

40447 Operate geothermal steam-field processes and equipment in an energy and chemical plant

Kaupae Level	4
Whiwhinga Credit	20
Whāinga Purpose	<p>This skill standard is intended for people working as energy and chemical process operators in an energy and chemical plant.</p> <p>People credited with this skill standard are able to operate geothermal steam-field processes and equipment in an energy and chemical plant.</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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Operate geothermal steam-field processes and equipment in an energy and chemical plant.	a. Identify hazards associated with working in a geothermal steam-field operation and apply steps to minimise the risk.
	b. Carry out procedures for entering the geothermal steam-field in accordance with organisational requirements.
	c. Identify consents associated with the operation of the geothermal steam-field in terms of their requirements for a site.
	d. Carry out well operating procedures.
	e. Carry out plant equipment operating procedures.
	f. Carry out routine inspections, testing and monitoring.
	g. Identify geothermal steam-field equipment faults and take corrective actions in accordance with organisational requirements.

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

Assessment specifications:

- evidence for this skill standard must be supplied from the workplace.
- evidence must be presented in accordance with organisational requirements.
- 1a: evidence of a minimum of five (5) hazards is required.
- 1d: evidence of at least five (5) is required.
- 1e: plant equipment – evidence of at least five (5) is required; plant equipment procedures – evidence of at least five (5) is required.
- 1g: evidence of fault identification and corrective actions must be documented in accordance with organisational requirements; evidence of at least five (5) faults is required.

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

- Consent requirements such as – total production, reinjection, discharges to air, water and ground, noise.
- Well operating procedures such as – vent gas cap, warm up, place on bleed, bring on-line, shut in, isolate, de-isolate down-hole testing.
- Plant equipment such as – steam field pipeline/production/ reinjection/protection, separator, scrubber, pumps, dump station, vent station.

Plant equipment operating procedures such as – de-isolate, warm up, bring on-line, take out of service, isolate, test protection and protective devices, cross country pipeline warming, pipelines with low points, precautions against water hammer.

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 Kounga | Quality assurance information

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

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	24 April 2025	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 28160.		
Rā arotake Planned review date	31 December 2029		

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