

Title	Load pulp or paper chemical by-products into road or rail tankers		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: identify chemical by-product tanker loading equipment and associated requirements; prepare for chemical by-product tanker loading; load chemical by-products to the tanker; and complete the loading process.
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Classification	Wood Fibre Manufacturing > Pulp and Paper - Chemical Plants
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Available grade	Achieved
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Guidance Information

1 Legislation and references

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

- Hazardous Substances and New Organisms Act 1996;
- Health and Safety at Work Act 2015;
- Resource Management Act 1991;
- Health and Safety at Work (Major Hazard Facilities) Regulations 2016.

2 Definitions

Operating parameters refer to the boundary conditions in which the operations are carried out in the loading of chemical by-products.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in the loading of chemical by-products.

Worksite documentation refers to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace, and are consistent with manufacturer's requirements. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, sustainability, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the pulp and paper industry.

3 Assessment information

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, worksite documentation and legislative requirements. This includes the knowledge and use of suitable tools and equipment.

Outcomes and performance criteria

Outcome 1

Identify chemical by-product tanker loading equipment and associated requirements.

Performance criteria

1.1 Tanker loading equipment and associated requirements are identified.

Range may include but is not limited to – data transfer, communication systems, control systems, additives, odorant, loading pumps, meters, storage tanks, pipelines, hoses, loading arms, weigh bridges, manifolds, drainage and bunding facilities, earthing and bonding facilities.

1.2 Safety equipment is identified.

Range may include but is not limited to – signage, barriers, fire extinguishers, hoses, fire monitors, fire hydrants, foam systems, fire alarms, fire detectors, deluge systems, personal protective equipment.

Outcome 2

Prepare for chemical by-product tanker loading.

Performance criteria

2.1 Potential hazards are identified, and the steps required to eliminate them are explained.

2.2 Loading documentation is checked.

2.3 Preloading checks are carried out.

Range checks may include but are not limited to – tanker positioning and connection, safety considerations, equipment availability, simultaneous loading and operations, inter-tank transfers, product quality and quantity, tanker contents and condition, earthing checks, Waka Kotahi (New Zealand Transport Agency) certification for prime mover and tank, drivers dangerous goods licence endorsement, current site safety induction.

2.4 Safety equipment is made available and used.

Range safety equipment may include but is not limited to – personal protective equipment, multi-meter, fixed fire protection, barriers, signage, emergency shutdown systems, gas detection systems, safety shower, eyewash facilities.

Outcome 3

Load chemical by-products to the tanker.

Performance criteria

- 3.1 Loading equipment is connected and started.
- Range may include but is not limited to – customer requirements, earth connection, valving, tank capacity, level protection, pumps, compressors.
- 3.2 Additive or odorant injection is carried out.
- 3.3 Product sampling is carried out.
- 3.4 Loading rates are controlled and monitored to ensure the product is loaded safely and within the tanker's defined storage capacities.
- 3.5 Communication is maintained to determine the progress of the loading, tank levels, and volumes with relevant parties.
- Range may include but is not limited to – operator, driver, control room operator.
- 3.6 Deviations from normal operating conditions are identified, and corrective actions are taken.
- Range may include but is not limited to – vapour lock, pressure differential, operator error, spills, leaks, earth faults, excess flow, contamination, instrument malfunction, overfill; evidence of corrective action for five deviations is required.

Outcome 4

Complete the loading process.

Performance criteria

- 4.1 Loading operation is verified as complete, and equipment is shut down.
- Range may include but is not limited to – shut down, isolation, disconnection.
- 4.2 Documentation is completed, and the results of the loading or transfer are communicated to appropriate personnel.
- Range may include but is not limited to – dangerous goods declaration, bills of lading, load receipts, weighbridge documents, product certificate of quality, logbooks, computer records.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 December 2006	31 December 2024
Review	2	24 October 2014	31 December 2025
Review	3	30 November 2023	N/A

Consent and Moderation Requirements (CMR) reference	0173
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.