Australian Government

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.

Application

This unit involves the skills and knowledge required to plan electrical installations for hazardous areas by selecting compliant explosion-protected equipment and wiring systems. It includes determining the extent of the installation from area classification documents and plant specifications; identifying the hazardous area zones; referencing manufacturer's data and plant design specifications to select and locate compliant explosion-protected and associated equipment and wiring systems; ensuring equipment received is consistent with the plan; and documenting the hazardous area installation plan.

This unit applies to electrical installation planning functions.

Site-specific work permits may be 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.

This unit of competency and associated assessment requirements is adopted from clause 2.8 of AS/NZS 4761.1:2018 Competencies for working with electrical equipment for hazardous areas (EEHA). There may be differences between the content of this unit and AS/NZS 4761.1:2018, so the Standard must be checked to ensure compliance with it. Clause 2.8 of AS/NZS 4761.1:2018 includes the following precondition for assessment:

- "A candidate seeking assessment in this unit shall have been deemed competent to arrange circuits, control and protection and select wiring systems and cables for non-hazardous electrical installations at AQF level 4 or NZQF level 5 or equivalent or higher".

Pre-requisite Unit

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

UEEHA0022 Determine the explosion-protection requirements to meet a specified classified hazardous area

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Competency Field

Hazardous

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Determine the extent of the installation	**1.1** Nature and characteristics of explosion hazards in the area are identified from the area classification and plant design documents
	1.2 In the absence of classification documents, arrangements are made with the appropriate person to have the area formally classified
	1.3 The extant gas zones, the gas groups and temperature classes or ignition temperatures are identified from the classification documents and any regulatory requirements
	1.4 The extent of dust zones, minimum cloud ignition temperatures and layer ignition energy are identified from the classification documents and any regulatory requirements
	1.5 Arrangements for the supply protection/control for the hazardous area installation are determined from plant design and electrical specifications taking into account existing installation arrangement
	1.6 The location of the electrical and control equipment items and routes of wiring systems for the hazardous area are determined from the plant design and electrical specifications
2 Select and check equipment, wiring components and accessories	**2.1** Information obtained to determine the extent of the installation is applied to selecting equipment, wiring components and accessories

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	2.2	Equipment and accessories are selected for their compliance with requirements of the relevant standards for the explosive atmosphere and zone in which they are to be installed and allowing for the equipment protection level (EPL) specified in the area classification documents
	2.3	Consideration is given to the adverse effects of external influences when selecting equipment and wiring systems as required by relevant standards
	2.4	The additional requirements for explosive atmospheres are applied to selecting electrical overload and short circuit protection devices as required by relevant standards
	2.5	Manufacturer's data is referenced to ensure equipment selected is certified for the area classification zonings, groups and temperature limitations for the location in which equipment is to be installed
	2.6	Wiring systems, cables, glands and terminations are selected to comply with the associated protection types and installation requirements
	2.7	Certification documents for equipment received are checked to ensure they are consistent with the equipment marking and installation requirements
	2.8	Cables and accessories received are checked to ensure they are consistent with the markings and installation requirements previously determined
3 Document installation plan	**3.1**	Equipment location, circuit arrangement diagrams, certification details for each item of equipment, and installation schedules are included in the planning documentation
	3.2	The installation planning documentation is forwarded to the appropriate person for acceptance

Foundation Skills

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

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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.

Planning electrical installations for hazardous areas must include reference to:

- verification dossier
- plant design and electrical installation requirements
- standards
- explosion-protected equipment manufacturer's data

Unit Mapping Information

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

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6

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