UET30712

Work Performance Portfolio

Candidate: _____

Employer: _____

This portfolio will assist you in providing evidence to satisfy the **work performance criteria** of core Competency Standard Units (CSUs) required for the qualification:

UET30712 Certificate III in ESI Power Systems – Rail Traction

For each competency unit, you are required to describe, **in detail**, tasks and operations you have performed at your place of work that **directly relate** to the performance elements of each competency unit, found throughout this portfolio. Supplied at the back of the portfolio is a template page for recording work performance examples. You should copy this page as many times as is necessary, to record your examples of work performance to satisfy the criteria of all units. Remember to reference each page - the following pages show an example of how to complete the portfolio.
Tip: one work performance example may satisfy some criteria in multiple units, so be sure to check through each unit and reference your examples wherever they apply.

Documented information should include:
- descriptions of how you prepared to perform the task
- detailed step by step descriptions of how you performed the task (dot points are fine)
- lists of documents that you used, and how you used them whilst performing the task
- lists of PPE that you used whilst performing the task
- lists of tools and test equipment that you used whilst performing the task
- lists of materials/equipment that you used whilst performing the task
- **supporting evidence**

You must provide a variety of supporting evidence, to support each description of work performance.

Supporting evidence may consist of:
- letters of reference/testimonials (on a company letter head)
- letters of employment/appointment
- resumes
- work log books, job sheets and task sheets
- comprehensive journals or work diaries
- job safety analysis
- work orders, job cards and invoices
- service/maintenance reports and logs
- drawings/plans of completed works
- commissioning reports
- time sheets and payslips
- photographic and video evidence
- profiling data
- formal workplace assessment by an accredited workplace assessor
- simulated workplace assessment by an accredited workplace assessor
- other evidence to demonstrate industry experience

Supporting evidence must be:
- **sufficient**, such that it satisfies the element(s) of the competency unit,
- **valid**, such that it directly relates to the element(s) of the competency unit,
- **authentic**, such that it has been verified by the supervising tradesmen, and
- **current**, such that it relates to work performed not more than 4 years prior to submission of evidence

Please note that completion of this portfolio does not guarantee a judgement of competency.

Work Performance Portfolio

Example

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE101A Apply OHS regulations, codes and practices in the workplace
Candidates Name:	**John Smith**

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Prepare to enter the workplace by obtaining work permits & clearances	**1**		
Participate in consultation, identify hazards, & implement & monitor control measures	**1, 2**	JSA x 2	
Implement risk control measures & apply work procedures to control risks	**1, 2**	JSA x 2 SWMS x 2	
Work safely at heights	**1**	JSA, SWMS & Photos	
Use MSDS and chemical substances correctly	**2**	MSDS	
Isolate, tag & tape off correctly			
Use correct Personal Protective Equipment (PPE)	**1, 2**	JSA, SWMS & Photos	
Follow procedures relating to accidents, fires and workplace emergencies			
Deal with unplanned events whilst undertaking the elements listed above	**1**		

Declaration by Candidate

All information provided is entirely factual

Name: **John Smith**

Signed: 

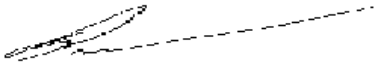
Date: **19/11/2012**

Work Performance Example: 1	
Employer: **ABC Electrical**	Work Date: **12/09/2012**
Work Location: **15 Sample Street, Rhodes NSW 2138**	
Description of Works	
I arrived at the site and attended a site induction with the builder, JB Construction. I was	
Then instructed by my supervisor to rough in some lighting circuits, and he gave me the	
lighting plans to work off (copy attached). I then completed a risk assessment for the job	
(copy attached). I measured up where the lights had to go and marked them out on the floor.	
I then measured out some cable and terminated some plug bases on where the lights had to	
go. I then worked with Gary, the 1st year apprentice, to clip the lighting loom to the slab	
ceiling using chistmas trees and cable ties (Gary had already drilled the holes). We had a	
6 foot step ladder each, and we ensured that we worked of the ladders as per the company	
SWMS (copy attached).	
After clipping up around 15 meters worth of the loom, all the christmas trees fell out of the	
roof and the cable came down. I inspected the holes and saw that Gary had drilled them to	
big. I told Gary what he had done and gave him the right size drill bit to use. Gary and I both	
re-drilled the holes and re-installed the christmas trees, re-using the ones that had fallen out.	
We then successfully cable tied the lighting loom to the ceiling.	
PPE Used	**Tools Used**
Safety goggles, ear plugs, hi-vis vest, hard	Pliers, screwdrivers, hammer, tape measure,
hat, steel-cap boots	ladder,
Material/Equipment Used	**Test Equipment Used**
Plug bases, 1.5 mm^2 flat TPS Twin & E,	N/A
christmas trees, cable ties,	
Documents Used	**Document Application**
Floor plans	Measuring & marking out
Risk assessment	Identify & control risks
SWMS	Use safe work methods

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: **Tony Radesmen** Electrical Licence No: **77477C**

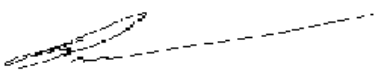
Signed:  Date: **14/09/2012**

Work Performance Example: 2	
Employer: **ABC Electrical**	Work Date: **13/09/2012**
Work Location: **15 Sample Street, Rhodes NSW 2138**	
Description of Works	
The job was to dig a trench and install some underground conduit for an outdoor lighting	
circuit. Prior to starting, I completed a risk assessment (attached).	
While digging, I ensured that I used correct manual handling procedures, as per the	
company SWMS.	
I got some blue glue from the site shed to glue the conduit before I backfilled the trench. The	
supervisor told me to have a quick read over the MSDS prior to using the glue, so I did. I was	
careful not to get the glue on my skin whilst gluing the conduits together.	
I stored the glue back in it's place in the site shed after use.	
PPE Used	**Tools Used**
Riggers gloves, hi-vis vest, hard	Conduit cutters, 20 mm bending spring, tape
hat, steel-cap boots	measure, shovel
Material/Equipment Used	**Test Equipment Used**
20 mm orange PVC conduit, blue glue	N/A
Documents Used	**Document Application**
Diagram	Measuring & marking out
Risk assessment	Identify & control risks
SWMS	Use safe work methods

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: **Tony Radesmen** Electrical Licence No: **77477C**

Signed:  Date: **14/09/2012**

Competency Standard Unit

Performance Criteria

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE101A Apply OHS regulations, codes and practices in the workplace
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Prepare to enter the workplace by obtaining work permits & clearances			
Participate in consultation, identify hazards, & implement & monitor control measures			
Implement risk control measures & apply work procedures to control risks			
Work safely at heights			
Use MSDS and chemical substances correctly			
Isolate, tag & tape off correctly			
Use correct Personal Protective Equipment (PPE)			
Follow procedures relating to accidents, fires and workplace emergencies			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE102A Fabricate, dismantle and assemble utilities industry components
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Interpret drawings/diagrams of utilities industry components			
Measure and mark out metal in preparation for component fabrication			
Cut metal using a hacksaw and/or shears			
Drill and tap a metal component			
Use a file to shape a metal component			
Shape a non-metallic material (eg. PVC)			
Safely use power tools (eg. drill, grinder)			
Fabricate a component including the selection & safe use of fabrication tools			
Dismantle and assemble an apparatus			
Clean work site, store equipment & notify relevant personnel upon task completion			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE104A Solve problems in d.c. circuits
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Select & connect test equipment correctly			
Predict circuit values/test results using ohms law			
Determine the operating parameters of an existing circuit			
Determine problems in d.c. circuits			
Verify circuit isolation			
Solve problems in d.c. circuits			
Alter a circuit to comply with a specified function & operating parameters			
Identify loss of supply to a circuit			
Clean work area, notify relevant personnel and document work practices upon task completion			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE105A Fix and secure electrotechnology equipment
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Select and install suitable fixings to fix a load of approximately 5 kg			
Select and install suitable fixings to fix a load of approximately 20 kg			
Select and install suitable fixings to fix a load of approximately 50 kg			
Select and install suitable fixings to fix electrotechnology equipment to a hollow wall			
Select and install suitable fixings to fix electrotechnology equipment to brick			
Select and install suitable fixings to fix electrotechnology equipment to concrete			
Select and install suitable fixings to fix electrotechnology equipment to steel			
Work at heights from at least 2 of the following: ( ) Step ladder ( ) Extension ladder ( ) Elevated work platform ( ) Scaffolds			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use at least 5 of the following fixing methods/devices: ( ) Direct fixing to timber ( ) Pop rivets ( ) Dynabolts ( ) PVC plugs ( ) Wooden plugs ( ) Loxins ( ) Chemical fasteners ( ) Toggle bolts ( ) Plasterboard devices ( ) Explosive tool studs ( ) Masonry nails ( ) Adhesives / tapes			
Clean work area and notify relevant personnel upon task completion			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify Australian Standard drawing symbols			
Interpret electrical circuit diagrams			
Interpret architectural drawings			
Interpret building floor plans			
Interpret wiring/cable schedules			
Identify function, location & connection of electrical components from diagrams			
Draw a freehand sketch using correct drawing conventions to communicate information to others			
Obtain and review standards and codes to verify compliance of works			
Use a job specification to obtain information regarding works to be undertaken			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEG101A Solve problems in electromagnetic devices and related circuits
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Determine the scope of work from drawings, specifications &/or supervisor			
Determine the need to test live and ensure circuit isolation where required			
Select & connect test equipment correctly			
Determine the operating parameters of a circuit with an electromagnetic device			
Alter an existing circuit with an electromagnetic device to comply with a specified function & operating parameters			
Correctly connect an electromagnetic device into a circuit			
Identify and rectify conditions causing an existing electromagnetic circuit to be unsafe			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Solve problems in circuits containing at least 4 of the following components: ( ) Reed switches ( ) Solenoids ( ) Relays ( ) Contactors ( ) Inductive limit switches ( ) Bells ( ) Lifting magnets ( ) Core balance devices ( ) Magnetic overloads ( ) Motors ( ) Generators ( ) Magnetic brakes ( ) Magnetic circuit breakers			
Document completion of works including solutions used to solve circuit problems			
Clean work site and notify relevant personnel upon task completion			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UEENEEG102A Solve problems in low voltage a.c. circuits
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Determine the scope of work from drawings, specifications and/or supervisor			
Determine the need to test live and ensure circuit isolation where required			
Select and connect test equipment to take measurements from single phase circuits			
Select and connect test equipment to take measurements from three phase circuits			
Determine the operating parameters of an existing low voltage a.c. circuit			
Alter an existing low voltage a.c. circuit to comply with a specified function & operating parameters			
Correctly connect a single phase circuit			
Correctly connect a three phase circuit			
Identify and rectify conditions causing an existing low voltage a.c. circuit to be unsafe			
Identify the cause of low power factor in an existing low voltage a.c. circuit			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Solve problems in at least 4 of the following circuit types: ( ) Series a.c. circuits ( ) Parallel a.c. circuits ( ) Series/parallel a.c. circuits ( ) Single phase motors/controls ( ) Three phase motors/controls ( ) Synchronous machines ( ) Transformers ( ) Star connected circuits ( ) Delta connected circuits ( ) Star-Delta interconnected circuits ( ) Open Delta connected circuits			
Document completion of works including solutions used to solve circuit problems			
Clean work site and notify relevant personnel upon task completion			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDREL11A Apply sustainable energy and environmental procedures
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Identify risks to the environment relevant to the work being undertaken			
Implement work practices to minimise damage to the surrounding environment			
Implement work practices to minimise waste			
Implement work practices to conserve energy			
Re-cycle and /or re-use materials			
Clean work area upon completion of task and store equipment and materials			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDREL12A Operate plant and equipment near live electrical conductors and apparatus
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Position rail/road signs, barriers and/or warning devices			
Operate at least 1 of the following plant, in close proximity to energised and exposed electrical conductors and/or apparatus, and in accordance with safe working procedures: ( ) Elevating work platforms ( ) Back hoes ( ) Self loading vehicle ( ) Borer ( ) Bobcat ( ) Trench excavators ( ) Heavy vehicles			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Operate at least 4 of the following types of equipment, in close proximity to energised and exposed electrical conductors and/or apparatus, and in accordance with safe working procedures: ( ) Portable generators ( ) Chain-saws ( ) Concrete cutters ( ) Jack hammers ( ) Welders ( ) Compressor ( ) Crimper-cutters ( ) Pumps ( ) Post hole diggers ( ) Drills ( ) Friction grip winches ( ) Pullers ( ) Block and tackle			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDREL16A Working safely near live electrical apparatus
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Obtain relevant work permits prior to commencing works			
Verify that relevant personnel at the work site are current in first aid and electrical rescue			
Safe Work Method Statements (SWMS), or equivalent documentation is obtained, read and understood			
Identify and confirm the 'safe working zone' around energised electrical apparatus			
Identify low voltage aerial circuits			
Identify high voltage circuits			
Follow enterprise SWMS, or equivalent, whilst working near energised electrical apparatus			
Use sustainable energy practices whilst working near energised electrical apparatus			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRIS52A Install and maintain poles, structures and associated hardware
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the installation or maintenance of poles, structures and associated hardware			
Verify that relevant personnel at the work site are current in first aid and pole top rescue			
Use at least 1 of the following techniques to install poles or structures and their associated hardware, in accordance with safe working practices and applicable standards : ( ) Crane ( ) Auger/erector ( ) 'A' frame ( ) Lifting beam ( ) Pole pikes ( ) Helicopter lift			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Install at least 1 of the following pole/structure types, in accordance with safe working practices and applicable standards: ( ) Wood ( ) Steel ( ) Concrete ( ) Composite			
Install at least 3 of the following types of hardware and equipment, in accordance with safe working practices and applicable standards: ( ) Insulators ( ) Cross arm braces ( ) Crossarms ( ) Pole steps ( ) Shackle straps ( ) Earth leads ( ) Traction supports ( ) Traction registration ( ) Bonding			
Perform at least 1 of the following operations, in accordance with safe working practices and applicable standards: ( ) Baulking ( ) Stays ( ) Concreting (including foundations)			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Carry out maintenance on at least 1 of the following pole/structure types, in accordance with safe working practices and applicable standards: ( ) Wood ( ) Steel ( ) Concrete ( ) Composite			
Perform maintenance on at least 3 of the following types of hardware and equipment, in accordance with safe working practices and applicable standards: ( ) Insulators ( ) Cross arm braces ( ) Crossarms ( ) Pole steps ( ) Shackle straps ( ) Earth leads ( ) Traction supports ( ) Traction registration ( ) Bonding			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRIS54A Install and maintain poles, structures, overhead conductors and cables
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the installation or maintenance of poles, structures and overhead conductors			
Verify that relevant personnel at the work site are current in first aid and pole top rescue			
Install at least 2 of the following conductors, cables and configurations, in accordance with safe working practices and applicable standards: ( ) Copper ( ) Aluminium ( ) Steel ( ) LV abc ( ) Aluminium/steel reinforced ( ) HV abc ( ) HV iuc ( ) Pilot rope			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use at least 2 of the following plant and equipment to install and/or maintain poles, structures and overhead cables, in accordance with safe working practices and applicable standards: ( ) EWP ( ) Portable platform ( ) Ladder			
Use tensioning equipment correctly and in accordance with safe working practices			
Use at least 2 of the following pieces of equipment, in accordance with safe working practices: ( ) Cable drum stands ( ) Cable trailers ( ) Ropes ( ) Rollers ( ) Sheaves ( ) Stockings ( ) Stringing equipment ( ) Swivels ( ) Winches			
Use a voltage indicator in accordance with safe working practices			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use at least 1 of the following pieces of test equipment in accordance with safe working practices: ( ) Phasing sticks ( ) Fault indicators ( ) Field intensity meter ( ) Operating rods			
Use at least 1 of the following methods to install overhead cables: ( ) Lay-out (stringing method) ( ) Pull through (stringing method) ( ) Pilot rope (stringing method)			
Use at least 1 of the following instruments during the installation and/or maintenance of overhead cables: ( ) Dynamometer ( ) Site board ( ) Beat (wave sagging) ( ) Abney level ( ) Theodolite			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRRT21A Install traction overhead wiring systems
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the installation of overhead traction wiring systems			
Verify that relevant personnel at the work site are current in CPR, first aid and rescue			
Participate in a pre-work briefing			
Position rail/road signs, barriers and/or warning devices			
Use at least 1 of the following plant and equipment to install traction overhead wiring systems, in accordance with safe working practices and applicable standards: ( ) EWP ( ) Portable platform ( ) Ladder			
Use tensioning equipment correctly and in accordance with safe working practices			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Install at least 4 of the following traction wiring system components, in accordance with safe working practices: ( ) Support structure ( ) Span ( ) Section insulator ( ) Neutral section ( ) Midpoint anchor ( ) Support equipment ( ) Tension regulators ( ) Stay/guy wire ( ) Tramway support network			
Install at least 2 of the following traction wiring system conductors, in accordance with safe working practices: ( ) Catenary ( ) Dropper ( ) Contact/trolley* ( ) Feeder ( ) Earth conductor ( ) Drape/potential jumper (*must do)			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use at least 1 of the following tools and equipment to install traction overhead wiring systems, in accordance with safe working practices: ( ) Specialised tools ( ) Ropes ( ) Geometry profiling equipment			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRRT22A Maintain traction overhead wiring systems
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the maintenance of overhead traction wiring systems			
Verify that relevant personnel at the work site are current in CPR, first aid and rescue			
Participate in a pre-work briefing			
Position rail/road signs, barriers and/or warning devices			
Use at least 1 of the following plant and equipment to perform maintenance on traction overhead wiring systems, in accordance with safe working practices and applicable standards: ( ) EWP ( ) Portable platform ( ) Ladder			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Perform maintenance on at least 4 of the following traction wiring system components, in accordance with safe working practices: ( ) Support structure ( ) Span ( ) Section insulator ( ) Neutral section ( ) Midpoint anchor ( ) Support equipment ( ) Tension regulators ( ) Stay/guy wire ( ) Tramway support network			
Perform maintenance on at least 2 of the following traction wiring system conductors, in accordance with safe working practices: ( ) Catenary ( ) Dropper ( ) Contact/trolley* ( ) Feeder ( ) Earth conductor ( ) Drape/potential jumper (*must do)			
Use tensioning equipment correctly and in accordance with safe working practices			

(Elements continued over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use at least 1 of the following tools and equipment to perform maintenance on traction overhead wiring systems, in accordance with safe working practices: ( ) Specialised tools ( ) Ropes ( ) Geometry profiling equipment			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRRT27A Install overhead traction components and equipment
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Participate in a pre-work brief and obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the installation of overhead traction components and equipment			
Verify that relevant personnel at the work site are current in CPR, first aid and rescue			
Position rail/road signs, barriers and/or warning devices			
Isolate circuits and verify that they are safe prior to commencing work in accordance with enterprise safe working procedures			
Install at least 2 of the following fittings, as part of an overhead traction system in accordance with safe working practices: ( ) Preformed fittings ( ) Compression fittings ( ) Wedge fittings ( ) Bolted splices			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Install at least 2 of the following devices as part of an overhead traction system in accordance with safe working practices: ( ) Fuse switches ( ) Dropout fuses ( ) Section insulators ( ) Switches/isolators ( ) Links ( ) Fuses ( ) Surge diverters ( ) Transformers			
Install at least 5 of the following components as part of an overhead traction system in accordance with safe working practices: ( ) Cantilever hardware ( ) Head span ( ) Neutral sections ( ) Pull offs ( ) Registration fittings ( ) Steady span ( ) Tension regulators ( ) Cross spans ( ) Tramway support network ( ) Pendulum			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Install at least 3 of the following components as part of an overhead traction system in accordance with safe working practices: ( ) Feeders ( ) Dissimilar conductors ( ) Lugs ( ) Bolted clamp ( ) Drapes/potential jumper ( ) Droppers			
Use at least 2 of the following tools/equipment during the installation of an overhead traction system in accordance with safe working practices: ( ) Voltage detectors ( ) Micrometer/gauge ( ) Tension wrench ( ) Dynamometer ( ) Specialised tools			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRRT28A Maintain overhead traction components and equipment
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Participate in a pre-work brief and obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor, in relation to the maintenance of overhead traction components and equipment			
Verify that relevant personnel at the work site are current in CPR, first aid and rescue			
Position rail/road signs, barriers and/or warning devices			
Isolate circuits and verify that they are safe prior to commencing work in accordance with enterprise safe working procedures			
Perform maintenance on at least 2 of the following fittings, as part of an overhead traction system in accordance with safe working practices: ( ) Preformed fittings ( ) Compression fittings ( ) Wedge fittings ( ) Bolted splices			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Perform maintenance on at least 2 of the following devices making up part of an overhead traction system in accordance with safe working practices: ( ) Fuse switches ( ) Dropout fuses ( ) Section insulators ( ) Switches/isolators ( ) Links ( ) Fuses ( ) Surge diverters ( ) Transformers			
Perform maintenance on at least 5 of the following components making up part of an overhead traction system in accordance with safe working practices: ( ) Cantilever hardware ( ) Head span ( ) Neutral sections ( ) Pull offs ( ) Registration fittings ( ) Steady span ( ) Tension regulators ( ) Cross spans ( ) Tramway support network ( ) Pendulum			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Perform maintenance on at least 3 of the following components making up part of an overhead traction system in accordance with safe working practices: ( ) Feeders ( ) Dissimilar conductors ( ) Lugs ( ) Bolted clamp ( ) Drapes/potential jumper ( ) Droppers			
Use at least 2 of the following tools/equipment whilst carrying out maintenance on an overhead traction system in accordance with safe working practices: ( ) Voltage detectors ( ) Micrometer/gauge ( ) Tension wrench ( ) Dynamometer ( ) Specialised tools			
Deal with unplanned events whilst undertaking the elements listed above			

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Qualification:	UET30712 Certificate III in ESI Power Systems – Rail Traction
Unit of Competence:	UETTDRRT99A Test and verify rail traction installations
Candidates Name:	

Work Performance Range

Evidence must demonstrate the performance of each element on at least **2 occasions**, autonomously and to requirements and time-frames typically expected in the industry.

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Identify OHS risks relevant to the work site & implement control measures			
Participate in a pre-work brief and obtain relevant work permits prior to commencing works			
Determine the scope of work from drawings, specifications &/or supervisor			
Verify that relevant personnel at the work site are current in CPR, first aid and rescue			
Position rail/road signs, barriers and/or warning devices			
Select test equipment suitable for rail traction installations			
Perform a visual inspection of a rail traction installation and document outcomes			
Perform an inspection of a rail traction installation using at least 1 of the following methods, in accordance with safe working practices: ( ) Infra-red camera ( ) X-Ray ( ) Camera ( ) Binoculars/telescope			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Inspect and check at least 1 of the following tower types for compliance, in accordance with safe working practices: ( ) Delta ( ) Pi ( ) Pyramid ( ) Enterprise specific type			
Inspect and check at least 3 of the following traction system components for compliance, in accordance with safe working practices: ( ) Insulators ( ) Clamps ( ) Bolts ( ) Conductor spacers ( ) Vibration dampers ( ) Structural components			
Inspect and test at least 1 of the following conductor types for compliance, in accordance with safe working practices: ( ) Copper ( ) Aluminium ( ) Steel ( ) Aluminium/steel reinforced			
Use a hook ladder to inspect, check &/or conduct tests on rail traction system conductors, components and equipment			
Use a voltage indicating device to determine whether a voltage is present			

(Elements continue over page)

Range Statement Validation			
Element	**Example Reference**	**Supporting Evidence**	**Assessor Initial**
Use earthing conductors to earth overhead traction equipment			
Use at least 1 of the following plant/equipment to carry out inspection and testing of a rail traction installation, in accordance with safe working practices: ( ) Elevated work platform ( ) Portable platform ( ) Gondola ( ) Elevated work box			
Verify compliance of the protection methods used in a rail traction installation			
Verify that rail traction switchgear is appropriately rated and meets functional requirements			
Verify compliance of rail traction earthing system			
Verify that rail traction network voltage levels comply with network supply standards			
Perform tests to ensure correct rail traction system phasing and record test results			
Perform tests to ensure correct rail traction system phase rotation and record test results			
Perform tests to ensure correct rail traction system polarity and record test results			
Identify and report non-compliance defects			
Rectify non-compliance defects			
Complete mandatory documentation and reporting on installation compliance			
Deal with unplanned events whilst undertaking the elements listed above			

(Declaration over page)

Declaration by Candidate

All information provided is entirely factual

Name: _____

Signed: _____ Date: _____

Work Performance Example:	
Employer:	Work Date:
Work Location:	
Description of Works	
PPE Used	**Tools Used**
Material/Equipment Used	**Test Equipment Used**
Documents Used	**Document Application**

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: _____ Electrical Licence No: _____

Signed: _____ Date: _____

Work Performance Example:	
Employer:	Work Date:
Work Location:	
Description of Works	
PPE Used	**Tools Used**
Material/Equipment Used	**Test Equipment Used**
Documents Used	**Document Application**

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: _____ Electrical Licence No: _____

Signed: _____ Date: _____

Work Performance Example:	
Employer:	Work Date:
Work Location:	
Description of Works	
PPE Used	**Tools Used**
Material/Equipment Used	**Test Equipment Used**
Documents Used	**Document Application**

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: _____ Electrical Licence No: _____

Signed: _____ Date: _____

Work Performance Example:	
Employer:	Work Date:
Work Location:	
Description of Works	
PPE Used	**Tools Used**
Material/Equipment Used	**Test Equipment Used**
Documents Used	**Document Application**

Declaration by Supervising Tradesmen

The candidate performed the task(s) described autonomously and to a standard typically expected within the industry

Name: _____ Electrical Licence No: _____

Signed: _____ Date: _____