



Australian Government

Department of Education, Employment and Workplace Relations

FDFOP2008A Operate a bulk liquid transfer process

Revision Number: 1

FDFOP2008A Operate a bulk liquid transfer process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to receive and load out bulk liquid product or raw materials.
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Application of the Unit

Application of the unit	This unit includes transferring bulk liquid product/materials from tankers and/or between storage and production storage facilities. Where bulk transfer of product is to and/or from tankers, refer to FDFOP2009A Load and unload tankers.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare bulk liquid transfer equipment and process for operation	1.1. Tank locations, product/materials holdings and capacities are identified 1.2. Actual to recorded holding levels are confirmed 1.3. Condition of tank farm and related equipment is inspected and maintenance requirements are identified and reported according to workplace reporting requirements 1.4. Transfer equipment settings and operating parameters are selected to meet safety and transfer requirements 1.5. Checks, tests or other materials/product clearance procedures are followed prior to transfer as required by workplace 1.6. Priorities for materials transfer are established to match intakes/transfers to storage capacity and production requirements
2. Transfer bulk liquid materials	2.1. The transfer process is started and operated according to workplace procedures 2.2. The transfer process is monitored to confirm correct location selection, quantities and equipment settings 2.3. Bulk liquid materials/product is transferred to the required location/storage facility 2.4. Workplace housekeeping standards are maintained 2.5. Work is conducted in accordance with workplace environmental guidelines 2.6. Workplace records are maintained according to workplace recording requirements
3. Complete transfer operations	3.1. Valves and related equipment settings are correctly positioned to complete transfer operation 3.2. Product/materials are purged from lines 3.3. Equipment is cleaned and prepared for further transfer 3.4. Information on the transfer operation is recorded according to workplace reporting requirements 3.5. Maintenance requirements are identified and reported according to workplace reporting requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- Access workplace information relating to materials transfer requirements
- Select, fit and use personal protective clothing and/or equipment
- Inspect equipment for signs of wear. Examples of typical sensory inspections include visual inspections to detect leaks, listening for unusual noises and or vibrations in pumps and checking gauges and meters
- Use workplace records and systems to confirm tank holdings and capacities and determine appropriate source/destination holding facilities. This typically involves use of computer-based systems. It may also involve verifying by physically inspecting storage facilities and checking materials/product compatibility
- Plan and sequence transfer process to meet storage capacity and production requirements
- Prepare equipment for materials transfer. This may involve confirming that equipment is clean, lines are purged, isolation or lockouts are cancelled as required, any scheduled maintenance has been completed and safety guards/equipment are correctly positioned
- Carry out procedures to confirm liquid bulk product/materials meet quality requirements. This may involve conducting tests or getting clearance documentation from laboratory/quality personnel
- Operate and monitor transfer process to confirm that correct quantities are transferred at the required times, to the required locations. This may include monitoring pump loads and flow rates and filter/strainer condition
- Respond to and/or report equipment failure within level of responsibility
- Locate emergency stop functions on equipment
- Complete transfer operations. This may include purging lines and selecting appropriate equipment/system settings
- Complete records of product/materials transfer as required
- Maintain work area to meet housekeeping standards
- Use process control and scheduling systems, screens and panels according to enterprise procedures
- Take and record product/materials samples and conduct tests according to enterprise procedures
- Conduct routine maintenance according to enterprise procedures
- Clean transfer equipment. This may require entry to confined spaces. Where this is the case, appropriate certification requirements must also be met
- Use oral communication skills / language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

REQUIRED SKILLS AND KNOWLEDGE

clarification and seeking advice from supervisor

- Work cooperatively within a culturally diverse workforce

Required knowledge***Knowledge of:***

- Bulk liquid materials storage facilities layout and related management systems
- Basic operating principles of the system and equipment used. This includes an understanding of the features of the bulk liquid handling system such as whether it is based on gravity and/or pressurised feed, and related performance aspects. It also includes an understanding of the equipment used which typically includes sensors, valves, pumps, pipework and other related equipment that controls the flow and transfer of bulk liquid materials, equipment operating capacity and the status and purpose of guards
- Planning and scheduling systems and responsibilities to prioritise materials transfer processes. This includes an understanding of the characteristics of materials received and related storage requirements, production requirements and storage capacities
- Signs and symptoms of faulty equipment and early warning signs of potential problems
- Operating parameters and corrective action required where operation is outside specified operating parameters
- OHS hazards and controls. This includes emergency procedures to respond to hazardous situations such as spills
- Product inspection procedures within level of responsibility
- Clearance procedures. This may include relevant test methods and action required if results are not within specification or clearance is not provided
- Contamination risks and controls. This includes an understanding of cross-contamination risks, product compatibility and storage requirements
- Isolation, lock out and tag out procedures and responsibilities
- Environmental issues associated with bulk liquid materials transfer. This includes consequences of spills and appropriate control/containment procedures
- Recording requirements and procedures
- Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
- Sampling and test procedures where relevant
- Routine maintenance procedures where relevant
- Cleaning procedures where relevant

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competency in this unit must be achieved in accordance with food safety standards and regulations.

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

Evidence of ability to:

- confirm transfer requirements
- conduct pre-start checks on equipment used for transfer
- start, operate, monitor and adjust process to achieve required quality outcomes
- take corrective action in response to typical faults and inconsistencies
- complete workplace records as required
- apply safe work practices and identify OH&S hazards and controls
- apply food safety procedures

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- personal protective clothing and equipment
- bulk liquid materials transfer system and related equipment
- bulk liquid materials transfer operating procedures
- bulk liquid product/materials to be transferred
- housekeeping standards and procedures
- sampling and test equipment as required
- cleaning procedures, materials and equipment as required
- bulk liquid materials transfer information recording system and procedures

Method of assessment

This unit should be assessed together with core units and other units of competence relevant to the function or work role. Examples could be:

- FDFOP2030A Operate a process control interface
- FDFOP2013A Apply sampling procedures

EVIDENCE GUIDE	
	• PMLTEST300B Perform basic tests • FDFOP2011A Conduct routine maintenance • FDFOP2004A Clean and sanitise equipment
Guidance information for assessment	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

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. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Policies and procedures	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the labelling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity. When applied to the pharmaceutical industry, relevant GMP codes apply and reference to food safety is replaced by GMP
Workplace information	Workplace information may include Standard Operating Procedures (SOPs), specifications, production schedules and instructions, manufacturers' advice, standard forms and reports
Transfer of bulk liquid materials	Transfer of bulk liquid materials typically involves the use of process control screens and systems
Typical bulk liquid transfer equipment	Typical bulk liquid transfer equipment includes tanks, vessels, pumps, valves, gauges, pipework, screens and filters, and tank dipping and measurement instrumentation
Confined spaces	Where cleaning tanks or silos requires entry to confined spaces, the relevant National Occupational Health and Safety Commission and/or state health and safety authorities assessment criteria and methods prescribed must also be met
Monitoring the condition of bulk liquid transfer equipment	Monitoring the condition of bulk liquid transfer equipment may include visually inspecting to identify leaks or faulty valve operation, and

RANGE STATEMENT

	checking operation/accuracy of gauges and related measuring equipment
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Unit Sector(s)

Unit sector	Operational
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		