

## 40437 Operate distillation equipment in an energy and chemical plant

<b>Kaupae   Level</b>	4
<b>Whiwhinga   Credit</b>	8
<b>Whāinga   Purpose</b>	<p>This skill 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 skill 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> <p>This skill standard can be used in the New Zealand Energy and Chemical qualifications at Level 4 and above.</p>

### Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

<b>Hua o te ako   Learning outcomes</b>	<b>Paearu aromatawai   Assessment criteria</b>
1. Operate energy and chemical distillation equipment in stable conditions.	a. Operate the distillation equipment to achieve maximum efficiency.
	b. Control upstream feed and maintain downstream output quality of the operation.
	c. Report and log process changes.
	d. Carry out preventative maintenance and standard operating procedures of distillation equipment.
2. Identify and describe responses to deviations from stable conditions in an energy and chemical process.	a. Identify minor deviations from stable operating conditions and describe the steps to avoid and recover.
	b. Identify deviations that may lead to emergency situations and describe plant emergency response procedures.

**Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria****Assessment specifications**

- evidence for the practical components of this skill standard must be supplied from the workplace.
- evidence for all outcomes must be presented in accordance with organisational requirements.
- 1a: product specifications, environmental impact, economic.
- 1d: monitoring, trip testing, maintenance related log keeping.
- 2a: temperature and pressure deviation, mechanical failure, vapour locking.
- 2b: flooding, fire, toxic emissions.

**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.

**Ngā momo whiwhinga | Grades available**

Achieved

**Ihirangi waitohu | Indicative content**

None

**Rauemi | Resources**

Legislation relevant to this skill 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.

**Pārongo Whakaū Kouna | Quality assurance information**

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
<b>Whakaritenga Rārangi Paetae Aromatawai  </b> DASS classification	Manufacturing > Energy and Chemical Plant > Operation of Energy and Chemical Plant
<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b> CMR	0079

<b>Hātepe  </b> Process	<b>Putanga  </b> Version	<b>Rā whakaputa  </b> Review Date	<b>Rā whakamutunga mō te aromatawai  </b> Last date for assessment
<b>Rēhitatanga  </b> Registration	1	24 April 2025	N/A
<b>Kōrero whakakapinga  </b> Replacement information	This skill standard replaced unit standard 18733.		
<b>Rā arotake  </b> Planned review date	31 December 2029		

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council at [qualifications@hangaarorau.nz](mailto:qualifications@hangaarorau.nz) to suggest changes to the content of this skill standard.