



Australian Government

Department of Education, Employment and Workplace Relations

UEGNSG119B Manage workplace risk in a gas industry facility

Release: 1

UEGNSG119B Manage workplace risk in a gas industry facility

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Unit covers the managing of risk management systems and practices in the workplace. This competency standard refers to Risk Management principles; Risk Management Plans; Appropriate persons; Authorisation; Risks; Hazards; Control measures; Relevant documentation; Legislative requirements; Emergency exercises; Emergency appliances; Contingency plans and Safety devices.

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,

License to practice**3)**

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.

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 5 Writing 5 Numeracy 5

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 Manage the identification and development of a risk management system using risk management principles	1.1 OHS principles and practices and Environmental and Sustainable Energy procedures which may influence the systems are reviewed and determined
	1.2 Purpose of the risk management plan is established after data is analysed and expected outcomes are confirmed with the appropriate persons
	1.3 Organisational established procedures on policies and specifications for the development of a risk management plan are obtained
	1.4 Work roles and tasks are allocated according to requirements and individual's competencies
	1.5 Work is prioritised and sequenced for the most effective outcome, completed within an acceptable timeframe to a quality standard and in accordance with established procedures
	1.6 Liaison and communication issues with authorised persons, authorities and clients are resolved and activities coordinated to carry out work

ELEMENT	PERFORMANCE CRITERIA
2 Manage the minimisation of risks in the work environment for specific projects	2.1 Decisions regarding the risk management plan are made on the basis of safety and effective outcomes according to requirements and established procedures
	2.2 Essential Knowledge and Associated Skills are applied to analyse specific data and compare it with compliance specifications to ensure completion of the project within an agreed timeframe according to requirements
	2.3 Risk management plan and critical incident report responsibilities are confirmed and managed for specific project activities to minimise risk
	2.4 Project schedule to establish time frame, work activities and procurement of materials is approved
	2.5 Procedures and work instructions are received and approved for project activities according to the risk management plan
	2.6 Appropriate persons are counselled, where appropriate, for compliance with company risk management policies, standard operating procedures and relevant documentation
	2.7 Appropriate persons are assessed to ensure they comply with the company/site-specific procedures, health, safety and environmental requirements
	2.8 Project compliance to risk management plan is evaluated and reported and approved in accordance with company policies, procedures and relevant documentation processes
3 Manage and review critical incident contingency plans	3.1 Critical incident report is received for evaluation to determine appropriate remedial measures according to company policies, procedures and relevant documentation processes are completed
	3.2 Appropriate persons are authorised for training and qualified to the type of emergency exercises

ELEMENT**PERFORMANCE CRITERIA**

- required according to company policies, procedures and relevant documentation processes are completed
- 3.3 Emergency appliances are authorised for selection and secured appropriate to the type of emergency exercise required according to company policies and procedures
- 3.4 Emergency appliances and safety devices are authorised for testing according to company standard operating policies and procedures, legislative requirements and manufacturers specifications
- 3.5 Emergency exercises are authorised and conducted according to developed contingency plans and monitored for performance and recorded accordingly
- 3.6 Final inspections of the risk management plan are undertaken to ensure they comply with all requirements and include all specifications and documentations needed to complete the project
- 3.7 Risk management plan report is submitted to relevant persons for approval

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 managing workplace risk in a Gas Industry facility.

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

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G 5.1.1 Supervise Gas Industry operations

Evidence shall show an understanding of the requirements to undertake the supervision of Gas Industry operations, indicated by the following:

- Implementation of risk management and Occupational Health and Safety (OHS) practices and principles including, but not limited to:
 - risk assessment, risk control and risk control measures
 - hierarchy of control
 - personal protective equipment — strengths and weaknesses
 - identifying hazards and their consequences
 - identifying hazards, assessing associated risks and implementing appropriate control measures
 - developing hazard checklists
 - reporting hazards including hazardous events
- planning theory and study of HAZOPS and HAZANS
- knowledge of applicable legislative requirements and Australian/New Zealand and ISO standards and codes of practice for the Gas Industry
- Implementation of relevant organisational policies and procedures
- identification and implementation of control measures
- establishing emergency management techniques
- principles and guidelines including critical incident analysis.

G 5.1.2 Apply problem solving, decision making and conflict resolution techniques

Evidence shall show an understanding and application of problem solving, decision making and conflict resolution techniques in a Gas Industry environment, indicated by the following:

- problem solving and decision making techniques
 - the decision making environment
 - group decision making
 - guidelines for making decisions
 - decision making aids and support systems
 - negotiation with internal and external stakeholders
 - the nature of negotiation
 - strategy and tactics of bargaining
 - pre-negotiation essentials
 - communication in negotiation
- resolve conflict with internal or external stakeholders
 - dealing with negotiation breakdowns
 - social context of negotiation
 - power in negotiation
 - ethics in negotiation.

G 5.1.3 Plan for, respond to and manage emergencies

Evidence shall show an understanding and application of emergency management techniques in a Gas Industry environment, indicated by the following:

- emergency management concepts and principles:
 - auditing and planning
 - systems analysis
 - policies and procedures for non-employees and contractors
 - types of emergencies
 - dealing with an emergency
 - elements of an emergency plan
 - employee assistance programs.
- Develop an emergency management plan which includes:
 - First Aid and welfare
 - recovery and post recovery plans
 - legislative requirements
 - interaction with authorities/emergency services

- communication with key stakeholders
- initial response/assessment and make safe

G 5.1.4 Management techniques for utilities industry supervision

Evidence shall show an understanding and application of management techniques required of Gas Industry operators in a supervisory capacity, indicated by the following:

- industrial awards and employee entitlements
 - industrial conflict
 - industrial relations issues
 - understanding industrial awards and employee entitlements
- individual and collective bargaining and agreements
- characteristics of ethnic and cultural groups
- Applicable environmental requirements
- relevant organisational standard operating procedures, site specific safety legislation and requirements
- correct waste management procedures
- application of OHS management in relation to other organisational management systems.
- Related organisational policies and procedures such as business planning, training, purchasing.

G 6.1.1 Understand and utilise concepts and skills for Gas Industry supervisors

Evidence shall show an understanding and interpretation of the concepts and skills required of Gas Industry supervisors to undertake activities, indicated by the following:

- applicable mathematical techniques and principles to enable production of relevant supervisory level calculations, data processing requirements and reports
- engineering principles and operating principles of pipeline systems
- understanding of safe design principles
- appropriate environmental requirements
- correctly read, analyse, interpret and record data
- third-party service location methods
- construction principles and safety
- applicable gas chemistry, properties and characteristics.

G 6.1.4 Communicate effectively

Evidence shall show an understanding and utilisation of technology for communication in a Gas Industry environment, indicated by the following:

- effective communication for Gas Industry managers and supervisors
 - motives for communication
 - communication networks: who communicates with whom
 - verbal and non-verbal communication
 - choosing the medium and the flow of a message
 - blocks to effective communication
- analyse and interpret recorded data, review and report
- use information technology for communication
 - understanding how to use information technology
 - effective use of email, internet and other communication mediums.

G 6.1.6 Plan and carry out project management

Evidence shall show an understanding and application of the requirements to undertake project management in a Gas Industry environment, indicated by the following:

- project management and costing
 - project planning processes
 - determining project costing
 - planning for events and milestones
 - determining inputs
 - producing outputs to a plan
- planning theory and its processes
 - the importance of planning
 - the planning process
 - organisational goals and objectives
 - strategic planning
 - operational planning
 - forecasting
- prioritise techniques
 - organising/prioritise work flows
 - time management
 - stress management
- managing persons and resources including consultants
 - understanding people
 - understanding behaviour
 - perceiving the causes of behaviour
 - defining leadership
- manage meetings

- understanding organisational communication
- formal and informal organisational communication
- managing meetings and recording minutes
- drafting minutes
- prepare reports
 - planning the writing process
 - developing the scope and outline of a document/report
 - drafting documents/reports utilising a plan and outline
 - finalising documents/reports
- facilitate contracts and employment
 - parliament, government and the law
 - statute law
 - common law
 - contracts and contract law
 - employment law
- understanding of sound business principles and performance measures
 - understanding organisational behaviour
 - business fundamentals
 - establishing the principles of performance management
 - establishing performance measures
- understanding of competition policy, budgets and product pricing and tariffs
 - understanding of government business relations in the Gas Industry
 - how tariffs are determined
 - working within legislative guidelines in tariffs and pricing.

G 6.1.7 Understand chemical and physical behaviours of gas

Evidence shall show an understanding of the chemical and physical behaviour of gases, and their effects in a gas system indicated by the following:

- chemical and physical behaviours of natural and liquefied petroleum gas
 - understanding of basic chemistry and physics of gases
 - the chemical makeup and properties of natural gas and LPG
 - dangers of working with natural gas and LPG and

- how to manage natural gas and LPG
- transportation of LPG and natural gas
 - understanding of issues associated with transporting of natural gas and LPG
- LPG supply logistics
 - correct filling procedures for LPG
 - identifying abnormal cylinder conditions
 - correct storage of LPG.

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	Risk Management principles: Six categories of exposures (personal, property, financial, environmental, product and administrative, legislative compliance, Occupational Health and Safety, procedure systems, vicarious liability, professional liability.
B	At least 4	Risk Management Plans: Identification of hazards assessment of risks

		Identification of control measures Implementation of control measures and review of control measures Reference to conduct and reporting of hazard and operability studies (HAZOPS) and hazard analysis studies (HAZANS) for critical incidents Recognition of six categories of exposures (see range statement for further information) Identification and use of Manufacturer's specifications and Australian/New Zealand and ISO standards Contingency plans for response to critical incidents
C	All	Risks (assessment for): Injury death, illness, damage to plant/equipment, financial loss, non-compliance with legislation, damage to products
D	All	Hazards: Confined spaces, gas, electricity, manual handling, noise, plant and equipment, infected blood, chemicals, temperature, lighting, radiation.
E	All	Control measures: Elimination of hazards, work procedures, Standard Operating Procedures,

		Personal Protective Equipment, fire safety, plant and equipment isolation, selection and training of appropriate persons, communications with appropriate persons, supervision of appropriate persons, management of control measures
F	All	Relevant documentation: Australian/New Zealand and ISO Standards; company risk management policy; codes of practice; standard operating procedures; Australian Dangerous Goods; trade practices; Occupational Health and Safety reporting requirements; injury reporting; claims management; contractor control; hazardous substances management
G	At least 2	Emergency exercises: Desktop and in-field simulation emergency exercises (involving fire; explosion; vapour/liquid leak; excavated/ruptured pipeline) LPG road/rail accidents Loss of supply Lost or unaccounted for persons Medical emergencies
H	All	Emergency appliances: Emergency trucks/trailers Emergency plant (compressors, cranes,

		welding equipment etc) Breathing apparatus Fire fighting equipment
I	All	Contingency plans: Emergency responses to a range of abnormal operating conditions Plans for responses to critical incidents Prioritise proposed responses
J	All	Knowledge of problem solving, decision making and conflict resolution Emergency management Communication for Gas Industry supervisors Ability to apply project management techniques Understanding of chemical and physical behaviours of gas
K	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 in managing workplace risk in a Gas Industry facility.

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.

UEGNSG117B Plan and Implement the data acquisition and metering requirements of a gas system

- UEGNSG118B Select and commission equipment to meet pressure and temperature control specifications
- UEGNSG120B Manage gas system environmental compliance
- UEGNSG121B Prepare and design specifications for a gas system
- UEGNSG115B Manage gas systems projects
- UEGNSG122B Manage a customer service gas business unit
- UEGNSG123B Manage financial resources
- UEGNSG116B Manage physical resources

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 managing workplace risk in Gas Industry facility.

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:

Risk Management principles

Risk Management Plans

Appropriate persons (6)

Authorisation

Risks

Hazards (6)

Control measures

Relevant documentation (6)

Legislative requirements (5)

Emergency exercises

Emergency appliances

Contingency plans

Safety devices include

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Cross discipline.