Title	Maintain and update operating log for electricity supply operational purposes		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the operating log; record operational details in the operating log; and use the operating log for analytical purposes, in an electricity supply environment.

Classification	Electricity Supply > Electricity Supply - Power System Management

Available grade	Achieved

Guidance Information

1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.

2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to
   − Health and Safety at Work Act 2015;
   − Electricity Act 1992;
   − Electricity (Safety) Regulations 2010;
   − Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry* (SM-EI) and relevant EEA guides available at www.eea.co.nz;
     and any subsequent amendments and replacements.

3 Definitions
   AIU – Automatic Indication Unit.
   Asset owner refers to an electricity industry participant who owns or operates assets used for generating or conveying electricity.
   Data refers to the information of a written or numerical form. The latter may include summary statistics, information in tables and numbers displayed in a variety of graphs.
   Industry requirements include all asset owner requirements; manufacturers' specifications; and enterprise requirements which may include the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.

Operating log is the collection of logbooks, sheets, completed authorisation forms and other records including electronic and tape, which together form a complete record of operating events in a station or operating area. It can include switching schedules, shift hand-over information, fault logs, operational constraints, and abnormal events of the system (movement of open points).
SCADA –Supervisory Control and Data Acquisition system used for control, indication, and monitoring purposes.
Status refers to the operational condition or state of any or all of the components of an electrical power system, relative to its expected or required performance level.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the operating log in an electricity supply environment.

Performance criteria

1.1 The purpose and applications of manual or electronic operating logs are explained.

Range may include but is not limited to – provide information for operators to make operating decisions, record operational information and instructions for managing transmission services, communications, protection, energy storage, generation and dispatch, produce history of operating events for use in post fault analysis.

1.2 Major categories of data records in operating logs are explained according to standard operating practice.

Range may include but is not limited to – instructions issued and/or received, operating actions, changes in plant from normal operating conditions, relevant non-operating events.

1.3 Format and type of entries used to input information into the operating log are explained in accordance with asset owner procedures.

Range may include but is not limited to entries such as – exact local time of sending, or receiving operational instructions and messages, communications, energy storage, generation and dispatch, switching instructions, operation of circuit breakers and disconnectors, auto-reclose operations, relay flaggings, AIU flag operations, protection limitations, public related events, incidents and messages reported to the control centre.

1.4　　　　Importance of updating operating log at set intervals is described in terms of the industry codes.

　　　　　　Range　　　　may include but is not limited to – keep all relevant system and work control documentation status up to date, keep uncompleted actions in view for supervision, avoid a blank log of entries in the event of a major system incident, assist a smooth hand-over of responsibility to replacement operator.

Outcome 2

Record operational details in the operating log in an electricity supply environment.

Range　　　evidence of three required.

Performance criteria

2.1　　　　The operating log is immediately updated upon receipt of operating information and data.

　　　　　　Range　　　　may include but is not limited to – date, time, event data.

2.2　　　　Entries are made in the operating log in chronological order.

2.3　　　　Entries are made in the operating log in a legible and unambiguous way.

2.4　　　　Abbreviations and terminology are used.

2.5　　　　Entries are made in the operating log with reference to the information source consistent with industry guidelines.

　　　　　　Range　　　　may include but is not limited to – field operator, SCADA, contractor, member of public, operating forms, industry codes.

2.6　　　　Non-operating events that impact on operational status are recorded in the operating log.

　　　　　　Range　　　　may include but is not limited to – events such as earthquakes, lightning and bird strikes, weather relating to operating events, accidents, unauthorised entry into restricted access areas.

2.7　　　　Archived operating log information and data is available on demand, and is stored in sequence and location as specified by the asset owner procedures.

2.8　　　　Information summaries are made to allow incoming operators to review operating events and current status of plant and equipment in operating area.

　　　　　　Range　　　　may include but is not limited to – authorisations outstanding, faults unresolved, other problems, generation status, abnormal circuit or plant configurations, recently imposed load constraints.

Outcome 3

Use the operating log for analytical purposes in an electricity supply environment.

Performance criteria

3.1   Fault data and information contained in operating log are analysed to ensure they meet asset owners' reporting requirements.

   Range   may include but is not limited to – determining types of faults, frequency of faults, operating control response to faults.

3.2   Decisions to be prioritised and carried out are informed by the analysis of the operating log.

3.3   Operating events and outcomes are assessed to establish long-term operational efficiency of system plant and equipment.

3.4   Performance levels of system plant and equipment are updated, and details recorded, in accordance with asset owner procedures.

Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	3 August 1999	31 December 2013
Revision	2	11 February 2004	31 December 2013
Rollover and Revision	3	26 November 2007	31 December 2013
Review	4	9 December 2010	31 December 2016
Review	5	21 May 2015	31 December 2023
Review	6	30 September 2021	N/A

Consent and Moderation Requirements (CMR) reference	0120

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

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.