



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline: Engineering (Signalling)

Category: Standard

Inspection and Testing of Signalling – Standard Forms

ESC-21-04

Applicability

ARTC Network Wide	✓	CRIA (NSW CRN)	✓
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Primary Source

SCP 11

Document Status

Version	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
1.2	13 August 2010	Standards	Stakeholders	Chief Operating Officer	Risk & Safety Committee 09/06/2009

Amendment Record

Version	Date Reviewed	Clause	Description of Amendment
1.0	27 Apr 09		First issue. Supersedes NSW Standard SCP 11 v1.0
1.1	07 Oct 09		Disclaimer updated as per Risk & Safety Committee 14/09/2009
1.2	13 August 2010	All	Issued as final.

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1 Introduction

1.1 General

This Standard sets out the typical requirements for inspection and testing documentation to be used to provide objective evidence of the process of certifying new and altered signalling works.

1.2 References

This Standard shall be read in conjunction with the ARTC Standards, Procedures and Work Instructions.

This Standard shall be read in conjunction with companion ARTC Engineering (Signalling) Standards:

- ESC-21-01 Inspection and Testing of Signalling - Roles, Responsibilities and Authorities
- ESC-21-02 Inspection and Testing of Signalling - Plans, Programs, Documentation and Packages
- ESC-21-03 Inspection and Testing of Signalling - Inspection and Testing Principles

This Standard shall be read in conjunction with Signal Engineering Instructions and Guidelines:

- As issued from time to time and published on the Engineering pages of the ARTC Intranet.

2 Inspection and Testing Standard Forms Index

2.1 *ESC2104F-01 Inspection and Testing Plan*

- Part 1: Inspection and Testing Strategy
 - Inspection and Testing Strategy Details
 - Quality Assurance Strategy
 - Inspection and Testing Strategy Check List
- Part 2: Inspection and Testing Outline Plan
- Part 3: Inspection and Testing Detailed Plan

2.2 *ESC2104F-02 Minor Signalling Work Package*

- Authorisation
- Inspection and Testing Plan – Minor Works
- Installation, Inspection, Testing and Commissioning Detailed Plan and Signalling Safeworking Requirements – Minor Works
- Installation, Inspection and Testing Quality Assurance Strategy – Minor Works
- Installation, Inspection, Testing and Commissioning Log – Minor Works

2.3 *ESC2104F-03 Installation Work Package*

- Authorisation of Installation Work Package
- Register of Working Documents
 - Register of Construction Copies of Working Drawings
 - Register of Signal Sighting Forms
 - Register of Detailed Site Survey Plans
 - Register of Site Installation Drawings
 - Register of Equipment and Operating Manuals
 - Register of Test Copies of Working Drawings
- Register of Quality Assurance Documentation
 - Register of Quality Assurance Documents
 - Register of Installation Work Package Documents for Version Control
- Type Approvals
- Accreditation / Competency Certificate
- Pre-Installation Test Certificates
 - Register of Pre-Installation Test Certificates
- Installation Inspection and Testing
 - Installation Inspection and Testing Log
 - Installation Inspection and Testing Report
- Installation Work Instructions
 - Register of Installation Work Instructions
 - Installation Work Instruction

- Issued Work Instructions
- Completed Work Instructions
- Installation Inspection and Testing Status Certificate
- Transmittals

2.4 *ESC2104F-04 Commissioning Work Package*

Section 1: Preparation

- Authorisation of Commissioning Work Package
- Safeworking Forms & Permits
- Network Alteration Notice and Circulars
- Scope of Works
- Commissioning Program
- Commissioning Notices
 - Certification of Signalling – ARTC
 - Certification of Signalling – V/Line
 - Commissioning Notice
- Prepared Pre-Commissioning Work Instructions
 - Pre-Commissioning Work Instruction
- Prepared Commissioning Work Instructions
 - Commissioning Work Instruction
- Prepared Post-Commissioning Work Instructions
 - Post-Commissioning Work Instruction
- Minutes of Pre-Commissioning Meeting

Section 2: Implementation

- Register of Work Instructions
 - Register of Pre-Commissioning Work Instructions
 - Register of Commissioning Work Instructions
 - Register of Post-Commissioning Work Instructions
- Completed Pre-Commissioning Work Instructions
- Completed Commissioning Work Instructions
- Completed Post-Commissioning Work Instructions

Section 3: Evaluation

- Commissioning Certificate
 - Commissioning Certificate – Part 1
 - Commissioning Certificate – Part 2
- Commissioning Log
- Attendance Book
- Report on Post-Commissioning Meeting
- Transmittals
 - Memorandum of Document Exchange

2.5 *ESC2104F-05 Handover Documentation Package*

- Updated Asset Register
- Interim Maintenance Copies of Design Documents
- Spare Equipment
- Equipment Manuals
- Certificate of Practical Completion
- Commissioning Work Package
- Copies of Inspection and Test Records
- Maintenance Issue of Design Documents
- Certificate of Acceptance
- Test and Certify (TC) Forms and Inspection and Testing Forms (ITF's)
 - TC 1(a) – Colour Light Signal Test Certificate
 - TC 1(b) – Double Light Signal (LED) Test Certificate
 - TC 1(c) – Single Light Signal (LED) Test Certificate
 - TC 2(a) – Cable Insulation Test Certificate
 - TC 2(b) – Cable Insulation Test Certificate
 - TC 2(c) – Cable Insulation Test Certificate
 - C/TC 3 – Compliance/Test Certificate – Cables
 - C/TC 4 – Compliance/Test Certificate – Cable Variance
 - TC 5 – Pre-Site Test Certificate
 - TC 6 – Point Operating Test Certificate
 - TC 7 – Location Power Supply Test Certificate
 - TC 8 – Motor Generator Test Certificate
 - TC 9 – Circuit Breaker Test Certificate
 - TC 10 – Level Crossing Test Certificate
 - TC 11 – Ready for Test Certificate
 - ITF 12 – Irregularities Found in Testing
- Certification Inspection and Testing Checklists
 - ITF 13/0 – Certification Inspection and Test Summary Checklist
 - ITF 13/1(a) – Checklist for Colour Light Signal
 - ITF 13/1(b) – Checklist for LED Colour Light Signal
 - ITF 13/2 – Checklist for Points
 - ITF 13/3 – Checklist for Ground Frames/Electric Releasing Switches
 - ITF 13/5 – Checklist for Track Circuits
 - ITF 13/6 – Checklist for Level Crossing
 - ITF 13/7 – Checklist for Power Supplies
 - ITF 13/10 – Checklist for Timer Relays/Units
 - ITF 13/11 – Checklist for Cables
 - ITF 13/15 – Checklist for Telemetry/Panel Processor
 - ITF 13/16 – Checklist for Control Console/Indicator Diagram
 - ITF 13/17 – Checklist for Location

- ITF 13/18 – Checklist for Computer Based Interlockings
- ITF 13/20 – Checklist for Aspect Sequence
- ITF 14 – Measuring Instrument/Tool Calibration/Test Record
- Interface Coordination Plan
- Typical Signal Sighting Forms
 - Signal Sighting Form – Double Light
 - Signal Sighting Form – Dwarf Signal
 - Signal Sighting Form – Guards Indicator
- Level Crossing Sighting Forms
 - Level Crossing Site Inspection Form
 - Stakeholder Site Inspection and Authority to Commission
 - Gated Pedestrian Crossing Assessment Sheet
 - Level Crossing Location Maintenance Visit Sheet