

Title	Describe and punch list, commission, and optimise new equipment in a system in an energy and chemical plant		
Level	4	Credits	7

Purpose	People credited with this unit standard are able to: describe and punch list new equipment in a system; commission a system with new equipment, and describe emergency procedures and contingency plans; and optimise new equipment in a system, in an energy and chemical plant.
----------------	---

Classification	Energy and Chemical Plant > Safety and Legislation for Energy and Chemical Plant
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Legislation relevant to this unit standard includes but is 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.

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.

Punch listing – checking new or modified equipment and processes prior to commissioning.
- 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.
 - evidence may be given of commissioning equipment that has been modified.

Outcomes and performance criteria

Outcome 1

Describe and punch list new equipment in a system in an energy and chemical plant.

Performance criteria

- 1.1 Describe punch listing in terms of the purpose and principles.
- 1.2 Identify the equipment to be punch listed in terms of the plant identification and numbering system.
- 1.3 Locate drawings against which the equipment is to be punch listed.
- 1.4 Punch list new equipment to be commissioned to identify any defects or omissions.
- 1.5 Record and report any equipment defects or omissions to relevant personnel.

Outcome 2

Commission a system with new equipment and describe emergency procedures and contingency plans in an energy and chemical plant.

Performance criteria

- 2.1 Locate documentation required for commissioning a system.

Range vendor manuals, training manuals, procedures, drawings, certification.
- 2.2 Describe emergency procedures and contingency plans associated with the commissioning.

Range emergency shutdown, trip tests, emergency response equipment, personnel responsibilities, audits.
- 2.3 Confirm the equipment status as ready for commissioning.
- 2.4 Carry out commissioning of equipment and system.
- 2.5 Monitor equipment operation during commissioning to identify problems.
- 2.6 Log and report any problems to identify remedial actions required.

Outcome 3

Optimise new equipment in a system in an energy and chemical plant.

Performance criteria

- 3.1 Identify plant operating parameters to determine the baseline.
- 3.2 Optimise the plant to maximise design specifications.
- 3.3 Trend and record trial actions to provide evidence of results.

Replacement information	This unit standard was replaced by skill standard 40373.
--------------------------------	--

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	6 February 1997	31 December 2018
Revision	2	3 August 2000	31 December 2018
Review	3	24 January 2002	31 December 2018
Review	4	20 February 2009	31 December 2018
Rollover and Revision	5	20 April 2017	31 December 2022
Review	6	27 February 2020	31 December 2026
Review	7	30 January 2025	31 December 2026

Consent and Moderation Requirements (CMR) reference	0079
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.