2** Systems isolation is performed in accordance with industry standards and workplace procedures
- 2.3** Gas processing, storage and reinjection operations are initiated and coordinated ensuring completion in agreed timeframes
- 2.4** Operation of processing and storage system is controlled and monitored to ensure safety and efficiency and system operations communicated to relevant person/s and other work areas in accordance with workplace procedures

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| 3 Shutdown operations and complete relevant documentation | <ul style="list-style-type: none">2.5 Alarm codes, logics and other hazard warnings are correctly recognised and WHS/OHS risks and control measures monitored, actioned and appropriate authorities consulted in accordance with requirements and workplace procedures2.6 Work schedule is monitored and remedial action taken to address any shortfalls encountered in accordance with requirements and/or workplace procedures2.7 Fault-finding and troubleshooting techniques are applied to problems encountered in accordance with workplace procedures2.8 Quality and safety checks of the work are conducted in accordance with job requirements, workplace procedures and industry standards3.1 Work undertaken is checked against work schedule for conformance and anomalies and proposed solutions reported to relevant person/s in accordance with workplace procedures3.2 Incidents and injuries are reported in accordance with relevant regulations, standards and workplace procedures3.3 Emergency shutdown procedures are applied in the event of equipment faults/failure or operational parameters being exceeded3.4 Relevant work permit/s are signed off and system returned to service and communicated to stakeholders in accordance with requirements and workplace procedures3.5 Work completion records, reports, documentation and as installed/modified drawing/s are completed, processed and appropriate person/s notified in accordance with workplace procedures |
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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.

resources must include at least five (5) of the following:

- pumps and compressors
- valves
- control and monitoring equipment
- mixing equipment
- sampling equipment
- air equipment

incidents must include at least three (3) of the following:

- gas leaks and fires
- equipment failure
- unsafe inventory and supply levels
- electricity supply fires

monitoring of facilities must include at least four (4) of the following:

- pressure
- temperature
- levels
- corrosion
- gas leaks
- fires
- stock levels
- security

equipment faults must include at least 4 of the following:

- electrical problems
- compressor failure
- pump failure
- out-of-current inspection status
- gauge failure
- loss of containment
- instruments out of calibration

Unit Mapping Information

This is a new unit.

Links

Companion Volume Implementation Guides are found in VETNet - [LINK POPULATED ON PUBLICATION](#)

Assessment Requirements for UEGNSG971Y Control gas processing, storage and reinjection operations in an LNG storage facility

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 fault-finding and troubleshooting techniques
- applying relevant industry standards, guidelines, codes of practice and regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - applying emergency response procedures
 - applying sustainable energy and environmental principles and practices
 - hazard identification and reporting
 - implementing risk control measures
- communicating and coordinating with relevant stakeholders
- completing relevant reports and documentation
- controlling processing, storage and reinjection operations
- dealing with unplanned events
- following workplace procedures, including:
 - emergency shutdown procedures
 - reporting procedures
 - standard operating procedures
- interpreting relevant drawings, plans and material lists
- isolating systems
- obtaining and complying with relevant work permits
- operating relevant control systems
- performing quality and safety checks
- planning control of processing, storage and reinjection operations
- recording relevant information
- shutting down operations.

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:

- alarm codes and control logics
- plant and equipment in an LNG storage facility, including:
 - compressors or pumps
 - heat exchangers
 - pipes, fitting and hoses
 - gas analysis equipment
 - testing equipment
 - fittings
 - hand tools
 - leak detection
 - alarm and communication equipment
 - personal protective equipment
- communicating in an LNG storage facility
- emergency response procedures, including shutdown procedures
- gas industry Process and Instrumentation Diagrams, plans and material lists
- gas industry products, processes and characteristics
- relevant permit to work systems
- properties of LNG
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant stakeholders, including:
 - authorised persons
 - authorities
 - receiving stations
 - clients
- 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 and schedules
- relevant workplace policies and procedures, including:
 - emergency shutdown procedures
 - liquefaction and re-gasification procedures
- relevant technical drawings

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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable 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 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]