



Australian Government

Assessment Requirements for UETDRSB005 Diagnose and resolve faults in a substation environment

Release: 1

Assessment Requirements for UETDRSB005 Diagnose and resolve faults in a substation environment

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

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 (2) separate occasions and include:

- applying relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including:
 - work health and safety (WHS)/occupational health and safety (OHS) requirements
- identifying hazards, assessing risks, and identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- dealing with an unplanned event on at least one (1) occasion
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- completing relevant work records, reports and documentation
- interpreting alarms and indicators, using existing technology
- diagnosing and resolving faults on at least two (2) of the following:
 - high voltage (HV) circuit breaker control system
 - transformer control system
 - direct current (d.c.) supply system
 - d.c. switchgear and equipment
 - communication equipment
- diagnosing faults using at least three (3) of the following testers:
 - multi meters
 - tong testers
 - insulation resistance/continuity tester
 - low resistance high current tester
 - overload injection tester
 - specialist test equipment.

Knowledge Evidence

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

- relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including WHS/OHS requirements
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- application, purpose and types of permits and access authorities
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- evaluation of equipment serviceability
- low voltage (LV) and HV isolation procedures
- interpretation of different system switching diagrams and drawings
- identification and procurement of materials and apparatus
- testing equipment, including:
 - voltage detection devices
 - multi meters
 - tong testers
 - insulation resistance/continuity testers
 - low resistance high current testers
 - overload injection testers
 - specialist testing equipment
 - temperature sensors
- interpretation of alarms and indicators from control and protection systems, and diagnosis of faults in:
 - HV circuit breaker control system
 - power and instrument transformer control system
 - busbars and feeders
 - reactive plant
 - d.c. switchgear and equipment
 - d.c. supply system
 - communication equipment
- fault conditions and symptoms, including:
 - types and typical fault conditions
 - interpretation of mechanical faults
 - interpretation of electrical faults
 - auxiliary systems
 - protection and alarm systems
- substation equipment, components and materials, including:

- control and protection equipment
- remote and local operating principles and conventions
- serviceability and control systems
- replacements
- indication of levels, quantities, volumes, pressures and temperatures
- types of materials, including insulation, construction, fabrication and lubrication
- hazardous materials.

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 workplace operational situations, where it is appropriate to do so.

Where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational 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:

- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace requirements, 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=229bace1-b7bc-4653-9300-dffb13ecfad7>