

Ref:	NR/L2/CTM/012/045
Issue:	1
Date:	06 March 2010
Compliance date:	04 September 2010

NR/L2/CTM/012/045 Competence & Training in Signal Engineering

SWT Mod 1: Tester in Charge

1 Purpose.

The purpose of this competence standard is to define the competence requirements for persons required to undertake planning of the Testing and Commissioning activity, control and co-ordination of, and commissioning of the signalling system.

2 Scope.

This competence standard applies in all circumstances where any person is required to manage the Testing and commissioning of Signalling systems on Network Rail managed infrastructure.

The Tester in charge (TIC) has overall responsibility for the testing and commissioning of new and altered signalling systems.

Mod 1 is split into 4 competencies:

- Module 1S – Simple Works
- Module 1C - Complex works
- Module 1M – Major Works
- Module 1E – Signalling Electronic Systems Works

3 Competence Standard.

This Competence Standard comprises three elements.

Element 1 Plan the Testing and Commissioning Activity

Element 2 Control and Co-ordinate the Testing and Commissioning Activity

Element 3 Commission the Signalling System

The first element is concerned with the gathering of information, specifying methods and procedures, planning, confirmation that conditions and procedures for implementation of the commissioning activity are suitable. Control of resources, production of and distribution of relevant documentation.

The second element deals with the correct implementation of testing plan, providing information to testing teams, effective use of resources, obtaining information, review of progress and identification/solving of problems and effective communication with relevant people.

The third element deals with assessment of the results of the commissioning, confirmation that products meet specifications guidelines. Provide information to relevant people, Identifying variations. Obtain acceptance of products. Correct completion/recording of relevant information.

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4 Assessment.

4.1 Initial Assessment

A modular training course is available for Mod 1 which leads to initial competence at Module 1S, subject to mentorship requirements, and employers competence assessment in accordance with NR/L2/SIG/30014/B410.

Progression to Mod 1C or 1M shall be by suitable and sufficient work experience under mentorship.

The tester will, at the same time work towards their IRSE license.

4.2 Re-Assessment

Licence holders will undergo surveillance after 5 years in order to retain their licence with a renewal IRSE Licensing assessment required after 10 years. Employers may have their own additional assessment processes in addition to this, and shall employ suitable surveillance of SWT staff.

4.3 Knowledge Evidence that is common to the whole unit.

You shall have knowledge and understanding of:

- a) What information is required, where it can be obtained and how to establish its currency and authorisation.
- b) What Signalling principles and design and installation procedures apply to the system.
- c) What are the regulations and guidelines that are relevant.
- d) How to establish the extent and limits of testing.
- e) What testing methods are applicable to the work to be completed and how much time and resources they require.

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Sig Mod 1 Unit – Tester in charge

Element 1: Plan the Testing and Commissioning Activity

Performance statements.

You shall be able to:

- Gather all relevant information relating to the signalling scheme. (Railway Specific)
- Specify the methods and procedures for commissioning the engineering products or processes.
- Plan the most appropriate way to commission the engineering products or processes.
- Confirm the conditions are suitable to implement the commissioning.
- Confirm the procedures for transferring control of the engineering products or processes.
- Determine and obtain the resources required to undertake the commissioning.
- Produce the testing documentation in an appropriate format, obtain the required approval and distribute the documentation to the relevant people. (Railway Specific)
- Confirm that any changes to the original information are accurately reflected in the documentation. (Railway Specific)

Scope of Competence.

- Gather information that is relevant to the scheme and confirm it is current, complete and authorised. Where insufficient information is available or where doubt exists you seek advice from relevant personnel.
- Interpret the information accurately to identify the types of tests required.
- Select the appropriate testing methods and specifications.
- Confirm the testing methods identified are applicable to the technology and the components/systems under test, and also take into account legislative and organisational instructions.
Testing methods may include:
 - Verification Testing
 - Functional Testing
 - Principles Testing
- Confirm that the documentation, technical manuals, instructions and plans that are required for the work, are accessible and authorised.
- Identify the extent and the types of tests required and confirm that the appropriate risk assessments have been completed.
- Clearly identify the interfaces between the system under test and the operational equipment.
- Established priorities and timescales for testing activities making optimum use of time and resources are available within the defined completion targets.
- Confirm the plan takes account of the factors affecting the work.
Factors include:
 - Human resources
 - Physical distribution of equipment
 - Possession required
 - Other engineering operations
 - Stage work
 - Specialised Test Equipment
 - Communications
- Established the optimum sequence for the completion of the project tasks and identify the relationships and dependencies.
- Deal with any conditions which are not suitable in accordance with organisational procedures.

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Element 1: Plan the Testing and Commissioning Activity
<p>Scope of Competence Cont,d.</p> <p>12. Conditions include:</p> <ul style="list-style-type: none"> • Authorisation • Preparation of products • Health and safety • Possessions • Availability of resources • Preparation of site • Environmental <p>13. Confirm resources are available, suitable and sufficient to meet the requirements of the testing schedule. Resources include</p> <ul style="list-style-type: none"> • Tools, Test equipment • Simulation systems • Materials • Consumables • Plant • Communications equipment • Personnel • Site facilities <p>14. Consult with all relevant people on the resources required.</p> <p>15. Obtain confirmation that personnel required for the work are available, competent and authorised for the specific testing activity.</p> <p>16. Confirm that all required documentation is complete, accurate, formatted and processed in accordance with organisational requirements. Documentation includes:</p> <ul style="list-style-type: none"> • Test plans • Schedules • Test specifications • Test certificates <p>17. Where the original information has changed, the impact is accurately reflected in the prescribed tests.</p>