



Australian Government

Department of Education, Employment and Workplace Relations

PMASUP241B Maintain pipeline easements

Revision Number: 1

PMASUP241B Maintain pipeline easements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	In a typical scenario, operators are required to conduct ground and/or aerial patrols to monitor and determine easement condition so as to maintain and ensure pipeline integrity. This includes continuous liaison and contact with a range of stakeholders, including landowners and contractors associated with pipeline systems and relevant company personnel.
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Application of the Unit

Application of the unit	Generally operators would be part of a team and would be expected to be capable of performing all parts of this unit. At all times they would be liaising and cooperating with other members of the team. The operator would: • monitor and report on signage, gate or other difficulties • identify and advise the organisation of any pipeline operational problems • facilitate access to pipelines in consultation with appropriate stakeholders within the context of relevant regulations • facilitate provision of resources to deal with pipeline incidents. This unit does not include the monitoring of civil works - see <i>PMASUP242B Monitor pipeline civil works</i>.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare maintenance activity	1.1. Interpret topographical and geographical maps to determine the selection of access to pipeline route 1.2. Select and operate equipment appropriate to the maintenance task in accordance with procedures 1.3. Inspect and assess easement to determine the required maintenance activities 1.4. Interpret assessment results and take appropriate actions.
2. Maintain pipeline easement and surrounding environment.	2.1. Maintain easement in accordance with legislative requirements and enterprise requirements 2.2. Isolate and secure any required work areas as required by procedures 2.3. Monitor and log the condition of signage/gates and easement ancillary equipment 2.4. Take appropriate action.
3. Maintain liaison with stakeholders.	3.1. Maintain continuous liaison and contact with pipeline system stakeholders 3.2. Advise stakeholders of intended activities in accordance with procedures 3.3. Conduct meetings with stakeholders to discuss notified issues as required 3.4. Record meeting outcomes in accordance with legislative and enterprise requirements 3.5. Take appropriate action.
4. Control hazards.	4.1. Identify hazards in pipeline work area 4.2. Assess the risks arising from those hazards 4.3. Implement measures to control those risks in line with procedures and duty of care.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Competence includes the ability to isolate the causes of problems to the pipeline and to distinguish between causes of problems/alarms/fault indications such as:
- various disturbances on or in the easement
- visual evidence of a pipeline rupture
- erosion and subsidence.

Required knowledge

The knowledge referred to in the Evidence Guide for this unit includes:

- appropriate local knowledge
- specific environmental procedures and requirements
- legal obligations and standing of both parties as it relates to access rights
- knowledge of the pipeline system and access routes
- appropriate and safe vegetation control techniques
- erosion control techniques
- company and legislative environmental policies, practices and procedures
- pipeline signage and application requirements.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment of this unit should include demonstrated competence on actual pipeline and equipment in a work environment. The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation.

Simulation may be required to allow for assessment of parts of this unit. Simulation should be based on the actual plant and will include walk-throughs of the relevant competency components. Simulations may also include the use of case studies/scenarios, role plays and 3D virtual reality interactive systems. In the case of evacuation training or training for competencies practised in life threatening situations, simulation may be used for the bulk of the training.

This unit of competency requires an application of the knowledge contained in the use of the pipeline and its integral equipment, to the level needed to maintain control and recognise and resolve problems. This can be assessed through questioning and the use of what-if scenarios both on the plant (during demonstration of normal operations and walk-throughs of abnormal operations) and off the plant.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Competence must be demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action. The emphasis should be on the ability to stay out of trouble rather than on recovery from a disaster.

Consistent performance should be demonstrated. In particular look to see that:

- early warning signs of pipeline easements needing attention or with potential problems are recognised
- the range of possible causes can be identified and

EVIDENCE GUIDE	
	analysed and the most likely cause determined • appropriate action is planned and implemented to rectify identified problems • effective communication and interpersonal skills are used in relation to third party liaison activities.
Context of and specific resources for assessment	These aspects may be best assessed using a range of scenarios/case studies/what-ifs as the stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations which may have been generated from the past incident history of pipelines, incidents on similar pipelines around the world, hazard analysis activities and similar sources.
Method of assessment	Assessment will require access to pipeline easements and pipeline maintenance work sites over an extended period of time or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios/case studies/what-ifs will be required as will a bank of questions which will be used to probe the reasoning behind the observable actions. It may be appropriate to assess this unit concurrently with relevant teamwork and communication units. Consider co-assessment with: • <i>PMASUP242B Monitor pipeline civil works</i>
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Codes of practice/ standards	Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.
Context	This unit of competency includes all such items of equipment and unit operations which are utilised in the maintenance of pipeline easements. For your enterprise this may include: • light aircraft (pilot provided) • off road vehicles • gas leakage detectors • vegetation control documentation • workplace mapping, eg pipeline alignment drawings, topographical maps, geographical maps • pipeline access route manuals • MSDS information • operating procedures.
Typical problems	Typical problems for your enterprise may include: • isolation and risk of exposure • gas or fluid leaks • accidental or geophysical rupturing of pipelines.
Easement	An easement is an area or strip through which a pipeline, or similar infrastructure runs. It may be owned by the operating company or a third party (or government, NGO or similar). The pipeline may be above or below the easement.
Stakeholders	Stakeholders may include: • landowners • contractors • company personnel • regulators and other officials.
Appropriate action	Appropriate action includes: • determining problems needing action • determining possible fault causes

RANGE STATEMENT	
	• rectifying problem using appropriate solution within area of responsibility • following through items initiated until final resolution has occurred • reporting problems outside area of responsibility to designated person.
Procedures	Procedures may be written, verbal, computer-based or in some other form. They include: • all work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions • any similar instructions provided for the smooth running of the plant. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Responsible Care) and government regulations.
Health, safety and environment (HSE)	All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence.

Unit Sector(s)

Unit sector	Support/generic
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		
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