



Australian Government

UEGNSG135A Monitor and control gas odourisation

Release 1

UEGNSG135A Monitor and control gas odourisation

Modification History

This unit is a revised version of the UEG11 unit UEGNSG107B Control gas odourisation.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers monitoring and controlling the odourisation of gas in accordance with relevant legislation, standards, codes and established procedures.

It encompasses the use of the appropriate tools, equipment and chemicals; the response procedures for uncontrolled release and completion of the relevant documentation.

Application of the Unit

Application of the Unit 2)

This competency standard shall apply to any safe work site where monitoring and control of gas odourisation occurs. It is subject to all Workplace Health and Safety (WHS)/ Occupational Health and Safety (OHS) and duty of care requirements being met for the workplace.

This unit is intended as an AQF 3 competency for new and existing workers in the gas industry. It is suitable for employment-based programs under an approved contract of training

Licensing/Regulatory Information

License to practice 3)

During Training:

Competency development activities are subject to regulations directly related to licensing, occupational health and safety and where applicable contracts of training such as apprenticeships.

In the workplace:

The skills and knowledge described in this unit are not subject to licence regulation other than those directly related to Workplace Health and Safety/Occupational Health and Safety, gas/electricity/water industry safety and compliance, industrial relations, environmental protection, telecommunications, anti-discrimination and training.

Commonwealth, State/Territory or Local Government legislation and regulations may exist that limit the age at which a person can operate certain equipment. Other conditions may apply to this competency under State and Territory legislative and regulatory requirements.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

Granting of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed:

- | | |
|------------|--|
| UEGNSG141A | Apply Workplace Health and Safety regulations, codes and practices in the gas industry |
| UEGNSG005A | Prepare to work in the gas industry |
| UEGNSG140A | Apply environmental policies and procedures in the utilities industry |

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading 3 Writing 3 Numeracy 3

Employability Skills Information**Employability Skills 5)**

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria**ELEMENT****PERFORMANCE CRITERIA**

1 Prepare to monitor and control odourisation of gas

1.1 WHS/OHS and environmental measures for the site are identified, obtained and understood.

1.2 Relevant requirements and established procedures for the work are discussed with relevant persons to establish and confirm the work schedule.

ELEMENT**PERFORMANCE CRITERIA**

- 1.3 WHS/OHS, environmental and sustainable energy policies and procedures are received and confirmed
- 1.4 Hazards are identified, WHS/OHS risks are assessed and control measures are prioritised, implemented and monitored according to established procedures
- 1.5 Scope of work under the relevant work permit and/or relevant notification is received and confirmed with relevant persons according to requirements and established procedures.
- 1.6 Resources including personnel, equipment, tools, materials and personal protective equipment needed to do the work are identified, scheduled and obtained and check for correct operation and safety.
- 1.7 Materials, plans, diagrams, drawings and resources required for work are confirmed, scheduled and obtained in accordance with established procedures
- 1.8 Relevant responsibilities associated with First Aid and other related work procedures for an incident at the worksite and checked and confirmed
- 1.9 Appropriate persons are consulted to ensure the work is coordinated effectively with others.
- 1.10 Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities confirmed in accordance with established procedures
- 1.11 Site preparation, safety plan, schedule of work and standard operation procedures are confirmed in accordance with established procedures

ELEMENT	PERFORMANCE CRITERIA
2 Monitor and control odourisation of gas	2.1 WHS/OHS risk control measures, schedule of work and standard operation procedures for carrying out the work are followed.
	2.2 Hazardous activities such as lifting, climbing, working in confined spaces or aloft, and use of power tools, techniques and practices are conducted in accordance with given instructions and requirements
	2.3 The monitoring and control of gas odourisation is carried out efficiently, to the required standard without waste of materials or damage to the apparatus, circuits, the surrounding environment or services and using sustainable energy principles
	2.4 Odourant is handled and transported and potential hazards, safety risks and control measures are monitored and preventative action taken in accordance with requirements and established procedures
	2.5 Procedures for referring non-routine events to the immediate authorised persons for directions are followed
	2.6 WHS/OHS risks and incidents are reported to the immediate authorised persons for directions according to established procedures
	2.7 Emergency shutdown is carried out effectively in the event of a spill according to established procedures
	2.8 Routine quality checks are carried out in accordance with established procedures
3 Complete work and relevant documentation	3.1 WHS/OHS risk control work completion measures and procedures are followed.
	3.2 Work site is cleaned up and made safe in accordance with established procedures
	3.3 Tools, equipment and any surplus resources and materials are cleaned, checked and securely

ELEMENT**PERFORMANCE CRITERIA**

stored

- 3.4 Relevant work permit(s) are signed off and equipment is returned to service in accordance with requirements
- 3.5 Appropriate persons are notified of the completion of the work in accordance with established procedures
- 3.6 Work completion documentation is completed accurately and provided to the appropriate persons in accordance with established procedures

Required Skills and Knowledge

7) This describes the required skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices for monitoring and controlling gas odourisation in accordance with relevant legislation, standards, codes and established procedures.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies. The extent of the required skills and knowledge is provided below. It forms an integral part of this unit.

KS01-G135A Gas odourisation

Evidence shall show an understanding of the monitoring and controlling gas odourisation in accordance with relevant legislation, standards, codes and established procedures to an extent indicated by the following aspects:

- T1. Gas odourisation
 - purpose
 - requirements
 - correct odourant and dosing levels
- T2. Odourising chemicals
 - MSDS
 - Storage, transporting and handling
 - WHS/OHS and environmental requirements
 - job safety analysis
 - spills/leaks
 - gas detection equipment
 - disposing of waste
- T3. Legislation, standards, codes requirements
 - approvals
 - permits/authorisations
- T4. Monitor and adjust odourant levels
 - equipment
 - tools and measuring devices
 - odourmeter
 - lance, hoses, regulators
 - level indicators

- established procedures and schedules for measuring, filling and adjusting odourant levels
- T5. Emergency/spill response
- types of emergencies/spills
 - emergency response plans/procedures
 - required emergency equipment/kit
 - absorption material neutralisers
 - fire control systems
 - emergency containers
 - transfer pump
 - molecular sieve for venting
- T6. Odourisation shutdown
- requirements
 - procedures
- T7. Documentation relevant to odourisation
- MSDS
 - approval, records and reporting requirements
 - reports, forms, etc.

Evidence Guide

8) The Evidence Guide forms an integral part of this Unit and shall be used in conjunction with all components parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment 8.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord

with industry and regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included in the Assessment Guidelines of this Training Package.

Critical aspects of evidence required to demonstrate competency in this unit 8.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines — UEG11'. Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and range
 - Apply sustainable energy principles and practices as specified in the Performance Criteria and range
 - Demonstrate an understanding of the required skills and knowledge as described in this unit to such an extent that the learner's performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment
 - Demonstrate an appropriate level of employability skills
 - Conduct work observing the relevant Anti-discrimination legislation, regulations, policies and workplace procedures
- Demonstrate performance across a representative range of contexts from the prescribed items below.
 - Monitoring and controlling gas odourisation as described in the 9.) Range Statement and including:

Range of tools/equipment/procedures/work place		
Group	The minimum number of items on which skill is to be demonstrated	Item List
A. Odourant storage and handling procedures	All	<ul style="list-style-type: none"> • Applying environmental and WHS/OHS legislation • Interpret MSDS • Transport and handling requirements • Spill and waste management procedures
B. Odourant	All	<ul style="list-style-type: none"> • Interpret relevant technical drawings and

t monitoring and control procedures		symbols <ul style="list-style-type: none"> • Obtain work authorisation • Communicate with other authorities and stakeholders • Carry out pre- start checks <ul style="list-style-type: none"> • check odourant levels • ensure spill response procedures are in place • Use of gas detection equipment • Correct and monitor odourant levels • Adding odourant
C. Tools/equipment	At least 6	<ul style="list-style-type: none"> • Odourmeter • Lance, hoses, regulators • Emergency response kit • Neutralisers • Masking agent • Level indicators • Fire control systems • Emergency containers • Transfer pumps • Molecular sieve for venting
D. Unplanned Event	At least one occasion	Dealing with unplanned events by drawing on required skills and knowledge, procedures/ protocols to provide appropriate solutions incorporated in the holistic assessment with the above listed items, for example encroachment and/or contact with assets

Context of and specific resources for assessment 9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- WHS/OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.
- Appropriate environmental regulation and work practices.
- Appropriate organisational requirements.
- Appropriate work environment, equipment and tools.

These should be part of the formal learning/assessment environment.

Assessment of this competency must also be undertaken in either an actual workplace or under a simulated work environment. Assessment must also integrate the employability skills.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to locating, proving and protecting utility assets.

Method of assessment 8.4)

This Unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note: Competent performance with inherent safe working practices is expected in the Industry to which this Unit applies. This requires that the specified required Skills and Knowledge are

assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the required Skills and Knowledge described in this unit.

**Concurrent
assessment and
relationship
with other units** 8.5)

There are no recommended concurrent assessments with this unit, however in some cases efficiencies may be gained in terms of learning and assessment effort being concurrently managed with allied Units where listed.

UEGNSG133 A Comply with environmental policies and procedures in the utilities industry

BSBFLM312B Contribute to team effectiveness

BSBFLM303C Contribute to effective workplace relationships

Range Statement

RANGE STATEMENT

10) This relates to the competency standard unit as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated in relation to monitoring and controlling gas odourisation in accordance with relevant legislation, standards, codes and established procedures. This includes ensuring relevant permits/authorisations are in place, safely storing and handling required chemicals, monitoring and adjusting odourisation levels, responding to chemical spills and completing relevant documentation.

The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section of this volume and form an integral part of the Range Statement of this unit:

- Tools and Equipment
- Spill and contamination response
- Documentation

Unit Sector(s)

Gas

Competency Field

Competency Field 11)
Cross discipline.