



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG131A Compile a gas industry technical report

Release: 1

UEGNSG131A Compile a gas industry technical report

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

The competency standard unit covers the compilation of a gas industry technical report. The competency standard unit encompasses determining the safety requirements are met and all regulatory responsibilities are adhered to. The person deemed competent in this competency standard unit must demonstrate an ability to identify information and collect and analyse gas industry data to compile a technical report.

Application of the Unit

Application of the Unit 2)

This unit is intended for competency development entry-level employment-based programs incorporated in approved contracts of training.

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, telecommunications, anti discrimination and training. Commonwealth, State/Territory or Local government legislation and regulations may exist that limit the age at

License to practice 3)
which a person can operate certain equipment.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

Nil

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve competency in 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 4 Writing 4 Numeracy 4

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 develop a technical report	1.1 OHS procedures for a given work area are obtained and understood.
	1.2 Established techniques for report writing are reviewed and adopted in accordance with organisational requirements
	1.3 The scope of the report is evaluated and report parameters established using a formal evaluation/survey process
	1.4 Criteria from other related works impacting on the report are determined
	1.5 Source and availability of information is identified
2 Develop a technical report	2.1 Report is developed to include scenarios/requirements established in consultation with appropriate persons and to regulatory and company requirements
	2.2 Report is developed in collaboration with all relevant personnel
	2.3 Competent persons are identified to assist in the compilation of the report
	2.4 Report is reviewed against all inputs and adjusted to rectify any anomalies
	2.5 Report is compiled in accordance with organisation's policies and procedures

ELEMENT	PERFORMANCE CRITERIA
3 Complete the final report	3.1 Report is presented and discussed with senior personnel for feedback and evaluation
	3.2 Alterations to the report resulting from presentation/discussion are negotiated with appropriate persons and to established procedures
	3.3 Final report is presented and approval for completion obtained from relevant personnel according to company procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Evidence must show that knowledge has been acquired of safe working practices and the compilation of a gas technical industry report.

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

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G 2.1.1 Work in the gas sector

Evidence shall show an understanding of how work is conducted in the Gas Industry, specifically:

- The Gas Industry in Australia
- Australian gas resources
- Types of gas and uses
- Combustion.

G2.2.2 Enterprise work activities records

Evidence shall show an ability to identify and recognise and understand the variety of symbols and abbreviations used in Gas Industry workplaces, specifically:

- Commonly used symbols and abbreviations

- Purpose of a scale/legend
- Read and interpret scales and legends.

G 2.2.20 Computer use basics

Evidence shall show an understanding of the knowledge required to install cast iron pipelines, fittings and accessories in a Gas Industry workplace, indicated by the following:

- Characteristics of cast iron pipeline, pipe sizes
- Situations in which a cast iron pipeline is used
- Range of fittings and accessories for cast iron
- Cast iron lead & hemp joints and how they are constructed
- Appropriate selection of transition fittings and adaptors to other materials
- Advantages/disadvantages in using cast iron pipe
- Read and interpret MSDS applying appropriate measures

G 2.2.21 Engineering analysis, decision making and reporting

Evidence shall show an understanding of the requirements to work with cast iron pipelines and fittings on a Gas Industry pipeline, indicated by the following:

- Identify environmental and safety hazards, assess risks and implement control measures
- Dangers of working with live gas
- Equipment, tools and materials required for working with cast iron pipelines
- Purpose and function of equipment, tools and materials
- Requirements of Australian Standards and gas industry standards for working with cast iron pipe and fittings
- Safety requirements and procedures for using equipment, tools and materials
- Procedures for joining cast iron pipeline to other pipeline

G 2.2.25 Research concepts

Evidence shall show an understanding of the processes required for the cutting out and replacing of steel pipeline on a Gas Industry workplace (distribution) pipeline, indicated by the following:

- Identify environmental and safety hazards, assess risks and implement control measures
- Dangers of working with live gas
- Purpose and function of equipment, tools and materials, including but not limited to, cutting and stopping equipment
- Demonstrate the correct use of stop off equipment and

cutting equipment

- Requirements of Australian Standards and gas industry standards for working with steel pipe and fittings
- Safety requirements and procedures for using equipment, tools and materials
- Gas leak testing
- Pressure testing procedures
- Apply procedures for ensuring continuity of supply including checking of network maps, gauging, fitting of bypasses and purging.
- Replace marker tape
- Coating types and repair
- Use of cross-bonding leads and neon testers

G 2.2.33 Working in a team

Evidence shall show an understanding and an ability to locate services, indicated by the following:

- Identification of relevant authorities or enterprises to contact regarding the location of other utilities services (gas, water, electricity, telecommunication, sewerage and stormwater)
- Read and interpret plans and drawings to identify the location of utilities and services
- Identification of utilities and services conduits and cables
- Correct use of electronic and manual service locators
- Apply hand excavation as required for the purposes of locating utilities and services

G 2.2.35 Data collection techniques

Evidence shall show an understanding of the knowledge to prepare the site for excavation on a Gas Industry workplace, indicated by the following:

- OHS and traffic control procedures for setting up a healthy and safe site
- Environmental control procedures for setting up a site
- Orally communicating with appropriate persons, team mates and customers regarding relevant aspects of site preparation.

G 2.2.36 Data analysis and presentation

- Evidence shall show an understanding of how to set out trenches on a Gas Industry workplace, indicated by the following:
- reading and interpreting job specifications and standard operating procedures

- grades and depth required for excavation of trenches for gas pipelines
- techniques for marking out trench location.

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit. It must be read in conjunction with the performance criteria and the range statement of the unit and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all 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-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.

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. Sources of evidence need to be 'rich' in nature 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 for Assessors 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 must be met.

Evidence for competence in this unit must 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 statement
 - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
 - 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
- Demonstrated consistent 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	Working knowledge of company policies and procedures especially related to report writing Understanding company briefs Analysing information to prepare a technical report Advanced literacy and report writing capability Research capability for technical report writing Effective use of a computer and software for technical

		report writing Negotiation skills for altering material with appropriate personnel
B	All	Dealing with unplanned events by drawing on essential knowledge and 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 in this unit.

These should be used in the formal learning/assessment environment.

Note:

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

The resources used for assessment should reflect current industry practices in relation to the selection of electronic components.

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 assessment 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 skills described in this unit.

**Concurrent
assessment and
relationship with
other units**

9.5)

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

Nil

Range Statement

RANGE STATEMENT

10) This relates to the 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.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Use computers and appropriate software

Dealing with general enquiries from the public

Relevant Acts, Standards and Codes for gas inspection

SOPs, Established Policies and procedures

Established procedures and requirements

Appropriate Persons (7)

Non-conformance notices and procedures for issuance

Incident reporting

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Cross Discipline