



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG106B Coordinate repair of pipeline, facilities and equipment

Release: 1

UEGNSG106B Coordinate repair of pipeline, facilities and equipment

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Unit describes the skills and knowledge required to coordinate the repair of gas pipelines, facilities and equipment. The competency standard will also cover the types of faults that are found; the facilities and equipment used; the documentation and the reports and record keeping that is performed.

Application of the Unit

Application of the Unit 2)

This competency standard shall apply to any basic and safe work site where Gas Industry operations occur. It could also apply, where applicable to other workplaces in the electricity supply industry (transmission and distribution and generation), the electrotechnology industry and the water industry, subject to all Occupational Health and Safety and duty of care requirements being met for the workplace.

Licensing/Regulatory Information

License to practice 3)

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

License to practice**3)**

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.

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:

Nil

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 for the coordination of repair of pipelines, facilities and equipment	1.1 Work schedule(s), including drawings, plans, requirements, established procedures and material lists are received, analysed and confirmed if necessary by site inspection
	1.2 Relevant requirements and established procedures for the work are communicated to all persons and identified for all work sites
	1.3 OHS, environmental and sustainable energy policies and procedures related to the coordination of repair of pipelines, facilities and equipment are obtained and confirmed for the purposes of the work performed and communicated
	1.4 Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with established procedures
	1.5 Hazards are identified, OHS risks assessed and control measures are prioritised, implemented and monitored including emergency exits kept clear according to established procedures
	1.6 Relevant work permits are obtained to access and perform work according to requirements and established procedures
	1.7 Resources including persons, equipment, tools and personal protective equipment required for the job are identified, scheduled and obtained and confirmed to be in working order

ELEMENT**PERFORMANCE CRITERIA**

	1.8	Relevant persons at work site are confirmed to be current in First Aid and other related work procedures according to requirements	
	1.9	Liaison and communication issues with authorised persons, authorities, clients and land owners are resolved to carry out work where necessary	
	1.10	Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures	
	1.11	Persons participating in the work, including plant operators and contractors are fully briefed and respective responsibilities confirmed where applicable in accordance with established procedures	
	1.12	Road signs, barriers and warning devices are positioned in accordance with requirements	
2	Coordinate repair of pipeline, facilities and equipment	2.1	OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents and hazards
		2.2	Lifting, climbing, working in confined spaces or aloft, and use of power tools, techniques and practices are safely followed and currency according to requirements confirmed
		2.3	Essential Knowledge and Associated Skills are applied for coordinating the repair of pipelines, facilities and equipment to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
		2.4	Performing the coordinating the repair of pipelines, facilities and equipment is carried out in accordance with the work schedule and to requirements and established procedures
		2.5	Pipeline facilities/equipment and conditions and all environment hazards, safety risks and control measures are monitored and preventative action

ELEMENT	PERFORMANCE CRITERIA
	taken and referred to appropriate authorities in accordance with requirements and established procedures
	2.6 Unplanned events in coordinating the repair of pipelines, facilities and equipment are undertaken within the scope of established procedures
	2.7 Known solutions to a variety of problems are applied using acquired Essential Knowledge and Associated Skills
	2.8 Ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures
3 Recommission systems and equipment	3.1 Repaired/installed equipment is brought back on line at the desired operational parameters and work undertaken is checked against works schedule for conformance with requirements and in accordance with established procedures
	3.2 Accidents and injuries are reported in accordance with requirements and established procedures where applicable
	3.3 Work site is rehabilitated, cleaned up and made safe in accordance with given instructions and established procedures
	3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures
	3.5 Relevant work permit(s) are signed off and equipment is returned to service in accordance with requirements
	3.6 Work completion records, reports and documentation and information is finalised and processed and appropriate persons notified

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Evidence shall show that knowledge has been acquired of safe working practices for the coordination and repair of pipeline, facilities and equipment.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-G106 Pipeline, facilities and equipment repairs

B

G 3.2.38 Plan and prepare coordination of repair of pipelines, facilities and equipment

Evidence shall show an understanding of the requirements to plan and prepare coordination of repairs to pipelines, facilities and equipment on a Gas Industry pipelines (Distribution), indicated by the following:

- identification of the types of problems and faults that may require repair
- obtaining, interpreting and using relevant technical drawings, plans or specifications during preparation and planning of repair work
- identification of hazards (including confined spaces) and explanation of ohs, procedures and environmental requirements that require implementation prior to and during repair work
- identification of procedures, persons, equipment and processes required for the repair work and plan the coordination of resources
- required work permits
- locating and securing of emergency equipment and ensuring all persons are familiar with emergency plans.

G 3.2.39 Secure work area and equipment prior to repair

Evidence shall show an understanding of the requirements to secure work area and equipment prior to repair on a Gas Industry pipeline (Distribution), indicated by the following:

- discuss the requirements for and use of work permits, safety plans, non-routine procedures and safety checks
- implementation and adherence to procedures, ohs and

environmental requirements to ensure a safe worksite is established and maintained

- equipment for repair work is depressurised, tagged and locked out
- routine checks and documentation of facilities/equipment and overall repair process
- verification that facilities/equipment are safe for repair work to commence by ensuring that all procedures have been followed and requirements met.

G 3.2.40 Coordinate repair of pipelines, facilities and equipment

Evidence shall show an understanding of the requirements to coordinate repairs of pipelines, facilities and equipment on a Gas Industry pipeline (Distribution), indicated by the following:

- different types of repair procedures relevant to repairing pipelines, facilities and equipment
- management plan and repair procedures relevant to the required work
- procedures to monitor systems, equipment and environmental conditions to ensure procedures, OHS and environmental requirements are maintained during repair work
- repair work and validate the standard to ensure it meets OHS and environmental and legislative requirements
- progress of repair work to evaluate required amendments or modifications and communicate changes to appropriate persons/regulatory authority
- completion/adjustment documentation to reflect the repair work carried out.

G 3.2.41 Recommission systems and equipment

Evidence shall show an understanding of the requirements to recommission systems and equipment on a Gas Industry pipeline (Distribution), indicated by the following:

- procedures to recommission repaired systems and equipment
- identification of the persons and authorities that need to be notified in relation to the recommissioning of the systems and the procedures to carry out the notification
- cancel/sign off of relevant work permits
- restoration of sites in compliance with OHS and environmental legislative and operational requirements
- completion and filing of records and documentation that accurately indicate extent of work performed, results of repair and completion of work with the appropriate

persons and departments.

Evidence Guide

EVIDENCE GUIDE

9) 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

9.1)

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 practised. 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** 9.2)

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 essential knowledge and associated skills 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:

Range of tools/equipment/procedures/workplace		
Group No	The minimum number of items on which skill is to be demonstrated	Item List
A	All	Interpret technical drawings and symbols Ensure emergency response procedures are in place Communicate with other authorities and stakeholders Communicate schedules /coordinate to persons Carry out job safety analysis Obtain work permit Ensure practical

		application of AS2865 Interpret MSDSs Use and interpret dial before you dig report
B	At least 3	Excavation Trenching Shoring Stitch bore Horizontal drilling Directional drilling
C	At least 3	Nylon (polymide) pipeline laying techniques Nylon gluing Nylon stop off Horizontal drilling Directional drilling
D	At least 5	PE pipeline laying techniques Large diameter PE PE electro fusion PE butt fusion Saddle fusion Socket fusion PE stop off Compression couplings or flanges Connection of PE to nylon Practical application of AS3723 Installation and Maintenance of plastic pipe systems
E	At least 4	UPVC pipeline laying techniques UPVC solvent cemented joints

		UPVC moulded joints UPVC stop off UPVC couplings or flanges Connection of UPVC to steel Practical application of AS3723 Installation and maintenance of plastic pipe systems
F	At least 2	Steel pipeline coating repair Steel pipeline coating testing (Jeeper) Steel, field joint coating
G	At least 3	Connection of PE to steel mains Steel mains welding Steel mains repair Sleeve application Clamp application Hot tap and stopple
H	At least 2	High pressure stop off 312 Bagtube Squash off jacks Squash off pliers
I	At least one occasion	Deal with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

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:

- 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.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency working in coordinating repair of pipeline, facilities and equipment.

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.

Method of assessment 9.4)

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 Essential Knowledge and Associated Skills 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 Essential Knowledge and Associated Skills described in this unit.

**Concurrent
assessment and
relationship with
other units**

9.5)

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.

UEGNSG102B Carry out work activities in a utilities industry work environment

UEENEEE101 Apply Occupational Health and Safety
A regulations, codes and practices in the workplace

UEGNSG104B Comply with environmental policies and procedures

UEGNSG105B Establish the work site

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 coordinating the repair of pipelines, facilities and equipment.

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:

Types of faults (3)

Facilities and equipment (3)

Documentation (3)

Reports (3)

Record keeping (3)

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Cross discipline.