

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

<b>Purpose</b>	<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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<b>Classification</b>	Energy and Chemical Plant > Operation of Energy and Chemical Plant
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 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.
  
- 2 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.
  
- 3 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.

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## 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.
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<b>Replacement information</b>	This unit standard and unit standard 28159 replaced unit standard 17607.
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<b>Planned review date</b>	31 December 2024
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#### 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	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0079
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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 the Primary Industry Training Organisation [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.