



**Australian Government**

**DEFPE005A Assist in the construction and  
operation of a non-permanent inland  
pipeline system**

Release 2

## **DEFPE005A Assist in the construction and operation of a non-permanent inland pipeline system**

### **Modification History**

<b>Release</b>	<b>TP Version</b>	<b>Comments</b>
2	DEF12V2	Layout adjusted. No changes to content.
1	DEF12V1	Primary release.

### **Unit Descriptor**

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

### **Application of the Unit**

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

This unit applies to personnel working in teams under direct supervision, following set procedures and methods, requiring some discretion and judgement. The size of the team varies and will increase as the length of the pipeline increases.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for construction	<ul style="list-style-type: none"><li>1.1 Instructions for the installation, including <i>schematic diagrams</i>, are received and confirmed with supervisor</li><li>1.2 <i>Equipment</i> is selected and inspected for serviceability prior to construction</li><li>1.3 <i>Safety equipment</i> is set-up prior to commencement of construction</li><li>1.4 Work health and safety (WHS) requirements and recognised safety precautions are applied throughout the operation in accordance with standard procedures</li><li>1.5 Environmentally sustainable work practices are identified, assessed and implemented where feasible</li></ul>
2. Construct an inland pipeline distribution system	<ul style="list-style-type: none"><li>2.1 Inland pipeline distribution system is constructed in accordance with instructions and <i>workplace procedures</i></li><li>2.2 Pipeline is earthed in accordance with workplace procedures to prevent static discharge</li><li>2.3 Inland pipeline <i>distribution system is tested</i> in accordance with instructions and workplace procedures</li><li>2.4 Problems encountered during construction or testing are reported to supervisor</li></ul>
3. Transfer liquid using an inland pipeline distribution system	<ul style="list-style-type: none"><li>3.1 Individual tasks are received and confirmed with supervisor</li><li>3.2 Pumping equipment is configured for transfer operations in accordance with workplace procedures</li><li>3.3 <i>Fuel is tested</i> for product contamination and results are recorded</li><li>3.4 Contaminated product is quarantined and reported to supervisor</li><li>3.5 <i>Communication</i> is maintained with team members and supervisor throughout fuel transfer operations</li><li>3.6 Fuel transfer is conducted in accordance with supervisor's instructions</li><li>3.7 Pipeline is pigged as directed by supervisor</li><li>3.8 Fuel transfer process is monitored and faults are rectified or reported in accordance with workplace procedures</li><li>3.9 <i>Emergencies/incidents</i> are responded to in accordance with emergency response plans</li><li>3.10 Fuel transfer equipment is shut down on completion of transfer operations in accordance with</li></ul>

**ELEMENT**

**PERFORMANCE CRITERIA**

- manufacturer's instructions
- 3.11 Documentation is completed in accordance with workplace procedures
4. **Maintain an inland pipeline distribution system**
- 4.1 Pipeline and pumping equipment is inspected and results are reported to appropriate personnel in accordance with workplace procedures
- 4.2 Pipeline and pumping equipment is maintained in accordance with manufacturers' instructions and workplace maintenance procedures
- 4.3 *Minor repairs* within scope of own responsibilities are carried out when required
- 4.4 Maintenance and repair tasks are recorded and reported in accordance with workplace procedures
5. **Recover equipment**
- 5.1 Inland pipeline distribution system is *decommissioned* in accordance with instructions and workplace procedures
- 5.2 Equipment is recovered and inspected in accordance with workplace procedures
- 5.3 Site is refurbished in accordance with organisational environmental policies and procedures

## **Required Skills and Knowledge**

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

### **Required Skills**

- control fuel spills and fires
- interpret fuel markings and panels
- interpret technical diagrams and publications
- operate communications equipment
- operate fuel transfer systems

### **Required Knowledge**

- characteristics and capabilities of fuel pipelines and pumping equipment
- communication procedures
- dangerous goods handling procedures
- first aid
- fuel testing procedures
- functions and responsibilities of team members
- hazard control methods associated with fuel products
- maintenance procedures for fuel transfer systems
- relevant WHS and pollution control legislation and policies

## Evidence Guide

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

Assessment must confirm the ability to:

- construct a pipeline system which is greater than 1 km in length and utilises a minimum of two pumps.

### **Consistency in performance**

Competency should be demonstrated over time to ensure the candidate is assessed across a wide variety of situations within the workplace.

### **Context of and specific resources for assessment**

#### **Context of assessment**

Competency should be assessed in the workplace or a simulated environment.

#### **Specific resources for assessment**

Access is required to:

- fuel pipelines, pumping equipment and suitable fuel products
- safety equipment and personal protective equipment
- specific workplace operating procedures and publications.

## 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 in the Performance Criteria is detailed below.

<p><b><i>Non-permanent inland pipeline distribution system</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Filters</li> <li>• Fittings</li> <li>• Metres</li> <li>• Pipes</li> <li>• Pumps</li> </ul>
<p><b><i>Schematic diagrams</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Pigging system</li> <li>• Pipelines</li> <li>• Pumps</li> <li>• Safety equipment</li> <li>• Valves</li> </ul>
<p><b><i>Equipment</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• 150 mm/100 mm fuel equipment including:             <ul style="list-style-type: none"> <li>• fittings</li> <li>• fuel metering equipment</li> <li>• pipelines and hoses</li> <li>• pumps</li> <li>• valves</li> </ul> </li> <li>• Pigging system</li> </ul>
<p><b><i>Safety equipment</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Emergency spill kits</li> <li>• Fire extinguishers</li> <li>• First aid kits</li> <li>• Personal protective equipment including:             <ul style="list-style-type: none"> <li>• eye protection</li> <li>• hearing protection</li> <li>• high visibility clothing</li> <li>• gloves</li> <li>• safety headwear and footwear</li> </ul> </li> </ul>
<p><b><i>Workplace procedures</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Australian Standards</li> <li>• Briefs</li> <li>• Duty statements</li> <li>• Fire orders</li> <li>• Legislative requirements</li> <li>• Manufacturers' handbooks, industry specifications and technical instructions</li> <li>• WHS regulations</li> <li>• Organisational policies and procedures</li> <li>• Pollution control plan</li> </ul>



	<ul style="list-style-type: none"> <li>• Procedure manuals</li> <li>• Relevant state/territory or federal legislation</li> <li>• Standard Operating Procedures</li> <li>• Technical procedures</li> <li>• Written or verbal instructions</li> </ul>
<b>Testing distribution</b> system may include:	<ul style="list-style-type: none"> <li>• Conducting pressure testing</li> <li>• Ensuring a closed system</li> <li>• Ensuring installation conforms to schematic diagram</li> <li>• Pressing the line with air</li> <li>• Security of all components, fittings and fasteners</li> </ul>
<b>Testing fuel for product contamination</b> must include:	<ul style="list-style-type: none"> <li>• Appearance</li> <li>• Particulate</li> <li>• Water</li> </ul>
<b>Communication methods</b> may include:	<ul style="list-style-type: none"> <li>• Hand signals</li> <li>• Radio communications</li> </ul>
<b>Emergencies/incidents</b> may include:	<ul style="list-style-type: none"> <li>• Exposure to toxic fumes and substances</li> <li>• Fuel fires and explosions</li> <li>• Fuel spills, leaks and ruptures</li> </ul>
<b>Minor repairs</b> may include:	<ul style="list-style-type: none"> <li>• Emergency repairs to hoses</li> </ul>
<b>Decommissioning</b> may include:	<ul style="list-style-type: none"> <li>• Deconstructing the system</li> <li>• Pigging the pipeline</li> </ul>

## Unit Sector(s)

Not applicable.