

Title	Explain the uses of electrical reticulation plant and equipment in extractive operations		
Level	4	Credits	7

Purpose	<p>This standard is for those already working in the extractive industry to gain knowledge of electrical reticulation plant and equipment, and their uses.</p> <p>People credited with this unit standard are able to explain the uses of electrical reticulation plant and equipment in extractive operations.</p>
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Classification	Extractive Industries > Extractive Industries Management
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
- Health and Safety at Work Act 2015 (HSW);
 - Health and Safety at Work (General Risk and Workplace Management) Regulations 2016;
 - Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2022;
 - Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016;
 - approved codes of practice issued pursuant to the HSW Act.

Any new, amended, or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

Company procedures mean the documented methods for performing work activities and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.

Industry good practices may be documented in management plans, control plans, company procedures, managers' rules, occupational health and safety policy, industry guidelines, codes of practice, manufacturer's instructions, and safe working and/or job procedures (or equivalent).

3 Assessment information

This unit standard is intended for, but is not limited to, workplace assessment. In this standard, there is no intention for the learner to carry out a practical application. The range statements relate to company-specific equipment, procedures, and processes.

Outcomes and performance criteria

Outcome 1

Explain the uses of electrical reticulation plant and equipment in extractive operations.

Performance criteria

1.1 Compliance requirements for individuals authorised to operate, service, and maintain electrical reticulation plant and equipment are explained in accordance with legislation and industry codes.

1.2 The components and operation of electrical reticulation systems are explained in terms of their use in extractive operations.

Range components include for all extractive operations – instruments, electric motors, different voltage cables and extension leads, joint boxes, LifeGuards (LG) and connectors, lighting and emergency/battery lighting, communication, optical fibre and signaling systems, circuit breakers, switchgear, transformers, load centres, power circuit layout, Single Line Diagrams (SLD), sub stations, earthing systems, Generators (back-up or standalone); includes for underground coal mines, where this is the workplace context – flameproof enclosures, intrinsically safe equipment.

1.3 The safety and protection of electrical systems in reticulation plant and equipment is explained in accordance with legislation and industry good practice.

Range safety and protection of electrical systems includes for all extractive operations – isolation and lockout procedures, earth leakage systems, overload and short circuit trips, sensors, interlocks, resetting, basic maintenance requirements and reasons for them; includes for underground coal mines, where this is the workplace context – explosion risk zones (ERZs).

- 1.4 Electrical circuit and equipment measuring and monitoring instruments are explained in terms of their use at extractive sites.

Range instruments include but is not limited to for all extractive operations – multimeters, voltmeters, ohmmeters, ampmeters, insulation resistance tester, electronic instruments, thermal cameras; includes for underground coal mines, where this is the workplace context – intrinsically safe, flameproof, ERZs.

Planned review date	31 December 2029
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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 2017
Rollover and Revision	2	19 March 2010	31 December 2017
Review	3	18 June 2015	31 December 2019
Review	4	1 March 2018	31 December 2026
Review	5	30 January 2025	N/A

Consent and Moderation Requirements (CMR) reference	0114
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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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.