Australian Government

PUAFIR611A Process and analyse fire scene data and laboratory results

Release 3

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

PUAFIR611A Process and analyse fire scene data and laboratory results

Modification History

Release	TP Version	Comments
3	PUA12 V2.1	Editorial changes.
2	PUA12 V2	Layout adjusted. No changes to content
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to receive data from scientific practitioners, to process and analyse findings and to determine the origin and cause of fire.
It includes understanding scientific process, analysis and laboratory results.
No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

Application of this unit is relevant to specialist fire investigators.
This unit focuses on the skills and knowledge required to develop and apply a systematic approach to fire investigation working across fire and emergency incidents (structure, mobile and wildfire).

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR609A Collect, record and coordinate the analysis of physical evidence (Fire sector specific)

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate results of fire scene data	1.1 Fire scene ***data*** is collected and collated according to ***agency guidelines***
	1.2 Data is grouped according to ***physical evidence*** groupings, samples and documented evidence
	1.3 Evidence is categorised for further sampling or archiving
	1.4 Nature and extent of further examination is determined
2. Interpret laboratory results	2.1 Consultations are initiated with ***specialist practitioners*** to review preliminary evaluations and to validate data
	2.2 Common features and trends in data findings are identified
	2.3 Options are explored as to possible origin and cause of fire
3. Analyse documentary and physical evidence	3.1 Potential causal physical evidence is examined in light of research data emerging from laboratory examination and technical analyses
	3.2 Written reports and visual images are collected and reviewed in parallel with established scientific findings
	3.3 Consultations are initiated with specialist practitioners as required
	3.4 Physical evidence determined relative to fire origin and cause is identified, labelled, ***packaged and stored***

Required Skills and Knowledge

Required Skills

- analyse data

- apply occupational health and safety (OHS) principles
- communicate orally with stakeholders
- handle exhibits and preserve continuity of evidence
- interpret results and findings
- make decisions relevant to forensic investigation contexts
- manage resources
- manage time
- solve problems in relation to forensic investigation contexts
- work effectively with a range of practitioners
- write clear and unambiguous reports

Required Knowledge

- legislative, policy, procedural and quality system requirements for the collection, preservation, security, continuity, receipt and disposal of evidence
- range of services available to assist laboratory examination and interpretation of physical evidence
- role and functions of forensic discipline specialists in the laboratory examination of physical evidence
- OHS practices to be followed when handling physical evidence

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- maximise the potential evidentiary value of physical evidence collected.

Consistency in performance

Competency should be demonstrated over time and across a range of workplace and/or simulated situations.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace and in a simulated workplace environment.

Specific resources for assessment

Access is required to:

- legislation, policy, procedures and protocols relating to gathering and managing evidence
- case studies, computer-generated and workplace scenarios to capture the range of situations likely to occur for which evidence needs to be gathered and managed.

Guidance information for assessment

Assessment methods suitable for valid and reliable assessment of this unit may include a combination of:

- case studies
- demonstration
- observation
- questioning
- scenarios
- authenticated evidence from the workplace.

Range Statement

Data may include:	• Control charts • Graphs • Observations • Results of surveys • Tables • Tests and measurements
Agency guidelines may include:	• Methods and procedures manuals • Quality system requirements
Physical evidence includes:	• Biological tissue • Bite marks • Blood stain analysis • Clothing • Documents • Factual evidence which embraces any and all objects, gross or microscopic in size, living or inanimate, solid, liquid or gas including the relationship between all such objects • Fibres • Fingerprints • Fire debris • Paint • Shoe marks • Tool marks • Tyre marks • Vehicle examinations
Specialist practitioners may include:	• Emergency services personnel • Forensic scientists • Industry specialists • Police
Packaging and storing physical evidence may include:	• Drying of wet exhibits • Exhibit labels • Packaging medium • Physical nature of exhibit • Storage temperature • Tamper evident seals

Unit Sector(s)

Not applicable.