

40358 Monitor routine energy and chemical plant operations, and carry out operational handover

Kaupae Level	3
Whiwhinga Credit	5
Whāinga Purpose	<p>This skill 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 skill standard are able to: describe the monitoring of plant equipment and processes in terms of purpose; describe responses to alarms, and operational deviations in an energy and chemical plant; monitor routine energy and chemical plant operations and respond to operational deviations; and describe; and carry out operational handover of process plant operations in an energy and chemical plant.</p> <p>This skill standard can be used in the New Zealand Energy and Chemical qualifications at Levels 3 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. Describe the monitoring of plant equipment and processes in terms of purpose.	a. Describe the purpose of tools used for monitoring and verifying plant and process conditions.
	b. Describe the purpose of start-up permissives and sequence, shutdown permissives and sequence, and operational interlocks and trips in terms of a site-specific logic drawing or sequence.
	c. Describe the purpose of cross-checking readings in terms of the methods used.
2. Describe responses to alarms and operational deviations in an energy and chemical plant.	a. Describe responses to plant process alarms in accordance with organisational requirements.
	b. Describe operational deviations that occur in the plant in terms of the steps to respond to each deviation.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Monitor routine energy and chemical plant operations and respond to operational deviations.	a. Take, report and log equipment and process readings.
	b. Analyse equipment and process readings, take action as required, and record actions and results.
	c. Carry out routine testing of monitoring equipment.
	d. Identify operational deviations, take corrective action, and report and log actions.
4. Describe operational handover of process plant operations in terms of purpose.	a. Describe the purpose of handover of process plant operations and/or work control status.
	b. Describe the handover process and documentation required in accordance with organisational requirements.
5. Carry out operational handover of process plant operations in an energy and chemical plant.	a. Prioritise and communicate critical information using language appropriate to the situation.
	b. Carry out operational handover of process plant operations in a manner that reflects the operational and work control status.

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.
- evidence for all outcomes must be presented in accordance with organisational requirements.
- 1c: evidence of correlating instrument readings with process conditions and at least three (3) other methods is required
- 2b: evidence of five (5) is required.
- 3a: evidence of three (3) is required.
- 3c: evidence of three (3) is required.
- 5a: evidence of two (2) 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.

Operational handover – handover which is conducted after the formal shift to shift handover. Operational handover may also include handover of work controls. Operational handover may be one or a combination of – verbal, written, electronic, interactive.

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

- Plant monitoring requirements such as – observations, data logging, communication, reporting actions, standby equipment, establishing trends.
- Process plant operations such as – abnormal plant conditions, plant limiting conditions, outstanding work control documents, operational requirements, safety related issues, isolated or available plant, environmental related issues, relevant historical information.

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);
- 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 > 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 32029.		
Rā arotake Planned review date	31 December 2029		

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