



Australian Government

UEEHA0009 Develop and manage periodic electrical inspection and maintenance programs for hazardous areas

Release: 1

UEEHA0009 Develop and manage periodic electrical inspection and maintenance programs for hazardous areas

Modification History

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

Application

This unit involves the skills and knowledge required to develop and manage the explosion-protection aspects for periodic electrical inspections and maintenance schemes. It includes understanding of the provisions of the applicable hazardous area standards in relation to area classification or equipment protection levels (EPLs) and selection and installation of electrical equipment; understanding of repair and reclamation of equipment; determining the frequency and grades of inspections and levels of maintenance required; and specifying and overseeing the inspection and maintenance processes to be followed and maintaining the required documentation in the verification dossier. It is adopted from clause 2.9 of AS/NZS 4761.1:2018 Competencies for working with electrical equipment for hazardous areas (EEHA).

This unit applies to technical management and maintenance functions.

Site-specific work permits maybe required to work in the hazardous environment. In addition, other permits may be required, such as confined space and to operate specific pieces of equipment such as elevated work platforms (EWPs) in various jurisdictions.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEEHA0004 Enter a classified hazardous area to undertake work related to electrical equipment

UEEHA0003 Determine the explosion-protection requirements to meet a specified classified hazardous area

and

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations

or

UEEEL0028 Conduct compliance and functional verification of electrical apparatus and existing circuits

or

UEEIC0048 Verify compliance and functionality of instrumentation and control installations

Competency Field

Hazardous

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Establish inspection and maintenance requirements

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Understanding of the provisions of hazardous area standards applicable to area classification, electrical installation design, selection and installation, and repair and reclamation of electrical equipment is applied to establishing the inspection and maintenance program
- 1.2** Documentation in the verification dossier is reviewed to ascertain the extent of hazardous areas, the area classifications and the electrical installation details and, for an existing site, previous inspection schedule and maintenance program records
- 1.3** The effect of external factors that may influence equipment integrity are assessed and included in establishing the types, grades and frequency inspections

2 Develop an inspection program for a hazardous area

- 2.1** Inspection schedules are developed from knowledge of the extent of the hazardous area and the electrical installation, the assessment of factors influencing equipment integrity and an understanding of the requirements and recommendations of standards and equipment manufacturers
- 2.2** Procedures for each grade of inspection are developed from recommendation of standards and equipment manufacturers and conditions particular to the site
- 2.3** A documentation system is developed for reporting inspection activities and identifying non-compliance defects and recommendations for maintenance
- 2.4** WHS/OHS policies and procedures are incorporated into

		the inspection and resulting maintenance program
3 Implement and evaluate the inspection and maintenance program	3.1	Qualifications of inspectors and maintenance personnel are reviewed to ensure they are currently competent to do the work
	3.2	Periodic and sample inspection reports are used to develop maintenance programs and identify the need to revise the extent and frequency of inspections
	3.3	Maintenance programs are established within the limits permitted for remedial maintenance in hazardous areas
	3.4	Procedures are established for equipment identified as requiring repair or overhaul to be removed from service and sent to an accredited facility
	3.5	Reports and other documentation related to the inspection and maintenance program activities are retained in the site verification dossier

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - -

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

Assessment Requirements for UEEHA0009 Develop and manage periodic electrical inspection and maintenance programs for hazardous areas

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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:

- determining inspection requirements, including:
 - reviewing all documentation held in the verification dossier
 - assessing the effect of factors that may influence equipment integrity
- developing an inspection program for a given hazardous area, including
 - developing inspection schedules based on information gathered from the verification dossier, factors that may influence equipment integrity, requirements of relevant standards and any previous inspection results
 - developing procedures for each grade of inspection based on the recommendation of standards and equipment manufacturers and conditions particular to the site
 - developing or reviewing the documentation systems for reporting inspection activities and identifying non-compliance defects and recommendations for maintenance
 - establishing or improving work health and safety (WHS)/occupational health and safety (OHS) procedures and safe work methods for inspection and maintenance activities
- implementing and evaluating the inspection program and the resulting maintenance required, including:
 - reviewing qualification of inspection and maintenance persons to ensure they are currently competent
 - developing a maintenance program from periodic and sample inspection reports, including procedures for dealing with equipment that may require repair or overhaul
 - evaluating the need to revise the extent and frequency of inspections from analysis of information in the inspection reports
 - ensuring all inspection and maintenance documents are retained in the verification dossier
 - establishing procedures for remedial maintenance and equipment repair and overhaul.

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:

- area classification, including:
 - general principles and objectives
 - area classification procedures, including:
 - sources and grades of release
 - type and extent of zones
 - dust layer hazards
 - application of equipment protection levels (EPLs)
- required inspection documentation encompassing:
 - site-specific documents, including:
 - area classification and, where included, EPL for each location
 - records of explosion-protected equipment to be maintained in accordance with its type of protection
 - previous inspection records
 - compliance standards for equipment, electrical installation, design and selection and inspection and maintenance
- inspection requirements, including:
 - grades of inspection and types of inspection
 - aspects to consider in establishing an inspection schedule
 - inspection schedule requirements
 - documentation of the results of scheduled inspections
 - WHS/OHS policy and safe work methods, including isolation of equipment within the hazardous area
- maintenance requirements, including:
 - aspects of equipment subject to maintenance
 - limits of remedial maintenance within hazardous areas
 - requirements for repair, overhaul and reclamation of equipment
 - defects and remedial recommendations identified in schedule inspections.

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:
 - WHS/OHS policy and procedures for the site
 - verification dossier for the site that includes the following:
 - area classification documents
 - plant design specifications
 - ‘as-installed’ electrical equipment location and distribution drawing
 - process diagrams
 - certification documents for all installed equipment
 - relevant technical standards
 - inspection reports and maintenance records.

Links

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