Supervision Guideline for Trainee Electrical Testers

This Guideline has been developed by the Victorian Electricity Supply Industry (VESI) Skills and Training Reference Committee to provide guidance to employers and trainees..

In the Victorian Electricity Supply Industry

September 2014

DATE	VERSION	AMENDMENT	NAME
June 2009	1	Published on vesi.com.au	VESI STRC
August 2012	2	Clarified definition of Supervisor included Updated footer and version number Updated levels of supervision for various tasks General formatting Circulated amongst industry for comment	VESI STRC
September 2014	3	Align contents defining the Safety Observer role with apprentice Substation Electrician guidelines Align contents defining access authorities ensuring consistency across all Guidelines. Update table 1 – activities and required levels of supervision Updated the Supervision level definitions	VESI STRC

CONTENTS

INTRODUCTION

This guideline have been developed and established by the Victorian Electricity Supply Industry, (VESI) Skills and Training Reference Committee (STRC). Any changes to this guideline can only be made with the agreement of the STRC.

PURPOSE

This guideline have been developed to assist both employers and Trainee Electrical Testers who enter into a training contract, to understand the obligations and expectations in regards to workplace supervision, taking into consideration the welfare of the trainee in terms of safety and competency development.

SCOPE

This Guideline applies to the supervision of Trainee Electrical Testers employed in the VESI who are undertaking a traineeship.

RESPONSIBILITIES

Employer

- Ensure that employees meet the requirements of this Guideline
- Shall take all reasonable steps to ensure supervision of trainees is carried out by a person that is competent to carry out the work
- Establish effective coaching/mentoring practices for their trainees
- Provide opportunities for the Trainee to develop their knowledge and skills

Supervisors/Crew Leaders

- Ensure that trainees and relevant employees meet the supervision requirements of this Guideline
- Apply this Guideline when planning or allocating work functions and activities in the work place for trainees
- Take into consideration the kind of work being undertaken, especially with regard to work in the vicinity of live apparatus
- Have regard to the level of competence of the trainee for the particular task, skill or activity to be performed

Trainees

- Only undertake work or activity for which they have been trained and/or supervised in accordance with this Guideline.

SUPERVISION FRAMEWORK

The Supervision framework describes the criteria and supervision levels that the employer and trainee shall allow for when planning work.

In determining the appropriate level of supervision to apply the following criteria shall be considered:

- Safety of the trainee
- The work to be carried out
- The experience of the trainee
- When the knowledge and skills is attained (off job training)

Trainees should not undertake tasks unless they have received the relevant training. However this does not restrict a trainee from observing or assisting qualified personnel undertaking tasks, for which the trainee is not trained. For example, a first year trainee can assist a qualified tradesperson under direct supervision by:

- hanging and wiring a meter
- hanging a service at the house end in preparation for testing

Refer to Table 1 which provides guidance on the supervision requirements for types of work and activities that trainees can undertake.

At all times during the term of their traineeship, the trainee shall be under Direct, General or Broad Supervision as defined below and in Table 1 Work Types. The goal is for supervision to progressively diminish from direct to broad in the third or fourth year of the traineeship dependant on experience gained and the task. Note: Where 'No' is indicated in Tables 1 this means the task is not permitted.

In determining the level of supervision for a Trainee Electrical Tester several factors are taken into account. These are knowledge attained and, previous experience and training the trainee has had relative to each particular task, skill, or work function to be performed.

Direct Supervision

The onsite supervising tradesperson shall be in direct visual and audible contact with the apprentice, providing constant instruction and inspection of the tasks being performed.

General Supervision

The onsite supervising tradesperson shall make regular face to face contact with the apprentice, delivering progressive instruction and inspection on tasks being performed.

Broad Supervision

The onsite supervising tradesperson shall provide instruction and inspection of tasks being performed by the apprentice.

RECOGNITION OF PRIOR COMPETENCIES

There are situations where a trainee has previously been assessed as competent and/or authorised to undertake certain activities (e.g. Licence to perform high risk work and/or Network Authorisations).

Exemptions are permitted for these activities provided that the licence to perform high risk work and/or Network Authorisations and appropriate refresher training records are current and with Network Operator approval.

SAFETY OBSERVER ROLE

Trainees who are new entrants into the industry and who have not acquired relevant skills and knowledge are not to be used as safety observers in their initial 24 month period.

Trainees may be utilised, after the initial 24 month period, as a safety observer but only if they have:

a) been trained in rescue and/or escape techniques applicable to the task being performed

b) been trained in Safe Approach Distances

c) have an understanding of the task or work practice being observed; and

d) an understanding of the functions and movements of plant and equipment.

ACCESS AUTHORITIES

A Trainee Electrical Tester cannot be a 'Recipient in Charge' of an Electrical Access Permit.

First Year Trainee

If working under an access authority the Trainee shall be bracketed on to the Access Permit as an Instructed Person with an authorised Access Permit recipient.

Second - Fourth Year Trainee

A trainee can be Authorised as a holder of Receive Access Permits. This means that they can sign onto access permits and work within the bounds of the access permit but shall remain under supervision as outlined in Table 1.

Prior to being authorised, a trainee shall have successfully completed:

- the first year of the traineeship
- Apply Access procedures to work on or near electrical network infrastructure (Receive Access Permits)

Post Traineeship

Upon successful completion of the Electrical Tester traineeship and with approval from the Network Operator the holder can sign on to an Access Authority as a Recipient in Charge

TABLE 1

ACTIVITY	SUPERVISION LEVEL			
	Year 1	Year 2	Year 3	Year 4
General movement through ZSS / Terminal Switchyard	Direct	General	Broad	Broad
General movement through Distribution Substation	Direct	General	General	Broad
Assisting with primary work in switchyard – (Supervision levels less than direct supervision is dependent on acquiring Authorised Recipient competency)	Direct	General	General	Broad
Point to Point testing in clearly identified 'dead' panel (panel completely isolated)	Direct	General	Broad	Broad
Point to Point testing in clearly identified 'live' panel (panel has live equipment)	Direct	Direct	Direct	General
Commissioning tests on CT or VT dead station	Direct	General	General	Broad
Commissioning tests on CT or VT Live station	Direct	Direct	General	General
Commissioning tests on CB dead station	Direct	General	Broad	Broad
Commissioning tests on CB Live station	Direct	Direct	General	General
Relay Maintenance pre test isolations	Direct	Direct	General	General
Relay Maintenance / Commissioning Live station	Direct	Direct	General	General
Relay Commissioning Dead station	Direct	General	General	Broad
Downloading / uploading events and settings data from relays	Direct	Direct	General	Broad
Restoration of secondary isolations	Direct	Direct	General	General
Restoration of Gas Protection	Direct	Direct	General	General
On load tests	Direct	Direct	General	General
Work in Station services cubicle	Direct	Direct	Direct	Direct
Work on Batteries and charging equipment	Direct	Direct	Direct	Direct
Testing of capacitors	Direct	Direct	General	Broad
Testing requiring Sanction for Test (SFT)	Direct	Direct	Direct	Direct
Fault finding on protection and Control schemes	Direct	Direct	General	General
Pole top assets – Upload and Download of data in the field including traffic management	Direct	Direct	General	General
Pole top assets – Upload and Download of data in the Workshop	Direct	General	Broad	Broad
Change control box / commission equipment	Direct	Direct	General	General
Pilot Wire testing after isolations	Direct	General	General	Broad
Work on Scada systems RTU's	Direct	Direct	General	General

ACTIVITY	SUPERVISION LEVEL			
	Year 1	Year 2	Year 3	Year 4
Update of station drawings	General	Broad	Broad	Broad
Work on high risk schemes (load shedding, Run Back)	No	Direct	Direct	Direct
Work on station aux equipment, including: Transformer cooling pumps systems (oil & water), fans & cooling tower systems −Station ventilation system −Fire alarm system & associated equipment (eg. ventilation shutdown) −Mechanical services (usually PLC based)	Direct	Direct	Direct	General
Maintenance of protection Live Distribution sub including: −RMU prot −LV CB protection −Frame leakage prot −Gas Prot/alarm −Prove SCADA	No	Direct	Direct	General
Installation of data loggers on LV circuits in Live Distribution sub	No	Direct	Direct	Direct
Testing equipment in the workshop/test lab	Direct	General	General	Broad
Underground cable fault location (HV, LV & supervisory)	Direct	Direct	Direct	General
66kv UG cable sheath testing	Direct	Direct	Direct	General
UG cable identification Alive & Dead	Direct	Direct	Direct	General
UG cable spiking	No	No	No	No
Supervisory Testing End to End, including: −working from EWP (eg OH supervisory)	No	Direct	General	Broad
Pre-Commissioning tests of 415V LV switchboard in dead distribution Sub	Direct	Direct	General	Broad
Pre-Commissioning tests of 415V LV switchboard in live distribution Sub	No	Direct	Direct	Direct
Pre-commission tests on Primary Plant with no SFT	Direct	Direct	General	Broad
Supervision of Contractor	NO	NO	NO	NO
Under take Polarity Testing (NST)	NO	NO	NO	NO
Safety Observer	NO	NO	Direct	Direct