

<b>Title</b>	<b>Demonstrate and apply knowledge of hazards and handling of chemicals in an energy and chemical plant</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>7</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: identify hazards, describe control measures, and work safely in an energy and chemical plant; describe chemicals used in an energy and chemical plant and processes for dealing with hazards related to handling chemicals; and describe procedures and associated documentation for receiving, storing, and handling chemicals used 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 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.
  
- 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.

*Hazard* – the meaning used in section 2 of the Health and Safety at Work Act 2015.

*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.

*Risks* – a situation involving danger to people from being exposed to a hazard.

- 3 For the purposes of assessment:
- 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.

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## Outcomes and performance criteria

### Outcome 1

Identify hazards, describe control measures, and work safely in an energy and chemical plant.

#### Performance criteria

- 1.1 Identify and describe hazards found in an energy and chemical plant in terms of their potential risk of injury or illness to people.
- Range evidence of at least eight hazards is required.
- 1.2 Describe control measures to eliminate or minimise health and safety risks in an energy and chemical plant.
- 1.3 Carry out work activities taking reasonable care not to adversely affect the health and safety of other persons and self.

### Outcome 2

Describe chemicals used in an energy and chemical plant and processes for dealing with hazards related to handling chemicals.

#### Performance criteria

- 2.1 Describe chemicals found in an energy and chemical plant in terms of their use.
- Range evidence of three different chemicals is required.
- 2.2 Describe the types of containers, designated storage areas, and segregation requirements for storage of chemicals used in an energy and chemical plant.
- 2.3 Describe the details provided in safety information relating to storage and handling of chemicals.
- Range safety information includes but is not limited to – HAZCHEM code warning statements, chemical data sheets, safety data sheets, container labels, manufacturer's instructions, first aid information, personal protective equipment (PPE) instructions.
- 2.4 Identify hazards related to handling chemicals found in an energy and chemical plant, and describe the procedures used to maintain safety.

- 2.5 Describe disposal methods and/or processes and reporting requirements for chemical spills.

### Outcome 3

Describe procedures and associated documentation for receiving, storing, and handling chemicals used in an energy and chemical plant.

### Performance criteria

- 3.1 Describe the procedures for receiving, storage and handling chemicals.
- 3.2 Describe the plant associated documentation related to chemical use and storage.

<b>Replacement information</b>	This unit standard replaced unit standard 28284.
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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	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.