



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **TLID2407C Use specialised liquid bulk transfer equipment (gravity/pressurised)**

**Release: 1**

## **TLID2407C Use specialised liquid bulk transfer equipment (gravity/pressurised)**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This unit involves the skills and knowledge required to use specialised gravity and pressurised liquid bulk transfer equipment including planning the work; transferring the bulk according to regulatory and operational requirements; monitoring and operating controls; and completing all operations, as required.

### **Application of the Unit**

Work must be carried out in compliance with the ADG Code and relevant state/territory regulations concerning the use of specialised gravity and pressurised equipment for the transfer of liquid bulk product.

Work is performed under general supervision. It involves the application of basic principles, routine procedures and regulatory requirements to the use of specialised gravity and pressurised bulk transfer equipment to load and unload liquid bulk product.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

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 competency is packaged will assist in identifying employability skill requirements.

### **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. Assessment of performance is to be consistent with the evidence guide.

# Elements and Performance Criteria

## Elements and Performance Criteria

### Element

### Performance Criteria

#### 1 Plan work

- 1.1 Liquid transfer method is identified for loading and unloading as gravity or pressure
- 1.2 Dangerous or hazardous (including regulated waste) or other materials requiring specialised handling are identified and relevant procedures are taken into account when planning the work
- 1.3 Precautions are undertaken to eliminate all ignition sources
- 1.4 Traffic flow, vehicle positioning and work area conditions are assessed to ensure safe operation and no injury to people, or damage to equipment, loads or facilities
- 1.5 Characteristics of the liquid, transfer and holding method are taken into account when evaluating procedural requirements, special precautions for method, equipment and, where applicable, appropriate attachments to transfer the load
- 1.6 Potential occurrences in the work area that may affect the safety and efficiency of operations are reported to the appropriate personnel
- 1.7 Liquid transfer is planned, taking into account the requirements of the load, transfer method, storage facility and transport mode, load weight, volume and viscosity and the capacity of the equipment
- 1.8 Load is checked prior to and at the completion of transfer to ensure ullage and/or maximum permitted capacity complies with ADG Code
- 1.9 Adjustments are made to process to accommodate special requirements such as temperature control, combustion, etc.
- 0 1.1 Required personal protective equipment, signage, barriers and special precautions are identified in the plan and utilised
- 1.1 Procedures to deal with spills, leakages and

- 1 ruptures are identified
- 2 **Transfer material**
  - 2.1 Equipment is prepared and any appropriate attachments fitted
  - 2.2 Equipment controls are checked for correct operational status before commencing transfer
  - 2.3 Instruments and gauges are monitored during operations to ensure that operation is within manufacturers specifications and workplace schedule and safety requirements
  - 2.4 Speed of operation is managed for safety and efficiency of materials movement and equipment operations
  - 2.5 Faults or damage to equipment are immediately reported to the appropriate personnel
- 3 **Monitor and operate controls**
  - 3.1 Equipment controls are monitored and operated in accordance with manufacturers operating instructions
  - 3.2 Control systems are monitored in accordance with statutory authority regulations, manufacturers guidelines and site operating procedures
  - 3.3 Materials are moved ensuring no injury to personnel or damage to equipment or goods
  - 3.4 Faults are identified and reported in accordance with workplace procedures
- 4 **Complete operations**
  - 4.1 Equipment is shut down within manufacturers guidelines without injury to personnel or damage to equipment, loads or facilities in accordance with workplace procedures
  - 4.2 Clean up methods for transfer equipment are completed following workplace procedures
  - 4.3 Equipment is secured in accordance with securing procedures for the appropriate equipment
  - 4.4 Workplace documentation is completed and filed following workplace procedures

## **Required Skills and Knowledge**

### **REQUIRED KNOWLEDGE AND SKILLS**

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

#### **Required knowledge:**

Australian Dangerous Goods Code and relevant state/territory mass and loading regulations as they apply to vehicles transporting liquid bulk product

OH&S procedures and guidelines concerning the use of specialised liquid bulk transfer equipment

Risks when transferring liquid bulk product and related precautions to control the risk

Workplace procedures and policies for the efficient use of specialised gravity and pressurised equipment to transfer liquid bulk product

Problems, faults or malfunctions that may occur when transferring liquid bulk product using specialised equipment and action that should be taken to prevent or resolve them

Hazards involved in transferring liquid bulk product using specialised equipment when transferring liquid bulk product and ways and means of controlling the risks involved

Housekeeping standards procedures required in the workplace

Methods of securing a vehicle following transfer of liquid bulk product

Relevant permit and health and safety requirements

#### **Required skills:**

Communicate effectively with others when transferring liquid bulk product using specialised equipment

Read and interpret instructions, procedures, information and signs relevant to the transfer of liquid bulk product using specialised equipment

Identify goods coding, IMDG markings and, where applicable, emergency information panels

Interpret and follow operational instructions and prioritise work

Complete documentation related to the transfer of liquid bulk product using specialised equipment

Operate electronic communication equipment to required protocol

Estimate the mass, volume and special requirements of liquid bulk product

Work collaboratively with others when transferring liquid bulk product using specialised equipment

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when transferring liquid bulk product using specialised equipment in accordance with regulatory requirements and workplace procedures

Implement contingency plans for unexpected events that may arise when transferring liquid bulk product using specialised equipment

Apply precautions and required action to minimise, control or eliminate hazards that may exist during the transfer of liquid bulk product using specialised equipment

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in transfer equipment in accordance with standard operating procedures

Identify and correctly use equipment required to transfer liquid bulk product

Monitor performance of transfer equipment

Service transfer equipment in terms of maintenance schedule and standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

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

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

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

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or
- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### **Method of assessment**

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or
- in an appropriate range of situations in the workplace

## 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.

Operations may be conducted:	in a range of work environments and weather conditions by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	restricted spaces exposed conditions controlled or open environments
Liquid bulk product to be transferred may require:	special precautions
Hazards in the work area may include exposure to:	hazardous or dangerous materials contamination of, or from, materials being handled noise, light, energy sources stationary and moving machinery, parts or components service lines spills, leakages, ruptures dust/vapours
Hazard management is:	consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
Personal protective equipment may include:	gloves safety headwear and footwear safety glasses mask or respirator high visibility clothing
Exposure during work operations may be to:	corrosive chemicals solvents and adhesives toxic, explosive and other harmful substances movement of equipment, goods, vehicles



Regulatory controls and enterprise procedures may govern requirements for:	transport storage volume mass required controls
Ignition sources include:	naked flames and static sources
Requirements for work may include:	site restrictions and procedures use of safety and personal protective equipment communications equipment specialised lifting and/or handling equipment incident breakdown procedures additional gear and equipment noise restrictions hours of operation authorities and permits
Consultative processes may involve:	other employees and supervisors suppliers, potential customers and existing clients management and union representatives industrial relations, OH&S specialists, and other maintenance, professional or technical staff
Communication in the work area may include:	phone electronic data interchange fax email internet radio oral, aural or signed communications
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures enterprise procedures organisational procedures established procedures site procedures
Information/documents may include:	Safe Working Load (SWL) and Working Load Limit (WLL) manifests, bar codes, goods and product identification manufacturers specifications for equipment/tools workplace procedures and policies for the transfer of liquid bulk product

goods identification numbers and codes, including ADG and IMDG markings and HAZCHEM signs  
supplier and/or client instructions  
codes of practice including the Australian Dangerous Goods Code, relevant Australian Standards and the Industry Safety Code award, enterprise bargaining agreement, other industrial arrangements  
relevant standards and certification requirements  
quality assurance procedures  
emergency procedures  
material safety data sheets

Applicable regulations and legislation may include:

state/territory mass and loading regulations  
Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:  
Australian and International Dangerous Goods Codes  
Australian Marine Orders and the International Maritime Dangerous Goods Code  
IATA Dangerous Goods by Air regulations  
Australian and International Explosives Codes

Australian and state/territory regulations related to the transfer of liquid bulk product  
relevant Australian Standards, including AS 2809.1, AS 2809.2, AS 2931, AS 2430  
relevant state/territory environmental protection legislation  
relevant state/territory OH&S legislation

## Unit Sector(s)

Not applicable.

## Competency Field

D - Load Handling