



Australian Government

PMASUP242 Monitor pipeline civil works

Release: 1

PMASUP242 Monitor pipeline civil works

Modification History

Release 1. Supersedes and is equivalent to PMASUP242B Monitor pipeline civil works

Application

This unit of competency covers the skills and knowledge required to monitor civil works and maintenance being undertaken by external contractors on pipeline easements and associated facilities.

This unit of competency applies to operators who are required to identify and report on the nature of civil works to be undertaken, establish the suitability of the equipment and machinery to be used in the work, ensure the site is accessible to equipment and authorised personnel, and work with third-parties and contractors.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members and the control room operator, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|-------------------------|-----|--|
| 1 | Prepare for work | 1.1 | Identify work requirements |
| | | 1.2 | Identify and control hazards |
| | | 1.3 | Coordinate with appropriate personnel |
| 2 | Interpret civil | 2.1 | Determine required civil works through the |

	drawings and data		interpretation of reports and investigations
		2.2	Access and interpret pipeline alignment drawings to determine area of excavation/civil activity
		2.3	Liaise with appropriate authorities, third parties and/or company personnel
3	Inspect machinery	3.1	Inspect equipment required to undertake civil works to ensure that it conforms to requirements
		3.2	Determine most appropriate method of deploying equipment to site
		3.3	Monitor equipment deployment to site and take action
4	Prepare easement/ site for civil activities	4.1	Inspect site for the civil works prior to any work commencing
		4.2	Ensure site is prepared
		4.3	Apply knowledge of pipeline crossing design prior to excavation/ activity commencing
		4.4	Ensure permits have been issued for the work
5	Monitor easement/ site for civil activities	5.1	Monitor civil works and take action
		5.2	Restore the work affected area on completion of civil works
		5.3	Ensure issued permits have been closed

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (HSE) requirements, which may be imposed through state/territory 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.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, include one or more of the following:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Hazards Hazards include one or more of the following:

- gases and liquids under pressure
- equipment failures
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel

- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- remoteness/isolation
- other hazards that might arise

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- isolation and risk of exposure
- gas or fluid leaks
- accidental or geophysical rupturing of pipelines.

Known solutions are drawn from one or more of the following:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to according to relevant procedures.

Equipment

This unit of competency includes all such items of equipment and unit operations which form part of the monitoring system, including as appropriate to the facility one or more of the following:

- pipe locating equipment
- gas detection equipment
- transport and excavation equipment
- hand tools
- safety signage/barricades and materials

Action

Action in response to problems includes one or more of the following:

- determining problems needing action
- determining possible fault causes
- 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

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMASUP242B Monitor pipeline civil works

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>

Assessment Requirements for PMASUP242 Monitor pipeline civil works

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:

- prepare the site to ensure:
 - site layout is appropriate
 - lay down areas appropriate
 - site access is suitable
- deploy equipment to meet requirements
- check correct permits have been issued
- monitor civil works, including:
 - pipeline integrity
 - adherence to permit to work and procedure requirements
 - adherence to required health, safety and environment (HSE) and legislative requirements for site/works
- undertake hazard and risk control
- determine the most likely cause of routine problems and take action to ensure a timely return to full performance
- distinguish between causes of problems/alarm/fault indications, such as:
 - inappropriate work practices
 - visual evidence of a pipeline rupture
 - erosion and subsidence
 - equipment breakdowns
 - smell or sound of escaping pipeline contents
- determine work specifications from procedures and diagrams
- liaise and communicate effectively with internal and external stakeholders, including:
 - landowners
 - contractors
 - company personnel
 - regulators and other officials.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- legal obligations and standing of parties as it relates to access rights where civil works are conducted on easements that require access to private property
- pipeline system and access routes
- pipe locating equipment
- the operation of gas detection equipment
- use of safety signage/barricades and materials
- the use of pipeline alignment drawings
- regulatory framework
- organisation procedures, including those covering:
 - safety, emergency and hazard control
 - work permit systems
 - communications
 - environmental management.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of an operating plant
 - will typically include a supervisor/third-party report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
 - must include monitoring of actual pipeline civil works, the use of an appropriate industrial item/s of equipment requiring demonstration of operation, start-up and shutdown procedures and responding to problems
 - may use industry-based simulation for part only of the unit where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - industry-based case studies/scenarios
 - ‘what ifs’.

- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work

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