



Australian Government

DEFPET005 Assist in the construction and operation of a non-permanent inland pipeline system

Release: 1

DEFPET005 Assist in the construction and operation of a non-permanent inland pipeline system

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package.

Application

This unit specifies the skills and knowledge required to assist in the construction and operation of a non-permanent inland pipeline distribution system and to perform liquid transfer operations.

It includes preparing and assisting in the construction of inland pipeline distribution systems. It also includes transferring liquid and maintaining an inland pipeline distribution system incorporating equipment recovery.

This unit is applicable in environments where a need exists to transfer liquids such as fuel and water over distances ranging from 600 m to 37 km.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Persons undertaking this unit work in teams under direct supervision, follow set procedures and methods that require some discretion and judgement. The size of the team varies and will increase as the length of the pipeline increases.

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

Pre-requisite Unit

Not applicable

Competency Field

Petroleum Operators

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

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 construction | 1.1 Obtain and confirm instructions and schematic diagrams for the installation of a non-permanent inland pipeline system with relevant personnel |
| | 1.2 Select and inspect equipment for serviceability prior to pipeline construction |
| | 1.3 Set up safety equipment and a first aid station prior to commencement of pipeline construction in accordance with work health and safety (WHS)/occupational health and safety (OHS) safety guidelines |
| | 1.4 Apply WHS/OHS requirements and recognised safety precautions throughout the operation |
| | 1.5 Identify, assess and implement environmentally sustainable work practices, as required |
| 2 Construct an inland pipeline distribution system | 2.1 Construct inland pipeline distribution system in accordance with instructions |
| | 2.2 Earth pipeline to prevent static discharge |
| | 2.3 Test inland pipeline distribution system in accordance with instructions and operational procedures |
| | 2.4 Report unplanned safety or environmental issues and problems encountered during construction or testing, to relevant personnel |
| 3 Transfer liquid using an inland pipeline distribution system | 3.1 Identify and confirm tasks for liquid transfer with relevant personnel |
| | 3.2 Configure pumping equipment for transfer operations in accordance with manufacturer specifications and operational procedures |
| | 3.3 Test liquid for product contamination and record results in accordance with operational procedures |
| | 3.4 Quarantine contaminated product and report to relevant |

- personnel, as required
- 3.5** Maintain communication with team members and relevant personnel throughout liquid transfer operations
- 3.6** Conduct liquid transfer in accordance with instructions and operational procedures
- 3.7** Pig pipeline as directed
- 3.8** Monitor liquid transfer process and rectify or report faults in accordance with operational procedures
- 3.9** Respond to emergencies/incidents in accordance with emergency response plans
- 3.10** Shut down liquid transfer equipment on completion of transfer operations in accordance with manufacturer instructions
- 3.11** Document liquid transfer operations, as required
- 4 Maintain an inland pipeline distribution system**
 - 4.1** Inspect pipeline and pumping equipment and report results to relevant personnel in accordance with workplace procedures
 - 4.2** Maintain operation of non-permanent inland pipeline system equipment in accordance with manufacturer instructions
 - 4.3** Complete minor repairs within scope of work, as required
 - 4.4** Record and report maintenance and repair tasks undertaken
- 5 Recover equipment**
 - 5.1** Return and restow inland pipeline distribution system on completion of operational requirements
 - 5.2** Recover and inspect inland pipeline system equipment on completion of operational requirements
 - 5.3** Refurbish site in accordance with organisational and environmental policies and procedures

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to DEFPE005A Assist in the construction and operation of a non-permanent inland pipeline system.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFPET005 Assist in the construction and operation of a non-permanent inland pipeline system

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying dangerous/hazardous goods handling procedures
- applying relevant legislation, statutory requirements and operational policies and procedures
- communicating effectively with relevant personnel
- constructing a pipeline system that is greater than 1 km in length and that uses a minimum of two pumps
- decommissioning liquid pipeline system
- identifying, interpreting and analysing risk assessment requirements relevant to work being performed
- interpreting fuel markings and panels, and technical diagrams and publications
- labelling pipeline on or near hazardous chemical using signs or other appropriate labels
- preparing for construction and maintenance of an inland pipeline distribution system
- operating liquid transfer systems
- pigging a pipeline
- recovering equipment
- refurbishing site
- testing a distribution system
- transferring liquid using an inland pipeline distribution system.

Knowledge Evidence

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

- Australian dangerous goods codes including:
 - segregation and storage requirements
- characteristics and capabilities of liquid pipelines and pumping equipment
- communication protocols
- dangerous/hazardous goods handling procedures
- decommission liquid distribution system and must include one or more of the following:

- deconstructing the system
- pigging the pipeline
- recovering equipment
- emergency response plans
- environmentally sustainable work practices
- liquid testing procedures including:
 - fuel products
- functions and responsibilities of team members
- hazard control methods associated with liquid products
- maintenance procedures for liquid transfer systems
- minor repairs including:
 - emergency repairs to hoses
- non-permanent inland pipeline distribution system including:
 - filters
 - fittings
 - metres
 - pipes
 - pumps
- pigging system
- relevant equipment manufacturer specifications
- relevant operational policies and procedures
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental control legislation and policies
- schematic diagrams
- testing distribution system including:
 - conducting pressure testing
 - ensuring a closed system
 - ensuring installation conforms to schematic diagram
 - pressing the line with air
 - security of all components, fittings and fasteners
- unplanned event and problemsolving operational procedures.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations, where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- liquid pipelines, pumping equipment and suitable products
- relevant and appropriate materials, tools, safety equipment and personal protective equipment currently used in industry including:
 - eye protection
 - hearing protection
 - high visibility clothing
 - gloves
 - safety headwear and footwear
- applicable documentation including specific workplace operating procedures, publications, regulations, codes of practice and operation manuals.

Links

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