

40363 Maintain process conditions and respond to process deviations in an energy and chemical plant

Kaupae Level	5
Whiwhinga Credit	12
Whāinga Purpose	<p>People credited with this skill standard are able to: maintain stable energy and chemical process conditions; and respond to and restore process conditions in an energy and chemical plant.</p> <p>This skill standard can be used in the New Zealand Energy and Chemical qualifications at Levels 5 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. Maintain stable energy and chemical process conditions.	a. Obtain and record process data at scheduled times
	b. Identify, monitor and, where required, adjust operating parameters for each process to ensure plant safety and product specifications are met.
	c. Describe consequences of deviation from stable operating parameters in terms of effects on product, equipment, and production schedules.
	d. Identify and analyse trends and adjust equipment and processes where necessary to maintain stable operating parameters.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
2. Respond to and restore process conditions in an energy and chemical plant.	a. Describe circumstances in which emergency shutdowns are automatically initiated.
	b. Describe circumstances in which emergency shutdowns are manually initiated.
	c. Report situations which cannot be remedied within the operator's authority to the appropriate personnel for escalation.
	d. Take corrective actions in the event of a continuing deviation.
	e. Restore stable process conditions without delay while minimising loss and without compromising safety.
	f. Identify and diagnose any faults to determine causes.
	g. Record and communicate problems and corrective actions to appropriate personnel.

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

Assessment specifications:

Evidence for the practical components of this unit standard must be supplied from the workplace.

Definitions:

Distributed control system includes – Supervisory Control and Data Acquisition (SCADA), Man Machine Interfaces (MMI).

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

- Process data, such as sampling, plant logs, product data, distributed control system.

Rauemi | Resources

Legislation and regulations relevant to this unit standard include but are not limited to:

- Health and Safety at Work Act 2015;
 - Health and Safety at Work (Hazardous Substances) Regulations 2017 (HSWA);
 - Approved Code of Practice for the Design, Safe Operation, Maintenance and Servicing of Boilers, Occupational Health and Safety Service, 2000;
 - Resource Management Act 1991;
- and any subsequent amendments.

Pārongo Whakaū Kouna | 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 > Monitoring 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	30 January 2025	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 18725.		
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.