



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UEENEEG072C Investigate and report on electrical incidents**

**Release: 1**

## **UEENEEG072C Investigate and report on electrical incidents**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

**1)**

##### **1.1) Descriptor**

This unit covers investigating and reporting the possible electrical cause of incidents resulting electric shock, injury, fatality or property damage. It encompasses working safely, gathering information from an incident site and from witnesses, conducting site tests, gathering and arranging for analysis of forensic evidence, documenting findings and presenting evidence in court.

### **Application of the Unit**

#### **Application of the Unit**

**4)**

This unit is intended as an additional competency to relevant competencies previously acquired. It is suitable for employment-based programs under an approved contract of training at the aligned AQF 4 level or higher.

## Licensing/Regulatory Information

### 1.2) License to practice

The skills and knowledge described in this unit require a license to practice in the work place subject to regulations for undertaking of electrical work. Practice in workplace and during training is also subject to regulations directly related to occupational health and safe and contracts of training such as new apprenticeships.

Note:

1. Compliance with permits may be required in various jurisdictions and typically relates to the operation of plant, machinery and equipment such as elevating work platforms, powder operated fixing tools, power operated tools, vehicles, road signage and traffic control and lifting equipment. Permits may also be required for some work environments such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation.
2. Compliance may be required in various jurisdictions relating to currency in First Aid, confined space, lifting and risk safety measures.

## Pre-Requisites

### Prerequisite Unit(s)

2)

### 2.1) Competencies

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEG021B Verify compliance and functionality of special electrical installations

UEENEEG023B Conduct compliance inspection of electrical installations with demand exceeding 100A per phase

UEENEEG024B Conduct compliance inspection of special electrical installations

For the full prerequisite chain details for this unit please refer to Table 2 in Volume 1, Part 2

## Employability Skills Information

### Employability Skills 3)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

## Elements and Performance Criteria Pre-Content

|                                                                     |                                                                                                                                                                                 |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6) Elements describe the essential outcomes of a unit of competency | Performance criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide. |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Elements and Performance Criteria

| ELEMENT                           | PERFORMANCE CRITERIA                                                                                                                                                     |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Prepare to investigate incident | 1.1 OHS procedures for a given work area are identified, obtained and understood.                                                                                        |
|                                   | 1.2 Established OHS risk control measures and procedures in preparation for the work are followed.                                                                       |
|                                   | 1.3 Safety hazards that have not previously been identified are documented and risk control measures devised and implemented in consultation with appropriate person(s). |
|                                   | 1.4 Notification of the incident is reviewed in consultation with appropriate person(s) to establish the nature and extent of the investigation.                         |

**ELEMENT****PERFORMANCE CRITERIA**

|                        |     |                                                                                                                                                                                                                                                                                       |
|------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | 1.5 | Appropriate person(s) are consulted to ensure the investigation is coordinated effectively with others involved on the work site.                                                                                                                                                     |
|                        | 1.6 | Tools, equipment and testing devices needed for the investigation are obtained in accordance with established procedures and checked for correct operation and safety.                                                                                                                |
| 2 Investigate incident | 2.1 | OHS risk control measures and procedures for carrying out the investigation are followed.                                                                                                                                                                                             |
|                        | 2.2 | The need to test or measure live is determined in strict accordance with OHS requirements and when necessary conducted within established safety procedures.                                                                                                                          |
|                        | 2.3 | Co-operation of others involved in the investigation is sought and obtained.                                                                                                                                                                                                          |
|                        | 2.4 | Recreation of incident situation is only undertaken in strict accordance with OHS requirements and when necessary conducted within established safety procedures.                                                                                                                     |
|                        | 2.5 | Witnesses to the incident are interviewed in accordance with established procedures and protocols to determine the circumstances of the incident and those leading up to it.                                                                                                          |
|                        | 2.6 | Physical evidence of the possible causes of the incident is obtained through inspection and testing and documented in accordance with established procedures.                                                                                                                         |
|                        | 2.7 | Forensic evidence gathered at the site is handled to avoid contamination or damage and where necessary forwarded to appropriate persons for analysis.                                                                                                                                 |
|                        | 2.8 | Witness statements and evidence gathered at the site is documented in accordance with established procedures and include: <ul style="list-style-type: none"><li>• Procedures and results of tests undertaken on site;</li><li>• Forensic evidence removed from site and for</li></ul> |

| ELEMENT                         | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 Report investigation findings | <ul style="list-style-type: none"><li>analysis;</li><li>• Aspects of the electrical installation that do not comply with safety standards and requirements.</li></ul> <p>2.9 Actions are taken to prevent any unsafe electrical hazards found on the site from posing a risk of any further injury or damage.</p> <p>3.1 Reports of forensic evidence analysis are obtained and reviewed for inclusion the final investigation report.</p> <p>3.2 Cause or causes of the incident are extrapolated from the evidence using acceptable deductive methods.</p> <p>3.3 Investigation procedures, finding, conclusions and recommendation are documented in accordance with established procedures.</p> <p>3.3 Investigation report is forwarded to appropriate person(s) in accordance with established procedures.</p> <p>3.5 Where required, evidence as documented in the Investigation Report is given in court honestly and without bias following court procedures and protocols.</p> |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

7) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and investigating and reporting on electrical incidents.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

The extent of the essential knowledge and associated skills (EKAS) required is given in Volume 2 - Part 2.2 EKAS. It forms an integral part of this unit.

- 2.2.49 Procedure and protocols for giving evidence in a court of law.
- 2.7.14 Procedures and processes for responding to reported electrical incidents.
- 2.7.15 Causes and consequence of unsafe and misuse of electrical installations and equipment.
- 2.11.6.1 Advance electrical testing and measuring devices.
- 2.11.6.2 Electrical field testing and measurement techniques.

## Evidence Guide

### EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

#### Overview of Assessment

##### 9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in

## EVIDENCE GUIDE

the Assessment Guidelines of this Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

#### **9.2)**

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines - UEE07'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
  - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range statement
  - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
  - Demonstrate an appropriate level of skills enabling employment
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Investigate and report on electrical incidents as described in 8) and including:
    - A Establish the nature and extent of the investigation by reviewing initial notification of the incident
    - B Recreating incident situation as accurately as evidence indicates
    - C Interviewing and taking witness statements

## EVIDENCE GUIDE

- appropriately
- D Gathering relevant physical evidence and treating it appropriately
  - E Documenting evidence gathered at the site including:
    - Procedures and results of tests undertaken;
    - Forensic evidence removed for analysis;
    - Aspects of the electrical installation that do not comply with safety standards and requirements
  - F Taking appropriate actions to prevent any unsafe electrical hazards found on the site from posing a risk of any further injury or damage
  - G Using deductive methods to determine the cause or causes of the incident
  - H Documenting investigation procedures, finding, conclusions appropriately
  - I Preparing and giving evidence in a court of law honestly and without bias
  - J Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

## EVIDENCE GUIDE

### Context of and specific resources for assessment

#### 9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

### Method of assessment

#### 9.4)

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the industry to which this unit applies. This requires assessment in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

### Concurrent assessment and relationship with other units

#### 9.5)

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEEE024C Compile and produce an Electrotechnology report

The critical aspects of occupational health and safety covered in unit UEENEEE001B and other discipline specific occupational health and safety units shall be incorporated in relation to this unit.

## Range Statement

### RANGE STATEMENT

**8)** This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated by investigating and reporting of at least two of the following incidents involving:

- Reported electric shock.
- Injury from a reported electrical source.
- Fatality from a reported electrical source.
- Property damage from a reported electrical source.

The incidents may occur in a domestic premises, a non-domestic premises or a construction site.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

## Unit Sector(s)

Not Applicable

## Competency Field

### 2.2) Literacy and numeracy skills

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

|         |   |         |   |          |   |
|---------|---|---------|---|----------|---|
| Reading | 5 | Writing | 5 | Numeracy | 5 |
|---------|---|---------|---|----------|---|

## Custom Content Section

|                  |            |
|------------------|------------|
| Competency Field | 5)         |
|                  | Electrical |