

Title	Operate geothermal steam-field equipment and processes in an energy and chemical plant		
Level	4	Credits	20

Purpose	<p>This unit standard is intended for people working as boiler operators and energy and chemical process operators in an energy and chemical plant.</p> <p>People credited with this unit standard are able to operate geothermal steam-field equipment and processes in an energy and chemical plant.</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 this unit standard must be supplied from the workplace.
 - evidence must be presented in accordance with organisational requirements.

Outcomes and performance criteria

Outcome 1

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

Performance criteria

- 1.1 Identify hazards associated with working in a geothermal steam-field operation and apply steps to minimise the risk.
- Range evidence of a minimum of five hazards is required.
- 1.2 Locate and apply procedures for entering the geothermal steam-field.
- 1.3 Identify and describe consents associated with the operation of the geothermal steam-field in terms of their requirements for a site.
- Range requirements may include but are not limited to – total production, reinjection, discharges to air, water and ground, noise.
- 1.4 Locate and carry out well operating procedures.
- Range procedures may include but are not limited to – vent gas cap, warm up, place on bleed, bring on-line, shut in, isolate, de-isolate down-hole testing; evidence of at least five is required.
- 1.5 Locate and carry out plant equipment operating procedures.
- Range plant equipment may include but is not limited to – steam field pipeline/production/ reinjection, separator, scrubber, dump station, vent station; evidence of at least five is required. procedures may include but are not limited to – 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; evidence of at least five is required.
- 1.6 Carry out routine inspections and tasks.
- 1.7 Identify, investigate, record and report geothermal steam-field equipment faults and corrective actions taken.

Replacement information	This unit standard was replaced by skill standard 40447. This unit standard and unit standard 28159 replaced unit standard 17607.
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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 October 2014	31 December 2022
Review	2	27 February 2020	31 December 2026
Review	3	24 April 2025	31 December 2026

Consent and Moderation Requirements (CMR) reference	0079
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.