Australian Government

Assessment Requirements for UEERS0014 Install and maintain vital relay interlocking systems

Release: 1

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Modification History

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

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:

- interpreting plans and specifications correctly
- using appropriate fault-finding techniques
- installing/maintaining vital relay interlocking systems to operational requirements
- organising work to minimise rail traffic disruptions
- using tools correctly
- following relevant codes of practice, work health and safety (WHS)/occupational health and safety (OHS) and environmental protection procedures and requirements
- completing relevant technical reports, records and documentation
- dealing with unplanned events
- applying rail safe working practices and relevant industry standards, codes and rail safety regulations
- applying relevant WHS/OHS requirements, including:
  - implementing workplace procedures and practices
  - using risk control measures
- applying sustainable energy principles and practices
- completing installation/maintenance of vital relay interlocking 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:

- vital relay interlocking systems installation/maintenance, including:
  - rail signalling, interlocking systems - electrical
  - equipment and their components encompassing:
    - power supplies
    - relays - timers
    - relays - latching/delatching

    - relays - line
    - relays - biased
    - signaller controls/indications
    - geographic modules
    - mechanical interface
- operating principles and parameters encompassing:
    - normal mode operation
    - route selection circuits
    - signal approach circuits and timers
    - point release circuits and timers
    - panel indications and circuits
    - wrong-side protection mode
    - alarm mode
    - emergency operation
    - correct operation in accordance with control and locking tables
- servicing procedures encompassing:
    - maintenance documentation
    - coordination/planning sequence
    - operational test procedures
    - scheduled/preventative maintenance
    - unscheduled/corrective maintenance
    - certifying interlocking equipment (commission and decommission)
- certifying procedures applicable for compliance with rail operator and/or enterprise standards
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace policies and procedures
- safe working practices and relevant industry standards, codes and regulations.

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 installing/maintaining power signalling and protective relay interlocking 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