



Australian Government

PMC562071 Operate bulk materials handling equipment

Release: 1

PMC562071 Operate bulk materials handling equipment

Modification History

Release 1. Supersedes and is equivalent to PMC562071C Operate bulk materials handling equipment

Application

This unit of competency covers the skills and knowledge required to operate equipment used to store and convey bulk, particulate materials. It applies to particulates, such as:

- cement
- sand
- aggregate
- frit
- cullet
- asphalt (not strictly a particulate solid but included in this unit)
- other similar materials.

This unit of competency applies to operators who are required to start up and shut down conveyors; transfer and store materials; monitor quality, quantity and location of bulk materials; perform minor maintenance on equipment; and identify and take action on problems.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members, team leader and supervisor, as appropriate.

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

Pre-requisite Unit

Nil

Competency Field

Support

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|--------------------------------------|-----|--|
| 1 | Operate conveyors | 1.1 | Recognise the type and number of conveyors |
| | | 1.2 | Identify hazards and implement hazard controls according to procedures |
| | | 1.3 | Start up and shut down the conveyor in a manner appropriate to the conveyor type and duty |
| | | 1.4 | Complete routine checks, logs and paperwork, taking action on unexpected observations, readings and trends |
| | | 1.5 | Convey correct material from and to the correct location as required |
| | | | |
| 2 | Manage bulk material storages | 2.1 | Recognise type of storage facility |
| | | 2.2 | Monitor quality, quantity and location of bulk materials stored |
| | | 2.3 | Transfer stock into, out of and between storage, as required |
| | | 2.4 | Supply internal and external customers with correct quality and quantity in a timely manner |
| | | 2.5 | Make effective use of storage capacity available taking account of safety issues |
| | | | |
| 3 | Rectify problems | 3.1 | Identify the range of faults that can occur during the operation |
| | | 3.2 | Determine and rectify fault causes in accordance with established enterprise procedures |
| | | 3.3 | Identify and rectify equipment failure causes in accordance with established enterprise procedures |
| | | 3.4 | Make sure appropriate records and log books of equipment operations are maintained to meet enterprise requirements |

- 3.5 Identify non-routine problems and report according to procedure

- 4 **Carry out maintenance procedures**
 - 4.1 Recognise a maintenance need according to procedure
 - 4.2 Isolate materials handling equipment and prepare for maintenance/vessel entry as required
 - 4.3 Complete minor maintenance according to procedures
 - 4.4 Receive plant back from maintenance and check for safe operation
 - 4.5 Prepare plant for the introduction of materials and for operation

- 5 **Control hazards**
 - 5.1 Identify hazards in the material handling work area
 - 5.2 Assess the risks arising from those hazards
 - 5.3 Implement measures to control those risks in line with procedures
 - 5.4 Shut down in an emergency as required

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

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

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, equipment and production processes and hazardous materials
- Australian/international standards relevant to the materials being used and products being made
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures may be written, verbal, visual, computer-based or in some other form. They include one or any combination of:

- manufacturer's technical information
- job cards
- drawings
- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Problems Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of:

- contamination of stored stock
- rat holing and bridging in silos/bins/hoppers
- routing issues
- equipment problems.

Known solutions are drawn from one or more of:

- procedures
- training
- remembered experience.

Non-routine problems must be reported according to according to relevant procedures.

Tools and equipment

Tools and equipment include:

- conveyor/feeders used for handling particulates, including one or more of:
 - mechanical conveyors/feeders (e.g. travelling stackers, belt, vibrating, screw and flight)
 - pneumatic conveyors (e.g. dense phase, disperse phase, pressure and vacuum)
- bulk storage:
 - piles
 - bunkers
 - silos
 - bins/hoppers
 - weigh bins/loss in weight bins
- personal protective equipment (PPE).

Hazards Hazards must be identified and controlled. Identifying hazards requires consideration of:

- heat, smoke, dust, vapours or other atmospheric hazards
- weight, shape, volume of materials to be handled
- hazardous products and materials
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks

- electricity
- gas
- gases and liquids under pressure
- noise
- rotational equipment or vibration
- plant services (steam, condensate, cooling water, etc)
- structural hazards
- equipment failures
- machinery, equipment and product mass
- limited head spaces or overhangs
- working at heights
- working in restricted or confined spaces
- other hazards that might arise.

Records and reports Records include one or more of:

- log books/sheets
- electronic records
- job/work sheets
- other records used for the smooth running of the plant.

Reports include one or more of:

- paper or electronic-based logs and reports
- verbal/radio reports
- reporting items found which require action.

Unit Mapping Information

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Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>