



Australian Government

UEGNSG221A First on site response to gas pipeline emergencies

Release 1

UEGNSG221A First on site response to gas pipeline emergencies

Modification History

This is a new unit which replaces the UEG11 unit UEGNSG209B First on site emergency response on a distribution pipeline, and UEGNSG309B First on site emergency response on a transmission pipeline.

Unit Descriptor

Unit Descriptor 1) Scope:

1.1) Descriptor

This unit covers the first on site response requirements to a gas distribution or transmission pipeline emergency incident in accordance with relevant legislation, code, regulations and procedures. These incidents may include but is not limited to, gas escapes, gas outages, security breaches, fires, injury and damage

This encompasses assessing the situation extent and type of incident; making the area safe, identifying source of gas leaks, reporting back to the response/control centre, identifying and controlling potential ignition sources, ventilation/ evacuation from property, liaising with other authorities and emergency services, remaining on site and maintaining site safety until support arrives, should it be required. This includes using approved Standard Operating Procedures and appropriate PPE.

Application of the Unit

Application of the Unit 2)

This competency standard shall apply to Gas Industry work sites, 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 2 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.

In the workplace:

The skills and knowledge described in this unit are not subject to licence regulation other than those directly related to WHS /Occupational Health and Safety (OHS), gas industry codes/guidelines, industrial relations, environmental protection, anti-discrimination and training laws.

Commonwealth, State/Territory or Local Government legislation and regulations may 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 4)
Unit(s)

Competencies 4.1)

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

UEGNSG00 Prepare to work in the gas industry
5A

**Prerequisite
Unit(s)****4)**

UEGNSG13 2A	Carry out basic work activities in a gas industry work environment
UEGNSG13 4A	Establish a utilities infrastructure work site
UEGNSG14 0A	Apply with environmental policies and procedures in the utilities industry
UEGNSG14 1A	Apply Workplace Health and Safety regulations, codes and practices in the gas industry
HLTAID003	Perform first aid
CPPFES200 5A	Demonstrate first attack fire fighting equipment

**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
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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 Plan first on site emergency response	1.1 WHS/OHS and environmental measures for the site are identified, obtained and understood.
	1.2 Details of incident are confirmed with supervisor, control centre or radio room.
	1.3 Relevant requirements and established procedures for the incident response are discussed with relevant persons to establish and confirm the work schedule.
	1.4 WHS/OHS, environmental and sustainable energy policies and procedures are received and confirmed
	1.5 Hazards are identified, WHS/OHS risks assessed and control measures are reported, prioritised, implemented and monitored according to established procedures
	1.6 Relevant work permits and/or relevant notifications if required are secured to ensure the work is approved, recorded, coordinated and performed safely.
	1.7 Resources including persons, equipment, tools and personal protective equipment required to carry out the work are identified, scheduled, obtained and checked to correct operation and safety
	1.8 Effective liaison and communication is established with the supervisor, coordination centre, emergency authorities and land owners.

ELEMENT**PERFORMANCE CRITERIA**

- 1.9 Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities coordinated and authorised in accordance with established procedures
- 1.10 Site preparation, safety plan and the work schedule are confirmed in accordance with established procedures.
- 2 Carry out first on site emergency response**
- 2.1 WHS/OHS and risk control measures, schedule of work and standard operating procedures for carrying out the work are followed.
- 2.2 A safe work zone is created in accordance with Standard Operating Procedures and reported back to relevant stakeholders
- 2.3 First Aid and other related work procedures are performed according to requirements and established procedures
- 2.4 Hazardous activities such as lifting, climbing, working in confined spaces and aloft, use of power tools, techniques and practices are conducted safely in accordance with given instructions and to requirements
- 2.5 Hazard warnings and safety signs are recognised and hazards are assessed and WHS/OHS risks and incidents are reported to the immediate authorised persons for directions according to established procedures
- 2.6 General operating conditions of equipment are monitored in order to determine performance of equipment and system
- 2.7 Liaising with third parties concerning the threat to the pipeline occurs to ensure the pipeline can be monitored.
- 2.8 Communication with immediate supervisor, coordination centre, emergency authorities and property owners is undertaken in accordance with established procedures

ELEMENT	PERFORMANCE CRITERIA
	2.9 Preliminary evidence is collected from the scene as per established procedures
	2.10 Basic fault finding and troubleshooting techniques are applied to identify any repairs or maintenance that is required according to requirements and established procedures
	2.11 Stands by and maintains site safety until support arrives.
	2.12 Procedures for referring non-routine events to the immediate authorised persons for directions are followed, for example the emergency level being escalated.
	2.13 Routine quality checks are carried out in accordance with work instructions.
3 Complete response and relevant documentation	3.1 WHS/OHS risk control work completion measures and procedures are followed.
	3.2 Incidents and injuries are reported and followed up in accordance with requirements and established procedures
	3.3 The incident site is correctly handed over to the repair coordinator or relief response person, including all reports, risk control measures and permit conditions.
	3.4 Tools, equipment and any surplus resources and materials are cleaned, checked and securely stored.
	3.5 Relevant work permit(s) are completed and signed off in accordance with requirements
	3.6 Works completion documentation including records, reports as installed/modified drawing(s) and information is completed accurately and provided to appropriate persons in accordance with established procedures.
	3.7 Participates in debriefing to discuss strengths and weaknesses of incident response.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Evidence shall show that knowledge has been acquired for first on site emergency response on a distribution and transmission pipelines.

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-G221A Gas pipeline first on site emergency response

Evidence shall show an understanding of first on site emergency response requirements for a gas distribution or transmission incident in accordance with relevant legislation, code, regulations and procedures. to an extent indicated by the following aspects:

T1. Security breaches and required action

- types of security incidents including but not limited to physical security breaches at gas infrastructure
- threat assessment and management
- confidential information security
- communication with applicable emergency service and regulatory organisations
- compliance with applicable enterprise security policies and procedures

T2. Emergency/incident control procedures compliance with applicable enterprise

- policies and procedures
- communication with relevant stakeholders
- application of relevant procedures
 - isolate emergency site
 - initial traffic control measures in a gas emergency situation – vehicle and pedestrian
 - safe approach of a gas emergency site

T3. Emergency site assessment

- physical security breaches of gas infrastructure
- threat assessment and management

T4. Site investigation and evidence gathering techniques

- investigating events
- maintaining integrity of site
- gathering evidence from site
- preserving evidence and site for further investigation

REQUIRED SKILLS AND KNOWLEDGE

T5. Problem solving in a first response role

- likely problems /assets involved and possible solutions
- recommending probable solutions
- problem solving techniques
- understanding and interpreting relevant technical drawings including, but not limited to:
 - District plans
 - Mains detail plans
 - Easement Plans
 - Industrial Service Plans
- Pipeline route maps and alignment sheets

T6. Communications

- identify nature of situation and preliminary assessment
- internal
 - workplace colleagues and managers
- external
 - relevant customers and suppliers
 - regulatory bodies
 - property/land owners (including traditional land owners) and tenants
 - emergency response organisations

T7. Reports

- procedures and legislative requirements for maintaining appropriate reporting and recording systems
- job records and process information to appropriate/relevant department
- non-conformance and incident reports including customer outages/ security breaches

Evidence Guide

EVIDENCE GUIDE

8) *The Evidence Guide forms an integral part of this Competency Standard 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 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 for Assessors in the Assessment Guidelines of this Training Package.

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

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.
 - Carrying out first on site emergency response for a gas distribution or transmission incident in accordance with relevant legislation, code, regulations and procedures as described in 9.) Range Statement and including:
 - A. Identifying and evaluating threats to the integrity of gas pipelines

- B. Assessing the incident and establishing a safe working site
- C. Monitoring gas concentrations and control ignition sources
- D. Initially investigating the incident and collecting evidence
- E. Completing required documentation and reporting.
- F. 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 8.3)
specific
resources for
assessment**

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

- OHS/OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this Competency Standard Unit.
- Appropriate environmental regulation and work practices.
- 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 Competency Standard 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 Competency Standard Unit applies. This requires that the required Skills and Knowledge s 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 and associated skills 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 Competency Standard Units where listed.

UEGNSG132A Carry out work activities in a gas industry work environment

UEGNSG140A Apply with environmental policies and procedures in the utilities industry

UEGNSG134A Establish a utilities infrastructure work site

BSBFLM312B Contribute to team effectiveness

BSBFLM303C Contribute to effective workplace relationships

Range Statement

RANGE STATEMENT

9) *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 Competency Standard Unit shall be demonstrated in relation to first on site response to an emergency on a gas pipeline which may include but is not limited to, escapes, outages, security breaches, fires, injury and damages.

This includes assessing the extent and type of incident; making the area safe, identifying source of gas leaks, reporting back to the response/control centre, identifying and controlling potential ignition sources, ventilation/ evacuation from property, liaising with other authorities and emergency services .

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
- Maps and drawings
- Established procedures
- PPE and First Aid equipment
- Traffic control
- Emergency response manuals
- Security breach investigation practices

Unit Sector(s)

Gas Industry

11. Competency Field

Competency Field 11)

Gas distribution and transmission