



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline: Engineering (Signalling)

Category: Procedure

Signals Staff Competency Assessment

EST-20-02

Applicability

| | | | |
|-------------------|---|----------------|---|
| ARTC Network Wide | ✓ | CRIA (NSW CRN) | ✓ |
|-------------------|---|----------------|---|

Primary Source

| |
|-----------|
| ESI-08-01 |
|-----------|

Document Status

| Version | Date Reviewed | Prepared by | Reviewed by | Endorsed | Approved |
|---------|----------------|-------------|--------------|-------------------------|---------------------------------------|
| 1.2 | 13 August 2010 | Standards | Stakeholders | Chief Operating Officer | Risk & Safety Committee 10/03/2009 |

Amendment Record

| Version | Date Reviewed | Clause | Description of Amendment |
|---------|----------------|--------|---|
| 1.0 | 20 Apr 09 | | First issue. Supersedes Engineering Instruction ESI-08-01. Including issues from post Risk & Safety Commission consultation |
| 1.1 | 07 Oct 09 | | Disclaimer updated as per Risk & Safety Committee 14/09/2009 |
| 1.2 | 13 August 2010 | All | Issued as final. |

© Australian Rail Track Corporation Limited 2009

Disclaimer:

This document has been prepared by ARTC for internal use and may not be relied on by any other party without ARTC's prior written consent. Use of this document shall be subject to the terms of the relevant contract with ARTC.

ARTC and its employees shall have no liability to unauthorised users of the information for any loss, damage, cost or expense incurred or arising by reason of an unauthorised user using or relying upon the information in this document, whether caused by error, negligence, omission or misrepresentation in this document.

This document is uncontrolled when printed.

Authorised users of this document should visit ARTC's intranet or extranet (www.artc.com.au) to access the latest version of this document.

Contents

| | | |
|----------|---|-----------|
| 1 | General | 4 |
| 2 | Scope | 4 |
| | 2.1 Application to Works..... | 4 |
| | 2.2 Application to Signalling Staff | 4 |
| | 2.3 Procedure Owner | 4 |
| 3 | Responsibility | 5 |
| 4 | Competency Assessment Principles | 6 |
| | 4.1 Evidence of Competency | 6 |
| | 4.2 Qualifications and Experience | 7 |
| | 4.3 Health and Safety | 7 |
| | 4.4 Certification | 7 |
| | 4.5 Non Practicing Signals Staff | 8 |
| | 4.6 Audit | 8 |
| 5 | Competency Certification | 9 |
| | 5.1 Levels of Competency | 9 |
| | 5.2 Comparative Skills | 9 |
| | 5.3 Supervision | 9 |
| | 5.4 Competency Framework..... | 10 |
| | 5.5 Statements of Competency..... | 11 |
| | 5.6 Agreement..... | 12 |
| | 5.7 Related Information | 12 |
| | 5.8 Signals Competency Classification | 12 |
| 6 | Performance and Competency Issues | 14 |
| | 6.1 Performance..... | 14 |
| | 6.2 Review of Issues..... | 14 |
| | 6.3 Suspension of Competency..... | 14 |
| | 6.4 Reporting of Issues for Assessment Activities | 14 |
| 7 | Competency Assessment Process | 15 |
| | 7.1 ARTC Context for application of competency | 16 |
| | 7.2 Assessment Application and Records..... | 17 |
| | 7.2.1 Application for Assessment | 17 |
| | 7.2.2 Work Experience Records | 17 |
| | 7.2.3 Certified Copies of Education, Training and Work Records..... | 18 |
| | 7.2.4 Relevance of Past Experience | 18 |

| | | |
|----------|--|-----------|
| 7.2.5 | Supplementary Requirements | 18 |
| 7.2.6 | Applicant Agreement to ARTC Procedures | 18 |
| 7.2.7 | Organisation Requirements..... | 19 |
| 7.3 | Draft Statement of Competency | 19 |
| 7.4 | Submission of Assessment & Draft Statement of Competency..... | 19 |
| 7.5 | ARTC Review of Assessment and Endorsement | 19 |
| 7.6 | Competency Certificate Records | 19 |
| 7.7 | ARTC Publication of Certificates..... | 20 |
| 7.8 | ARTC Nominated Signalling Representatives | 20 |
| 7.9 | Trades and Assistants..... | 20 |
| 8 | Competency Assessment Framework..... | 21 |
| 8.1 | Authorised Assessors..... | 21 |
| 8.1.1 | Authorised Contractor Organisation & 3rd Party Organisations | 22 |
| 8.1.2 | Authorised Signalling Contractors | 22 |
| 8.2 | Duration of Competency Certificate..... | 23 |
| 8.3 | Transfer of Staff to other Organisation | 23 |
| 8.4 | Work Based Training in Specific Competency..... | 24 |
| 8.5 | Recording of Competency Information..... | 24 |
| 8.6 | Access to Competency Information | 24 |
| 8.7 | Use of Competency Information | 24 |
| 8.8 | Re-Accreditation Training | 25 |
| 9 | Schedule A: Competency Levels – ESW-20-02 | 26 |

1 General

ARTC has defined the following common requirements for the assessment and certification of competency of all staff involved in Rail Signalling Infrastructure (i.e. Railway Safety Work) including activities for design, projects, installation, testing, commissioning and maintenance.

This Procedure also details processes and requirements for organisations to ensure all signal staff meet the requirements of Signal Engineering Competencies against the functional criteria.

2 Scope

The scope of this Procedure is applicable to the Signalling Works and the Signalling Staff working on ARTC Signalling Infrastructure network wide.

2.1 Application to Works

The procedure applies to **all** staff involved in the design, construction, testing, commissioning, project management and maintenance of signalling infrastructure for ARTC who have a signalling competency.

Staff who have a trades or other discipline competency or a general labourer competency are not required to be assessed under this standard. This covers backhoe operators, electrical trades, concreter, general labourer. These people are then not permitted to directly work on the signalling infrastructure but are permitted to work on related infrastructure such as erection of buildings, construction of cable trenches, etc. However, they still require Induction, Track Safety Awareness and site safety in accordance with the ARTC procedures and practices.

2.2 Application to Signalling Staff

The procedure applies to operational, construction and design staff who may work in an office and not be physically present on the ARTC Signalling Infrastructure. It is applicable to all signalling staff. The staff shall be nominated as being in one of the following four categories.

- 1) **ARTC Signalling employees** This covers all ARTC staff who are employees, seconded or otherwise working under the ARTC structure. These staff will be assessed by ARTC internal assessors.
- 2) **ARTC Signalling Staff under Contract Arrangements** Staff working under contract arrangements through an external organisation under supervision of the ARTC staff. These staff will be assessed by ARTC internal assessors.
- 3) **Signalling staff employed by or contracted to Signalling Contractors** which are certified as complying with ISO9000 and who have documented Management Systems that address the requirements of AS4292. These staff will be assessed by the organisation's approved internal assessors. This includes signalling staff working for sub-contractors.
- 4) **Signalling staff employed by or contracted to Signalling Contractors** which are not certified as complying with ISO9000 or do not have documented Management Systems that address the requirements of AS4292. These staff will be assessed by assessors from nominated third party assessor organisations. This includes signalling staff working for sub-contractors.

2.3 Procedure Owner

The ARTC Manager Standards is the Procedure Owner and the initial point of contact for all enquires related to the content and format of this Procedure.

Previously the ARTC issued Certificates of Competency. Under this Procedure these are now referenced as Statements of Competency.

3 Responsibility

Responsibility for tasks associated with Signals Staff Competency Assessment is shared by all those involved in the process. Below are general details of responsibilities of individual roles/positions. The other sections of this document detail the responsibility for the performance of specific tasks.

- a) ARTC, its Contractors and Alliance Partners shall have a process of assessing the competency of staff prior to their undertaking any signalling related tasks.
- b) Contractors and Alliance Partners shall comply with this procedure to meet the outlined principles and outcomes. Alliance Partners and Contractors may use their internal policies and procedures to aid in achieving compliance with this procedure.
- c) The ARTC Infrastructure Manager and delegated officers are responsible for the implementation of this Procedure and to ensure that all Staff working on the Signalling Infrastructure and on projects shall have a relevant Statement of Competency.
- d) The nominated ARTC Managers are responsible for the Due Diligence Review and Endorsement of the Statement of Competency.
- e) Alliance Partners will have documented quality management processes that can be audited to demonstrate compliance with this Procedure.
- f) All Signalling Contractors and Alliance Partners are responsible that their Staff Competency is endorsed by ARTC before the staff commence work on the ARTC Signalling Infrastructure. All contractors, alliance partners and organisations are to ensure that they have staff, including all sub-contractors with the required competencies for the work on the signalling infrastructure.
- g) All signal staff are responsible for providing information as to the skills, competencies and experience that they possess. They shall maintain this information, ensure that it is accurate, keep it up to date and make it available for the process detailed in this Procedure.
- h) Staff shall not undertake work or tasks for which their competency has not been certified. All signal staff must advise the nominated ARTC representative or organisation representative when their competency statement is due to lapse. It is the responsibility of the Signal Staff to get the Competency Statement revalidated before its expiry.

4 Competency Assessment Principles

The processes for Signals Staff Competency shall meet the following principles:

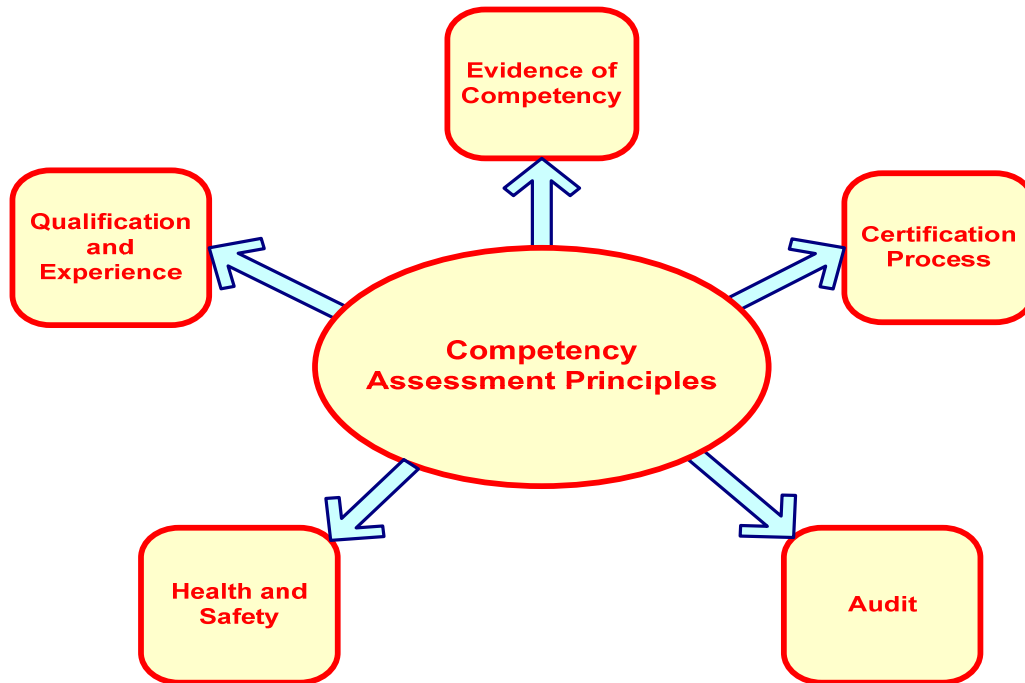


Diagram – 4.1 Competency Assessment Principles

4.1 Evidence of Competency

It is the responsibility of the person and the organisation to provide the evidence of the competency when seeking to have their competency assessed. The process followed in assessing and certifying the competency includes:

- 1) A formal documented process for Assessing Signals Staff Competency that includes documentary objective records of the competency evidence of the staff.
- 2) The process shall include relevant weighting for practical experience gained by the staff in performing Signalling tasks. The process shall also include formal training and assessment of competency for various skills.
- 3) The practical experience of a staff member shall be documented in a Work Experience Record or Professional Experience Log Book. The work shall be verified by a supervisor.
- 4) The competency of a person will diminish if the competency has not been used within the 4 year assessment period. Evidence of use of competencies shall be clearly indicated in the Work Experience Records.
- 5) Work Experience Records shall also clearly show where Staff may improve their competency rating by performing new or higher competency work under supervision or mentorship.
- 6) The organisation must keep, either individual records of staff competency or/and an organisation wide record of staff competency or a combination of both.

4.2 Qualifications and Experience

- 1) Signalling qualifications may be achieved through formal education training (Australian Qualifications Framework) or overseas formal training. These only provide the base level of competency for each skill or competency. Overseas formal training shall be correlated and certified to equivalent Australian qualifications by appropriate organisations.
- 2) Signals staff may also gain knowledge and competency from approved industry training courses and on the job training. The industry or equipment training courses shall generally be in accordance with ARTC Procedure EST-00-01 Signals Standards & Equipment Training Courses. On the job training and industry training courses shall be recorded in an Education & Training Record. This can be on the ARTC template or a form with equivalent information.
- 3) Signalling staff may attain further skills by practical experience in specific technical areas by working on signalling tasks under the direction and mentorship of a person who has the required level of competency and experience. This supervisor / mentor must certify the Work Experience Record and confirm the competency and experience attained.
- 4) The staff can then increase this competency to higher levels which represent greater complexity of technical understanding and capability. The competency level structure reflect this growth in understanding and capability.
- 5) Similarly, the level of skill may diminish if is not utilised over a period of time. Equally, industry Procedures, practices and systems change over time and lack of involvement will also lead to the person not keeping up with developments within the industry and current accepted practices. A person may reacquire competency levels by undertaking tasks or projects under the direction or supervision or mentorship of an appropriately qualified person.
- 6) Where a person has left the rail industry and/or railway signalling industry and have not had practical involvement in the railway signalling activities for more than 24 months, and then return to the industry, then they shall only work under direct supervision of accredited staff for a period of time. This period shall be at least one month for each year or part thereof that they have not worked in the signalling industry. They shall be assessed at the end of this period.
- 7) Where a person has left railway signalling for a period of 4 years or more than they shall undertake full re-accreditation training for the period they have been out of the industry. When this is completed satisfactorily, then the competencies of the person may be assessed.

4.3 Health and Safety

The health and safety of the staff is paramount and important while working on Signalling Infrastructure. All staff working on Signalling Infrastructure must have an acceptable health and safety record.

All signals staff are required to have a current valid medical assessment in accordance with the National Standard for Health Assessment of Rail Safety Workers appropriate for the type of work that they are performing. The candidate is responsible for updating this information as required. The date for reassessment of health may be different from the Statement of Competency expiry date. The candidate is responsible for ensuring the completion of the Health Assessment and advice of the results to the Competency Assessor prior to the Health Assessment expiry date.

Contractor Organisation and Supervisors are responsible for considering health and safety records of the Signalling Staff during the assessment for the issue of Competency.

Compliance with Drug and Alcohol Policy must also be considered for all Rail Safety Workers.

4.4 Certification

- 1) Signalling staff shall be certified in their nominated competencies for a period not exceeding 4 years.

- 2) A 4 year certification can only be given where the applicant has certified Work Experience Records covering the nominated competencies on the Statement of Competency. During the Transition period, certified Work Experience Records must cover the period from 1 January 2008 onwards. For periods prior to 1 January 2008, a verified 'Curriculum Vitae' with details of experience and related to competencies may be used. The Work Experience Records and Verified "Curriculum Vitae" must specifically address each of the competencies which have been graded. An applicant only requires the verified "Curriculum Vitae" to cover sufficient competencies and experience to support the graded competencies.
- 3) The certification process shall include a review of issues against the signalling staff member regarding the performance of signalling related functions and competencies. All such issues shall be examined, resolved and recorded. Staff shall not be certified in a particular competency or competency level where there are issues that are not resolved.
- 4) Competency Assessment examines a person's understanding, knowledge and experience in the respective signalling specific technical area. Assessment shall address the technical ability and use of process to achieve the required outcomes.
- 5) In regard to the ARTC Procedures and procedures, the assessment does not necessarily examine that the person is able to recall the contents of the respective ARTC Procedures and procedures. These Procedures are readily available on the ARTC intranet. However, the person must be able to demonstrate the ability to access ARTC Procedures, interpret the Procedures and implement the Procedures correctly. The person must have undertaken the ARTC Signal Procedures Induction.

4.5 Non Practicing Signals Staff

Staff who are not involved in railways or railway signalling will not be kept up to date in standards and their application to work tasks. Staff will also have the skills and competence diminish when it is not used regularly. The following shall be applied.

1. Where a person has left the rail industry and/or railway signalling industry and have not had practical involvement in the railway signalling activities for more than 24 months, and then return to the industry, then they shall only work under direct supervision of accredited staff for a period of time. This period shall be at least one month for each year, exceeding 2 years, or part thereof that they have not worked in the signalling industry. They shall be assessed at the end of this period.
2. Where staff has not had practical experience in the rail industry in the nominated competency or specific technical area during the previous 4 year period, then refresher training and assessment shall be undertaken prior to recertification of the competencies previously held.
3. Where a person has previously had a high level competency and has not practiced that competency in the previous four years, then that person's competency level shall be reduced commensurate with the level of related skills that have been practiced in the previous four years. A person previously with a Level 3 skill may be assessed as level 2 provided they have still been practising related competencies in the related role e.g. Design, Maintenance or Construction. However, if the person has been practicing related competencies, then this may provide sufficient work experience to keep the person at the previous competency level.

4.6 Audit

Each organisation providing staff who work on ARTC Signalling Infrastructure, is responsible for the assessment of the competencies of its staff in accordance with these ARTC requirements.

The organisation must audit the processes annually and in accordance with its quality procedures to ensure that it is meeting the requirements of this procedure. The organisation shall promptly advise ARTC of any audit issues arising against these ARTC Competency Assessment requirements and action to be taken to rectify the situation.

5 Competency Certification

5.1 Levels of Competency

Competencies required to work on Signalling Infrastructure has been identified and are dependent upon the complexity and the extent of the work.

Generally, the following levels of competency will apply. In some cases not all of the levels will be available in the templates because of the nature of the competency.

- LEVEL 0** No certified knowledge on the subject
- LEVEL 1** Training Exposure. Basic skill level attained but requires coaching. Has knowledge & Understanding of the Procedures. Person when performing the competency must be under supervision.
- LEVEL 2** Certified as being able to perform the identified competency independently and without supervision in routine activities. Also competent to perform complex activities under supervision of a level 3 person.
- LEVEL 3** Certified as being able to perform the identified competency independently and without supervision in all activities. Can coach others and be a team leader.

Generic activities are those as detailed in the Procedures, procedures and work instructions. An example is the performance of maintenance and testing activities that relate directly to the activities detailed in the procedures, service schedules etc. In the case of design, it would include new designs for configurations that were very similar to existing designs for example automatic signalling or a simple CTC crossing loop.

Supervision may vary depending upon the type of task, the existing competency, ability and experience of the person and the amount of other competencies.

Where a competency relates to a qualification assessed by an independent and suitably qualified organisation, then the competency will be rated as Y for Yes and N for No based on the production of suitable evidence of the attainment of the qualification. For example a Certificate IV in Rail Signalling Technology is issued by a Registered Training Organisation under the Australian Qualification Framework.

5.2 Comparative Skills

For each competency Section 10 Appendix - Levels of Competencies details a range of comparative skills, experience and ability that would be characteristic of a person with the nominated competency level. This is used as a guide to Assessors when evaluating the training, skill, experience and capability of the candidate. It is not an absolute definition of the requirements for the competency level. The Assessor shall consider the balance between these attributes when evaluating a candidate.

The candidates may also use these criteria as a guide to the levels of experience and training required prior to requesting an assessment for a particular competency level.

5.3 Supervision

Levels 1 and 2 require the supervision of the person by a suitably qualified person.

The level of supervision may vary according to the skills, experience and competency of the person and the task being performed. Supervision may take many forms, see examples below. The level of supervision, on the job training and mentorship is decided by the supervisor.

- Direct Supervision** the person is supervised by a competent supervisor/mentor who is at the same equipment location (or position where the activity is performed) as the person and checks the work at least once a day.
- Indirect Supervision** the person is supervised as part of a team which is under the control of a supervisor / mentor. The supervisor / mentor is in the same general location as the person but may be at a different equipment position. For example the person is at one end of a crossing loop and the supervisor is at

the other end of the crossing loop. The supervisor communicates with the person at the start and at the end of the shift and provides a pre-work briefing to the person. The supervisor is available for discussion via communications link during the day.

Remote Supervision the person is at a remote location performing the task under the supervision and mentorship of the supervisor at a different location. Communication is by radio or phone service. The supervisor will discuss the task with the person prior to undertaking the task. A review will be undertaken by the supervisor after the task is undertaken and prior to completing a shift of work.

Remote Mentor The person is performing the tasks at a different location to the supervisor / mentor. The supervisor is available for advice and mentoring by radio or phone service during the undertaking of tasks but does not necessarily do a pre-work briefing every shift. The supervisor reviews performance at least weekly.

Task Supervisor/Mentor This would generally apply for design, construction activities where the results of the activities are not in service. The supervisor is available for advice and mentoring by radio or phone service or in person during the undertaking of tasks but does not necessarily do a pre-work briefing every shift. The supervisor reviews performance at least weekly.

5.4 Competency Framework

| DESIGN | CONTROL SYSTEMS | FIELD MAINTENANCE/CONSTRUCTION | | FIELD CONSTRUCTION |
|--|-----------------------------------|--|---|---|
| SIGNAL DESIGN ENGINEER F02 | CONTROL SYSTEMS ENGINEER F08 | SENIOR SIGNAL ENGINEER F01 | | |
| | | SIGNAL ENGINEER MAINTENANCE/CONSTRUCTION F03 | | SIGNAL ENGINEER CONSTRUCTION F03 |
| SIGNAL DESIGN ASSISTANT F02 | CONTROL SYSTEMS TECHNICIAN F09 | SIGNAL MAINTAINER MAINTENANCE/CONSTRUCTION F04 | | SIGNAL INSTALLER/TESTER F06 |
| | | SIGNAL ELECTRICAL & MECHANICAL MAINTENANCE/CONSTRUCTION F05 | SIGNAL MECHANICAL MAINTENANCE/CONSTRUCTION F07 | TRADES ASSISTANT & SITE ACCESS WORK COMPETENCY F10 |
| SIGNAL STAFF COMPETENCY AGREEMENT | | | | |

Table of Signalling Competency Roles and related Certificates.

5.5 Statements of Competency

The Statements of Competencies (SoC), Checklists and Forms applicable to this Procedure are:

Statements of Competency

- *EST2002F-01 Senior Signal Engineer*
- *EST2002F-02 Signal Design Engineer*
- *EST2002F-03 Signal Engineer - Maintenance/Construction*
- *EST2002F-04 Signal Electrician/Maintainer – Maintenance/Construction*
- *EST2002F-05 Signal Electrical & Mechanical – Maintenance/Construction*
- *EST2002F-06 Signal Installer/Tester*
- *EST2002F-07 Signal Mechanical – Maintenance/Construction*
- *EST2002F-08 Control Systems Engineer*
- *EST2002F-09 Control Systems Technician*
- *EST2002F-10 Trades & Assistants/Site Access*

Competency Assessment Checklists

- *EST2002F-11 Senior Signal Engineer*
- *EST2002F-12 Signal Design Engineer*
- *EST2002F-13 Signal Engineer - Maintenance/Construction*
- *EST2002F-14 Signal Electrician/Maintainer - Maintenance/Construction*
- *EST2002F-15 Signal Electrical & Mechanical - Maintenance/Construction*
- *EST2002F-16 Signal Installer/Tester*
- *EST2002F-17 Signal Mechanical Maintenance/Construction*
- *EST2002F-18 Control Systems Engineer*
- *EST2002F-19 Control Systems Technician*
- *EST2002F-20 Trades & Assistants/Site Access*

Miscellaneous Forms

- *EST2002F-21 Signals Competency Assessment Request*
- *EST2002F-25 Signalling Work Experience Record*
- *EST2002F-26 Education & Training Record*
- *ARTC Work Experience Record (Example)*

Change to Competency

- *EST2002F-24 Signals Competency Upgrade Request*
- *EST2002F-22 Signals Competency Transfer Request*

Assessors and Assessor Organisations

- *EST2002F-23 Signals Competency Assessor Organisation Approval*
- *EST2002F-23A Signals Competency Assessor Request*

5.6 Agreement

Each of the Statements of Competency has sheet 2 as the standard Agreement for the candidate to follow ARTC standards and procedures. This covers the following items:

- a) Agreement to act in accordance with ARTC Standards;
- b) Not to do work without a valid Competency Certificate;
- c) Maintain a Work Experience Record or Log Book (except for Trades & Assistants);
- d) Management of access to ARTC locations and information;
- e) Management of Security Keys.

The person must also carry the Track Safety Awareness / Rail Safety Induction card at all times when working on ARTC infrastructure.

5.7 Related Information

Each of the Statements of Competency has sheet 2 which includes other information on the applicant. This is:

- a) Name address and telephone number;
- b) Portrait photo. This must be a good quality colour photo of the head (face view) and the top of the shoulders only. Sun glasses or hats are not to be worn in the photo. A standard passport type photo is suitable;
- c) Details of the National Standard for Health Assessment of Rail Safety worker showing the Category and valid date;
- d) OHS Induction reference and relevant state;
- e) Track Safety Awareness / Rail Industry Safety Induction reference, validity date and state(s) applicable to.

This information is assessed under other standards and is included here for reference.

The applicant must sign the Agreement. This signature must be witnessed by a representative from the organisation that the person works for or is contracted to.

5.8 Signals Competency Classification

The following classifications of signals competency are covered by this Procedure. The grouping of competency skills within a classification is based on typical grouping of the skills within roles for signals staff within the Australian rail industry. These may not necessarily match those in other industries or regions of the world. Candidates should initially select the classification based on the criteria detailed below. The actual classification achieved is based on the assessment.

- Senior Signal Engineer Field
This covers maintenance, construction, signal engineering, and management roles and responsible for a major function or group of signals people. The person typically has greater than 10 years engineering experience in railway signalling with at least 5 years in a responsible signal engineering management position.
- Signal Design Engineer
This covers those staff involved in signalling design who have an education attainment through a formal course from a TAFE, University or equivalent technical institute. Alternatively they may have more than 10 years experience as a signalling designer.
- Signal Design Assistant
This covers those staff involved in signalling design who do not meet the above requirement. This also covers related competencies as applied by CAD operators and draftsman.

- Signal Engineer Maintenance & Construction
 - This covers those staff involved in signalling maintenance and construction who has been assessed under an industry based process as meeting requirements covering a broad and detailed understanding of the signalling maintenance and constructions practices and the management of staff involved therein. Alternatively, they may have an education attainment through a formal course from a University or equivalent technical institute in a technical discipline related to the signalling work. Staff who have the Electrical Certificate IV and have also completed postgraduate training (diploma) covering Signal Engineering or Maintenance Management may also attain the Signal Engineer level.
- Signal Maintainer – Maintenance / Construction

This covers those staff involved in signalling maintenance and construction who have completed the Electrical Certificate IV in Rail Technology or an equivalent course and have been assessed under an industry based process as meeting requirements covering a broad and detailed understanding of the signalling maintenance and constructions.
- Signal Electrical & Mechanical – Maintenance / Construction

This covers those staff involved in signalling maintenance and construction who have completed an AQF Certificate course or equivalent and have been assessed under an industry based process as meeting requirements covering an understanding of the signalling maintenance and constructions practices.
- Signal Installer / Tester

This covers those staff involved in signalling construction who have completed an AQF Certificate course or equivalent and have been assessed under an industry based process as meeting requirements covering an understanding of the signalling constructions and testing practices.
- Signal Mechanical – Maintenance / Construction

This covers those staff involved in signalling maintenance and construction who have completed an AQF Certificate course or equivalent and have been assessed under an industry based process as meeting requirements covering an understanding in the construction, installation, testing and maintenance of signalling mechanical and electrical equipment and the relevant procedures and processes.
- Control Systems Engineer

This covers those staff involved in signalling control systems who have an education attainment through a formal course from a TAFE, University or equivalent technical institute. Alternatively they may have more than 10 years experience working on signalling control systems.
- Control Systems Technician

This covers those staff involved in signalling control systems who have completed an AQF Certificate course or equivalent in a discipline related to the control systems technology.
- Trades & Assistants / Site Access

This covers all other persons with Trade certificates or industry based certification for a skill that is applied in the construction or maintenance of signalling infrastructure. It also includes labourers who work on signalling infrastructure. These people who consistently work on the signalling infrastructure should use this competency form.

Trades and labourers who work consistently on signalling infrastructure should use the form EST 20 02 F20 Trades & Assistants / Site Access. Trades and labourers who are only occasionally required to work indirectly on signal infrastructure, do not require to be assessed under this standard. However, they still require Induction, Track Safety Awareness and site safety in accordance with the ARTC procedures and practices.

6 Performance and Competency Issues

All issues with the Statement of Competency or the competency of the staff must be reported to the nominated ARTC Representative or an ARTC Infrastructure Manager. Performance and Competency issues are examined so as to prevent the opportunity for events that may compromise the ARTC safety and efficiency objectives and this is the primary concern.

6.1 Performance

Issues may arise with regard to the manner in which a person with a Statement of Competency undertakes work on ARTC infrastructure. These issues and concerns may include but are not limited to the following:

- Performance of work
- Non-compliance with ARTC Standards and Procedures
- Qualifications and experience record
- Health and Safety record including use of alcohol and related matters

6.2 Review of Issues

The ARTC Representative shall review the issue or refer it to another nominated ARTC Representative or Infrastructure Manager to be reviewed. The issue shall be reviewed as expeditiously as possible. During the review the nominated ARTC Representative may direct the person(s) covered by the issue(s) to not undertake any activities on ARTC infrastructure for a period of up to 48 hours. An extension of this period shall be approved by a General Manager of ARTC. The person shall comply with this direction.

The Review should address the nature of the issue including the performance of work by the respective people with regard to their certified competencies. The Review shall consider the ARTC Standards, Procedures and Practices, all contributing factors, the resulting impact and the potential for a safety or quality breach. The Reviewer shall provide the person being reviewed with an opportunity to submit a written submission explaining the details of the issue or event.

At the completion of the Review the nominated ARTC Representative shall address the issues by:

- Doing nothing if the concerns are not substantiated and do not have relevance to the Signalling Competency matter
- Recommend the Imposition of restrictions on work that can be undertaken by the staff by lowering the level of competency of Certificate
- Recommend the Temporary or permanent suspension of the Statement of Competency

6.3 Suspension of Competency

A General Manager of ARTC must approve the suspension of a Statement of Competency or the imposition of restrictions for a person following issues arising from the review of performance of activities by that person.

6.4 Reporting of Issues for Assessment Activities

The results of any reviews are to be recorded in the register of Competencies.

The person who has had their competencies adversely affected by a Review of an issue shall detail this in any subsequent submission for a Competency Renewal or change.

7 Competency Assessment Process

There are a number of steps in the assessment of Signalling Competencies. The Assessment may be conducted within ARTC, by approved organisations that are contractor or alliance partners to ARTC or by third party assessors. For the non-ARTC organisations, the assessment procedure must be documented, be auditable and shall assist the assessor to issue Draft Statement of Competency, to the persons who have demonstrated their competency. The assessment process adopted by ARTC Signal Discipline and the external organisation may differ but external organisation must demonstrate the logic and the ability to achieve the outcomes of ARTC Procedures and Practices. In both situations the ARTC forms shall be used. The major activities in the assessment process are detailed below.

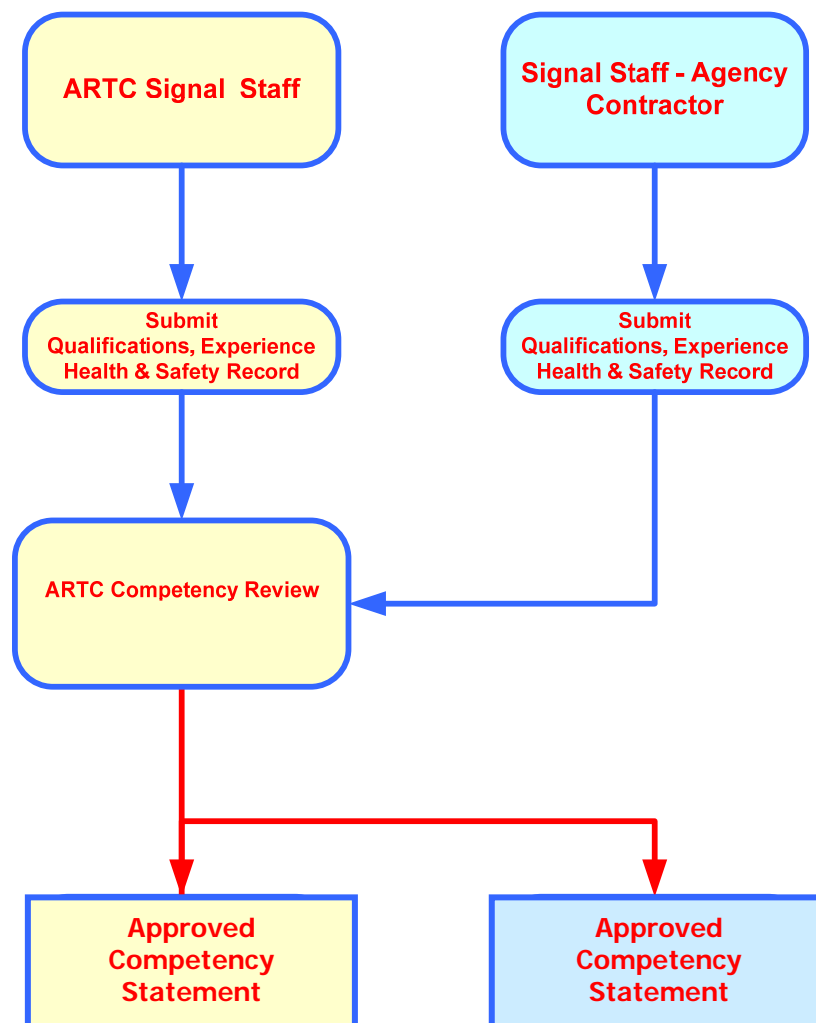


Diagram – 7.1 ARTC and Contractor Agency Staff Competency Process

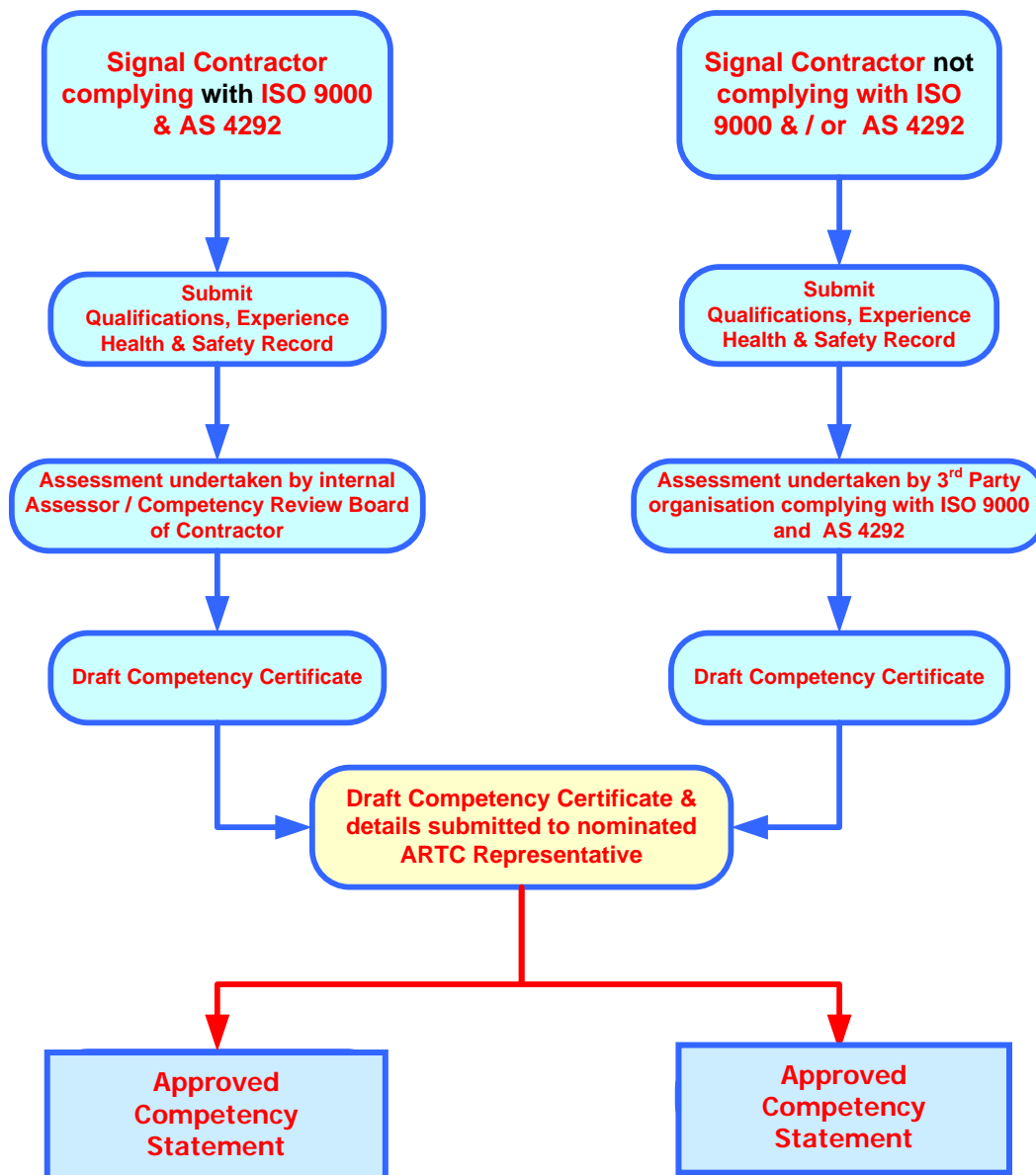


Diagram -7.2 Contractor Signal Staff Assessment Process

7.1 ARTC Context for application of competency

The person requiring certification shall not only have the required competencies but shall be able to use these within the ARTC context. This requirement must be auditable and there shall be records of the information and the resulting assessment. The person shall have completed the Signals Standards Induction self paced course. The person shall be assessed as having knowledge of the ARTC standards and practices and know how to access these standards. Where the person is applying for high levels of competency, then the person shall be able to demonstrate familiarisation with the ARTC signals standards and experience in using the standards.

The person shall demonstrate that they have access to the ARTC standards to the extent required by the work that they would perform under the nominated competencies.

7.2 Assessment Application and Records

The nominated ARTC Forms shall be used. Where an alternate form is permitted e.g. the Work Record, then the alternate shall contain all the information nominated on the ARTC form. All documents are to be provided to ARTC in electronic format. It is important that configuration management is practiced in the naming of these files. Generally files shall be in scanned pdf format. Photos shall be in jpg format. Where the ARTC form is completed and submitted as a draft, then the word template format shall be submitted.

In all these cases the file shall be named with the following structure <Competency ID>-<first name>-<surname>-<file subject>.<file type>.

Separate files shall be provided for each separate file subject e.g. Work Experience, Training qualifications, Track Safety Awareness details, Medical Assessment etc.

7.2.1 Application for Assessment

The person requiring accreditation shall submit an application with supporting information to the nominated assessor within the organisation. The details of the application for competency shall include but not limited to:

- Detail the competencies (refer to the Statement of Competency) for which certification is requested and the requested level of competency.
- The applicant shall also provide the supporting evidence and other corroboration for the nominated competency.
- The application shall include a colour photo of the portrait of the person similar to a passport photo.
- Documentary proof of IRSE Licenses or other similar external assessments undertaken.
- Work experience Log Books with corroboration by the task supervisor.
- A CV may be used provided the items are corroborated by a manager or independent source. (Note: Refer Transitional Arrangements: CVs will only be accepted for work undertaken prior to 2008 which shall be updated with other sources by early 2009.)
- Personnel requiring certificate to maintain fault, attend incidents, book out and disconnect operational signalling equipment must attend and pass reaccreditation training conducted by ARTC's approved RTO.
- In certain cases the applicant must list training and assessment in regard to "Gap training and reassessment".
- Applicants in possession of Statement of Competency issued by RailCorp or other organisations must attend "Gap training and reassessment" for issue of Competency Certificate under ARTC Procedure.
- Applicants having Certificate of Competencies from other organisations are required to complete all requirements of full training and reassessment for gaining Statement of Competency.

The candidate must submit a completed and signed form [EST2002F-21](#) Signals Competency Assessment Request. This must be accompanied by a Competency Assessment Checklist for the appropriate classification of signals competency. These forms are in the range EST2002F-11 to EST2002F-20. Details of the type of evidence for each competency and the reference to that activity on the Work Experience Record form [EST2002F-26](#) or equivalent must be completed. The forms also detail the supporting information to be supplied.

7.2.2 Work Experience Records

The experience of a person is demonstrated on the Work Experience Record. This may take the form of the ARTC template [EST2002F-26](#). Alternatively, equivalent templates within an organisations quality system or Industry based systems such as the IRSE Logbook are acceptable. These must be filled out to meet the following outcomes.

- a) Description of the task performed;

- b) Role and responsibility of the person in terms of the respective competencies and levels;
- c) Equipment or system types;
- d) A Verification signature, name and ID of a supervisor for the task/activity;
- e) Any observations or assessments of how the person performed the task.

All work experience records post 1 January 2008 must be in this form. Work Experience records must be updated at least annually. It is recommended that people update the records on a three monthly basis. Where a person is working on projects or for different organisations, then the work experience record shall be updated and verified at the end of each major task or when the person finishes work with an organisation.

7.2.3 Certified Copies of Education, Training and Work Records

The Education certificates, training records and work experience records are an important part of the competency process. It is important that this information is correct. The Competency Assessor must ensure that copies of these documents are valid. Where a copy of a record is provided it shall be a copy certified by a Justice of the Peace. Where the original is shown and a copy is provided, then the Competency Assessor shall certify the copy as follows:

"This is a certified copy of the original which I have sighted"
Signature of Assessor, printed name of Assessor, date

7.2.4 Relevance of Past Experience

Formal education training and industry based training are the basis for an assessment of the base competencies of persons working on signalling infrastructure. However, actual practical experience in a variety of tasks and under the supervision and mentorship of suitably experienced signals staff is necessary to attain the higher levels of competency

Where an applicant has had a previous ARTC or other organisation assessment of competency and one or more of those competencies have not been used for all or part of the past four years, then the applicant is required to demonstrate, that they have maintained the competency.

Where an applicant has not practiced or worked in railway signalling or directly related disciplines in the past 4 years, then all the competencies shall be reassessed after completion of a refresher course or instruction or work under supervision until competent in the respective competencies.

7.2.5 Supplementary Requirements

The person being assessed shall have:

- The knowledge of applicable ARTC Procedures and Procedures;
- Know how to access the ARTC Standards & Procedures;
- Keep up to date with changes in ARTC standards and procedures.

The Organisation shall assess and record how the applicant meets above requirements. The assessment processes shall be available for ARTC to review.

Please refer ARTC Signal Procedures & Equipment Training Courses EST-00-01 Procedure for meeting these Supplementary Requirements.

7.2.6 Applicant Agreement to ARTC Procedures

The applicant shall confirm acceptance of the following items in an agreement.

- Agreement to perform all work in accordance with ARTC Procedures, Procedures, Practices and Instructions;
- Agreement to manage access to ARTC Infrastructure locations, information, documents;
- Agreement to ARTC procedures for use of security keys.

All staff must sign the agreement which is on page 2 of the Statement of competency.

Site Access & Work Competency Agreement Form: *EST2002F-10* applies.

7.2.7 Organisation Requirements

The following requirements are generally evaluated at the Organisation level. However, where the organisation has not demonstrated these requirements they need to be established by other processes.

- The person must work under a Quality Management System which ensures that all tasks are performed in accordance with the respective ARTC standards and practices. This may be an organisation's Quality Management System or a project based Quality Plan covering all activities;
- The tasks and work performed by the person must be subject to reviews and checks as detailed in the ARTC standards and practices;
- The person must undergo a performance review of their work at least on an annual basis by a supervisor. The results must be documented and be available for audit by ARTC;
- Where the person works on multiple projects or tasks for multiple organisations then the performance review shall be by the supervisor of the task. It shall be conducted immediately after completion of the project or task.

7.3 Draft Statement of Competency

The nominated Signalling Competency Assessor shall issue a draft Statement of Competency. This shall be based on the information supplied for the assessment and be in strict accordance with the results of the assessment. The Statement of Competency shall be signed by the applicant and by the assessor.

7.4 Submission of Assessment & Draft Statement of Competency

The draft Statement of Competency shall be submitted by the Assessor to the nominated ARTC Signalling Representative.

All supporting information in electronic form shall also be submitted with the Draft Statement of Competency. Scanning shall be in colour and otherwise in accordance with ARTC Instruction EGI-07-01.

Assessor and the Assessor Organization will use relevant forms for the assessment and all supporting information. The Assessor when submitting the electronic records by email to ARTC shall include the following certification in the email. The email shall also include a list of the attached files of supporting information for the assessment. Only one competency assessment shall be covered by each individual email.

"The attached documents are certified as being true scanned copies of the originals that I have sighted."

7.5 ARTC Review of Assessment and Endorsement

The nominated ARTC Representative shall review the submitted Draft Statement of Competency, supporting documents and Assessment Record. This shall be in the form of a Due Diligence Review to confirm that the assessment is supported by the documents. If the ARTC Signalling Representative is satisfied with the review, then the Certificate shall be endorsed by the ARTC Representative.

ARTC may request additional information or explanation from the Assessor.

7.6 Competency Certificate Records

All information shall then be placed in the electronic file records in the ARTC System drive Engineering Competency folder. Each assessment shall be placed in a separate sub-folder. The scanned copy of the signed & endorsed Statement of Competency shall be added to the record

of Statements of Competency. The respective details shall be added to the Signals Staff Competency Register.

An electronic copy of the Certificate shall be issued to the applicant and to the Assessor.

7.7 ARTC Publication of Certificates

The list of signals staff and their respective Statement of Competency, ID and expiry date shall be displayed on the ARTC Engineering Intranet/Extranet. Access to Competency Register or to copies of certificates shall be made available to the individuals within external organisations that have a valid interest in this information.

7.8 ARTC Nominated Signalling Representatives

The ARTC Nominated Signalling Representative persons are as approved by an ARTC General Manager.

7.9 Trades and Assistants

Where a staff person does not have specific signalling competency Trades & Assistants Site Access & Work competency Form [EST2002F-10](#) shall be used to record the respective competencies of the person. This shall be submitted to ARTC and endorsed before undertaking any work on the ARTC Infrastructure.

This may be used to cover specific trades or other skills – example carpenter, back hoe operator.

8 Competency Assessment Framework

8.1 Authorised Assessors

Assessor shall require an approval from ARTC to enable them to assess applicants for assessing and drafting the Statement of Competency for staff to work on ARTC Signal infrastructure. An application to be an Authorised Assessor to ARTC will include all details of formal qualifications attained, experience gained in working at Signalling Infrastructures, mentoring and supervising experiencing, health and safety record, courses given and assessing others.

An Assessor must belong to an organisation complying with ISO 9000.

An Assessor shall be able to demonstrate skill and experience in all the tasks detailed in this procedure.

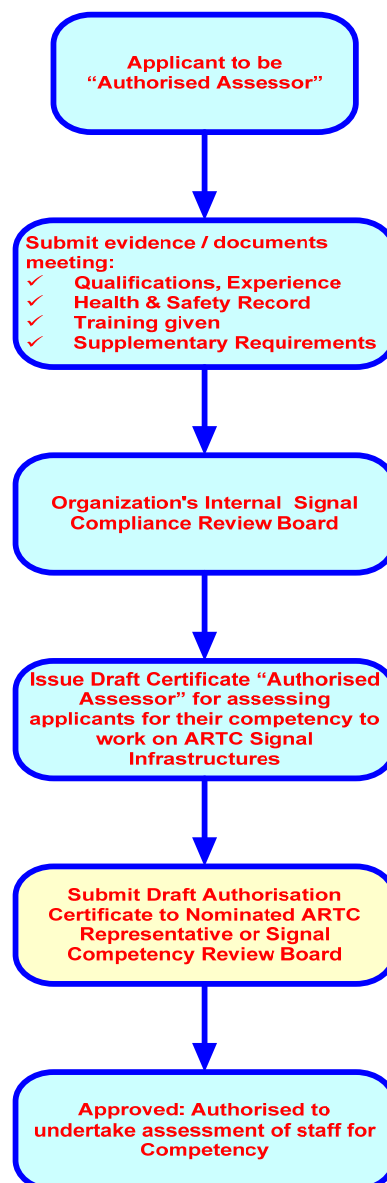


Diagram – 8.1 “Authorised Assessor” Review Process

8.1.1 Authorised Contractor Organisation & 3rd Party Organisations

The Organisation shall assess the Competency of an applicant to work on ARTC Signalling Infrastructure unless the Organisation has been formally authorised by the ARTC Representative.. This Authorisation includes drafting the Statement of Competency for all activities on site and in the organisations design sections and workshops related to ARTC Signalling Infrastructure.

The Organisation shall establish a documented process for Assessment of the Competencies of applicants. The Organisation shall nominate a Senior Signal Engineering Manager to perform the assessments. The Organisation shall keep records of all the assessments. The assessment process shall be rigorous to ensure the accuracy of the Certificate of Competencies. The assessor shall ensure that the applicant meets the Supplementary Requirements prior to issuing the Draft Statement of Competency.

Signalling Contractor Organisation or 3rd Party Organisations:

- Must comply with ISO 9000 Quality Management Systems and AS4292 Safety Management Systems.
- Shall have a documented Quality Management Process.
- Must have knowledge, skills and capability to apply relevant legislations
- Seeking "Authorisation" status shall submit evidence of their capability to ARTC Signal Compliance Review Board to review their capability with all relevant documents.

The Authorised Contractor or Third Party Assessor is responsible for the Competency Assessment results for each person assessed. An Authorised Contractor is also responsible for:

- Performance reviews of the assessed staff at least on an annual basis;
- Ensuring that the staff undertake the activities under quality management processes;
- Ensuring that staff do not work outside their assessed areas of competence;
- Ensuring that the staff have access to the ARTC standards and practices;
- Ensuring staff are informed of changes in the ARTC standards and practices;
- That records of competency Assessment and supporting documentation are kept for all assessments;
- Complying with the performance management requirements in accordance with section 6 of this standard;

Where staff with previously assessed competency transfer in to the organisation then the above responsibilities will apply.

8.1.2 Authorised Signalling Contractors

Where the Authorised Organisation is also a Signalling Contractor:

- Organisations shall assess and document the signalling competencies of all staff (employees, contract and sub-contract staff or seconded staff) that they assign to any work on ARTC Signalling Infrastructure.
- The organisation shall establish processes and procedures that meet the intent and outcomes detailed in this Procedure. The organisation shall conduct its own internal audits of its processes to ensure that they are effective and continue to meet the stipulated ARTC requirements from time to time.
- The organisation shall submit the staff competency assessments and supporting evidence of competency including work history, training, diplomas, certificates, letters of appointment, professional log, health and safety record, etc, to the nominated ARTC Signalling Representatives for endorsement.
- The Organisation shall have a procedure form to document the assessment and include any comments or conditions arising out of the assessment. The form shall also include how the applicant meets the Supplementary Requirements.

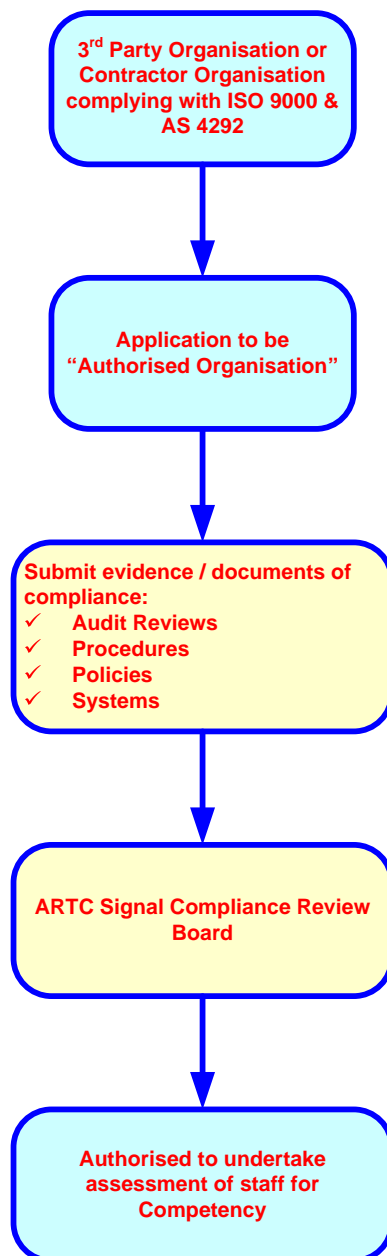


Diagram – 8.2 “Authorised Organisation” Review Process

8.2 Duration of Competency Certificate

The duration of Certificates of Competency issued under this Engineering Procedure shall be 4 years.

8.3 Transfer of Staff to other Organisation

Where an applicant has a current Statement of Competency in railway signalling from another organisation, it may be taken into account in determining the competency of the person.

- The applicant must meet Supplementary Requirements; these cannot be offset by experience or Competency Certificate from another organisation.
- Where a person has an ARTC endorsed certification of competencies through one organisation and proposes to work under another organisation, then the information shall be resubmitted by the new organisation along with the information on Supplementary Requirements.
- The nominated senior person in the new organisation must also endorse the draft Statement of Competency as detailed in section 7 above.
- The Draft Statement of Competency shall be approved by the nominated ARTC Representative if found satisfactory and meeting all requirements.

8.4 Work Based Training in Specific Competency

Where an applicant wishes to gain a Competency Certification in a specific task or technology or to improve a Competency rating to a higher level, then Work Based Training may be applicable. This applies to competencies not covered by formal or industry training courses. It applies where the applicant has lower level competency or certified competency in a related technical task. The applicant may work under the direction and mentorship of a person certified with the competency. The applicant shall also undertake study of the respective Procedures documents or manufacturer's documentation and data sheets.

(Note Examples of Work:

- a certified Commissioning Engineer may work as the Commissioning Engineer on the back shift under the direction of the Certified Commissioning Engineer on the day shift.
- a maintenance or design engineer may work on an item of technology under direction where he has a competency in a related technology.)

All Work Based Training is to be documented in the Work Experience Log Book and corroborated by the supervisor. The updated Log Books can be used as supporting material for a request to upgrade or extend the competencies certified.

An applicant shall submit *EST2002F-24* where an increase in the competency level or new competency assessment is requested.

8.5 Recording of Competency Information

All ARTC projects shall be managed with documented Installation, Testing and Commissioning Work Packages. Within each of these packages shall be a list of all staff proposed to undertake the works detailed. A copy of the Statement of Competency for each of the staff shall be included in each respective package.

The manager of other task shall have access to the Statements of Competency for all staff that are working within their team.

8.6 Access to Competency Information

ARTC staff, Contractors and Alliance Partners may access information regarding Certificate of Compliance, forms, checklists etc through ARTC Intranet. Additional information related to Statement of Competency may be sought from the Manager Standards.

8.7 Use of Competency Information

The information on Competency of Certificates and related matters must only be used for ARTC signal related works. The Competency information may be used for the following purposes:

- Identification of the staff that can be given the responsibility to work on Signalling Infrastructures
- For the assessment of applications received requesting issue of the Statement of Competency

- ARTC to confirm that the staff working on the ARTC Signalling Infrastructure has valid Statement of Competency.
- Assist other Railway Organisation by exchanging information (exchange of information with other Government Agencies) on the matters related with Statement of Competency.

8.8 Re-Accreditation Training

ARTC has courses for Re-Accreditation of signalling staff involved in certifying signalling infrastructure and signalling safeworking activities. This course is modular and covers refresher training in safeworking processes and updates on changes to signalling procedures.

9 Schedule A: Competency Levels – ESW-20-02

See Work Instruction for Competency Levels for particular tasks.