

Title	Operate equipment for distillation in an energy and chemical plant		
Level	4	Credits	8

Purpose	<p>This unit standard is intended for people working in an energy and chemical plant who operate complex plant from a panel.</p> <p>People credited with this unit standard are able to: operate energy and chemical distillation equipment in stable conditions; and identify and describe responses to deviations from stable conditions in an energy and chemical process.</p>
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Classification	Energy and Chemical Plant > Operation of Energy and Chemical Plant
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Available grade	Achieved
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Guidance Information

- Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015;
 - Hazardous Substances and New Organisms Act 1996;
 - Resource Management Act 1991;
 - and any subsequent amendments.
- Definitions

Energy and chemical plant may be in – petrochemical, agri-nutrient, power generation, dairy processing, meat processing, and wood fibre manufacturing, or other plants that operate with a combination of high temperatures, pressures, steam and/or chemicals in gas, liquid or solid form.

Organisational requirements – documented policies and procedures. These may include: equipment manufacturers' procedures, plant procedures, suppliers' instructions; site signage; codes of practice; company health and safety plans; on site briefings; and supervisor's instructions. This includes all regulatory and legislative obligations that apply to the plant.

Plant – the operational unit, equipment and/or workplace at which the person is working.
- For the purposes of assessment:
 - evidence for the practical components of this unit standard must be supplied from the workplace.
 - evidence for all outcome must be presented in accordance with organisational requirements.

Outcomes and performance criteria

Outcome 1

Operate energy and chemical distillation equipment in stable conditions.

Performance criteria

- 1.1 Operate the distillation equipment to achieve maximum efficiency.
- Range product specifications, environmental impact, economic.
- 1.2 Assess upstream and downstream effects of the operation to determine operating requirements.
- 1.3 Report and log process changes.
- 1.4 Carry out preventative maintenance and routine procedures.
- Range monitoring, trip testing, maintenance related log keeping.

Outcome 2

Identify and describe responses to deviations from stable conditions in an energy and chemical process.

Performance criteria

- 2.1 Identify minor deviations from stable operating conditions and describe the steps to avoid and recover.
- Range temperature and pressure deviation, mechanical failure, vapour locking.
- 2.2 Identify deviations that may lead to emergency situations and describe plant emergency response procedures.
- Range flooding, fire, toxic emissions.

Replacement information	This unit standard was replaced by skill standard 40437. This unit standard and unit standard 18423 replaced unit standard 9615.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 January 2002	31 December 2018
Review	2	20 February 2009	31 December 2018
Rollover and Revision	3	20 April 2017	31 December 2022
Review	4	27 February 2020	31 December 2026
Review	5	24 April 2025	31 December 2026

Consent and Moderation Requirements (CMR) reference

0079

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.