



Australian Government

Assessment Requirements for UEERS0029

Maintain non-vital telemetry systems

Release: 1

Assessment Requirements for UEERS0029 Maintain non-vital telemetry systems

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

This unit replaces and is equivalent to UEERS0008 Install and maintain non-vital telemetry systems.

Modifications this release include:

- Title changed.
- Application updated to reflect title change.
- Element titles and performance criteria amended to reflect title change.
- Performance criteria 1.7, 2.2, 3.2 and 3.3 added.
- Performance and Knowledge Evidence updated for clarity.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying rail safe working practices and relevant industry standards, codes and rail safety regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - implementing workplace procedures and practices
 - using risk control measures
- following relevant codes of practice, environmental protection procedures and requirements
- applying sustainable energy principles and practices
- following correct liaison procedures
- using Safety Critical Communications where required
- interpreting plans and specifications correctly
- calibrating and using test equipment and tools correctly
- maintaining and testing of non-vital telemetry equipment in accordance with workplace procedures
- using effective and efficient diagnostic fault-finding techniques
- using resources efficiently
- repairing equipment in accordance with workplace procedures
- ensuring repaired equipment conforms to manufacturer specifications/workplace requirements
- checking protective earthing, surge and lightning protection

- checking communications links for correct performance, errors or faults
- checking power supply quality
- reading mimics and animated graphics
- interpreting block diagrams and circuits
- completing relevant technical reports records and documentation
- dealing with unplanned events
- completing preventative/reactive maintenance of non-vital telemetry systems.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- non-vital telemetry systems maintenance, safe working practices and relevant standards, codes and regulations, including:
 - electronic switching encompassing:
 - devices and used for electronic switching and their switching characteristic
 - circuit configuration and switch-on, switch-off conditions
 - faults in electronic switching devices/circuits
 - typical applications of electronic switching
 - using supervisory control and data acquisition systems (SCADA) encompassing:
 - SCADA system features and applications
 - industries in which SCADA systems are used
 - associate benefits of the package
 - features and facilities of different SCADA packages
 - hardware requirements
 - rail signalling - remote control systems encompassing:
 - equipment and their components - programmable logic controllers (PLCs), dedicated PCs and prep systems
 - operating principles and parameters
 - servicing procedures
 - transmission protocols encompassing:
 - carriers
 - time division multiplexing
 - relay and computer-based interlocking (CBI) interfaces
 - block diagram identification of components
 - data structure
 - elements, including addressing, parity, cyclic redundancy check, network block diagrams, direction control data and indication data
 - reading mimics and animated graphics
 - viewing data and graphical representation of selected information

- trend graphs and data matching
- alarm logging
- analysing select data
- corrective action of alarm status
- quality of power supply requirements
- correct function of earthing protection, surge & lightning protection equipment
- communications link operation
- servicing procedures, including:
 - maintenance documentation
 - coordination/planning sequence
 - operational test procedures
 - scheduled/preventative maintenance
 - unscheduled/corrective maintenance
 - relevant rail transport operator certifying train detection equipment, checklists, survey records, and workplace procedures.
- WHS/OHS requirements including:
 - Legislated requirements
 - safe working practices
 - relevant job safety assessments or risk mitigation processes
- relevant standards, safety critical communications, codes and regulations
- relevant workplace documentation, policies and procedures
- relevant manufacturer specifications and manuals

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to maintaining non-vital telemetry systems

- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>