



Australian Government

Assessment Requirements for UEEHA0029 Plan electrical installations for hazardous areas

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.

This unit replaces and is equivalent to UEEHA0007 Plan electrical installations for hazardous areas

Prerequisite requirements have been amended.

Performance Evidence

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

- determining the extent of the installation, including:
 - identifying the nature and characteristic of the explosive hazard
 - in the absence of classification documents, arranging with the appropriate person to have the area formally classified
 - determining the extent of classified areas. including:
 - gas hazards and parameters
 - dust hazards and parameters
 - any regulatory requirements
 - arranging the electrical installation for compliance with hazardous area requirements, including:
 - supply, circuit protection and controls to comply with hazardous area requirements
 - location of electrical and control equipment items
- selecting and checking equipment, wiring components and accessories, including:
 - selecting equipment compliant with:
 - requirements for the explosive atmosphere and zone in which they are to be installed
 - equipment protection level (EPL) when specified
 - required protection against the adverse effects of external influences
 - hazardous area requirements for limiting temperature rise of Ex 'e' equipment for normal and overload conditions
 - selecting wiring systems and cables compliant with:
 - equipment groups and protection types
 - surface temperature limitations
 - flame propagation requirements

- requirements for Ex ‘i’ circuits
- checking equipment, cables and accessories received to ensure they are consistent with certification, equipment marking and installation requirements
- documenting installation plan, including:
 - circuit arrangement diagrams
 - equipment location
 - certification details of each item of Ex equipment
 - schedules of equipment, cables and connection arrangements
 - forwarding installation plan report to the appropriate person for acceptance.

Knowledge Evidence

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

- information needed to select compliant equipment, including:
 - gas, vapour or dust classification in relation to the group or sub-group of the electrical equipment
 - temperature class or ignition temperature of the gas or vapour involved
 - minimum ignition temperature and energy of the combustible dust cloud
 - minimum ignition temperature of the combustible dust layer
 - external influences and ambient temperature
 - relationship between EPLs and types of protection
- requirements for the selection of equipment specified, including:
 - additional requirements for specific equipment types
 - limitation of metallic materials (e.g. cable trays, mounting plates, weather protection and enclosures) in Group I and Group II installations
- requirements for wiring systems, cables and components, including:
 - wiring systems not permitted in hazardous areas
 - wiring systems not permitted above hazardous areas
 - cables suitable for fixed wiring for:
 - Group I
 - Group II
 - Group III
 - additional requirements for wiring systems supplying protection Ex ‘d’, Ex ‘e’ and Ex ‘n’ equipment
 - wiring requirements for intrinsically safe and energy-limited circuits.

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 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 tools and testing devices and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, safe work methods, installation and inspection standards, and verification dossier for the site, including:
 - area classification diagrams and documents
 - plant design specification
- electrical installation specifications, including:
 - electrical equipment to be installed
 - load requirements for each item of electrical equipment
- relevant technical standards.

Links

Companion Volume Implementation Guides are found in VETNet -

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