



Australian Government

Department of Education, Employment and Workplace Relations

TLID3024A Use specialised liquid bulk transfer equipment (gravity/pressurised)

Release: 1

TLID3024A Use specialised liquid bulk transfer equipment (gravity/pressurised)

Modification History

Not Applicable

Unit Descriptor

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. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

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

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

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

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.
- 1.10 Required personal protective equipment, signage, barriers and special precautions are identified in the plan and utilised
- 1.11 Procedures to deal with spills, leakages and 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

ELEMENT**PERFORMANCE CRITERIA**

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

ELEMENT**PERFORMANCE CRITERIA****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

Required skills:

- 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**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

- 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

EVIDENCE GUIDE

unit

this unit and include demonstration of applying:

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

EVIDENCE GUIDE

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/or 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 equipment, and
 - 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 activities in an appropriately simulated environment 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: | <ul style="list-style-type: none"> • in a range of work environments and weather conditions • by day or night |
| Customers may be: | <ul style="list-style-type: none"> • internal or external |
| Workplaces may comprise: | <ul style="list-style-type: none"> • large, medium or small worksites |
| Work may be conducted in: | <ul style="list-style-type: none"> • restricted spaces • exposed conditions • controlled or open environments |

RANGE STATEMENT

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

- other employees and supervisors
- suppliers, potential customers and existing clients

RANGE STATEMENT

involve:

- 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

RANGE STATEMENT

- 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

Competency Field D - Load Handling