

Title	Demonstrate knowledge of the principles of isolating and isolate and reinstate a section of an energy and chemical plant		
Level	4	Credits	10

Purpose	<p>This unit standard is intended for people working as boiler operators and process operators in an energy and chemical plant.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of the principles of isolating a section of an energy and chemical plant; isolate; and prepare for and reinstate a section of an energy and chemical plant and describe the impact of isolation on the process.</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

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

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the principles of isolating a section of an energy and chemical plant.

Performance criteria

- 1.1 Describe isolation and reinstatement procedures in terms of site-specific requirements.
- 1.2 Describe the reasons for isolation in terms of site-specific requirements.
Range evidence of three reasons is required.
- 1.3 Describe isolation methods in terms of their application.
Range methods include but are not limited to – double block and bleed, spading, blinding, tagging, lockout, stopple plugs, bladders, freezing, spool piece removal.
- 1.4 Describe testing methods in terms of verifying the integrity of the electrical isolation.
Range evidence of two methods is required.
- 1.5 Describe testing methods in terms of verifying the integrity of the mechanical isolation.
Range evidence of three methods is required.

Outcome 2

Isolate a section of an energy and chemical plant and describe the impact of isolation on the process.

Range evidence of three plant section isolations is required.

Performance criteria

- 2.1 Identify boundaries of isolation in accordance with organisational requirements.
- 2.2 Describe the impact of isolation on the process in accordance with organisational requirements.
- 2.3 Prepare and verify isolation documentation in accordance with organisational requirements.
- 2.4 Isolate a section of the plant and verify the isolation integrity in accordance with organisational requirements.

- 2.5 Document and report the isolation in accordance with organisational requirements.

Outcome 3

Prepare for and reinstate a section of an energy and chemical plant.

Range evidence of three plant section reinstatements is required.

Performance criteria

- 3.1 Verify the section of the plant as ready for reinstatement in accordance with organisational requirements.

- 3.2 Prepare for, plan, and carry out de-isolations in accordance with organisational requirements.

Range planning includes but is not limited to – authorisations, procedures, instructions.

- 3.3 Reinstate the section of the plant in accordance with organisational requirements.

- 3.4 Document plant status in accordance with organisational requirements.

Planned review date	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	27 June 2005	31 December 2014
Rollover and Revision	2	25 July 2006	31 December 2014
Review	3	22 May 2009	31 December 2016
Review	4	24 October 2014	31 December 2022
Review	5	27 February 2020	N/A

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>.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.