

40441 Isolate and reinstate a section of an energy and chemical plant

Kaupae Level	4
Whiwhinga Credit	10
Whāinga Purpose	<p>This skill standard is intended for people working as boiler operators and process operators in an energy and chemical plant.</p> <p>People credited with this skill standard are able to: describe the principles of isolating a section of an energy and chemical plant; isolate and reinstate a section of an energy and chemical plant; and manage the impact of isolation on the process.</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. Describe the principles of isolating a section of an energy and chemical plant.	a. Describe the reasons for isolation in terms of site-specific requirements.
	b. Describe isolation and reinstatement procedures in terms of site-specific requirements.
	c. Describe isolation methods in terms of their application.
	d. Describe testing methods in terms of verifying the integrity of the electrical isolation.
	e. Describe testing methods in terms of verifying the integrity of the mechanical isolation.
2. Isolate a section of an energy and chemical plant and manage the impact of isolation on the process.	a. Identify boundaries of isolation in accordance with organisational requirements.
	b. Assess and manage the impact of isolation on the process in accordance with organisational requirements.
	c. Prepare and verify isolation documentation in accordance with organisational requirements.
	d. Isolate a section of the plant and verify the isolation integrity in accordance with organisational requirements.
	e. Document and report the isolation in accordance with organisational requirements.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Reinstate a section of an energy and chemical plant.	a. Verify the section of the plant as ready for reinstatement in accordance with organisational requirements.
	b. Prepare for, plan, and carry out de-isolations in accordance with organisational requirements.
	c. Reinstate the section of the plant in accordance with organisational requirements.
	d. Document plant status in accordance with organisational requirements.

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

Assessment specifications

- evidence for the practical components of this skill standard must be supplied from the workplace.
- 1a: evidence of three (3) reasons is required.
- 1c: methods include but are not limited to – double block and bleed, spading, blinding, tagging, lockout, stopple plugs, bladders, freezing, spool piece removal.
- 1d: evidence of two (2) methods is required.
- 1e: evidence of three (3) methods is required.
- Learning outcome 2: evidence of three (3) plant section isolations is required.
- Learning outcome 3: evidence of three (3) plant section reinstatements is required.
- 3b: planning includes but is not limited to – authorisations, procedures, instructions.

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

None

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 21457		
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.