



Australian Government

PUAFIR306 Identify, detect and monitor hazardous materials at an incident

Release: 1

PUAFIR306 Identify, detect and monitor hazardous materials at an incident

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to use specific equipment to detect airborne contaminants, liquids and solids at a hazardous materials incident.

The unit applies to personnel required to detect and identify contaminants at a hazardous materials incident using specialist equipment to identify the materials, assess risks posed by the materials identified and to formulate a plan for their safe isolation and mitigation.

Hazardous materials incident is a generic term used to refer to an incident involving any hazardous material based on physico-chemical, chemical, biological or radiological properties that poses an unreasonable risk to life, property or the environment. This includes dangerous goods, goods too dangerous to be transported and hazardous chemicals.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR207 Operate breathing apparatus open circuit

Competency Field

Fire

Unit Sector

Fire

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 Assess hazardous materials incident

- 1.1 Hazardous materials incident is approached using care and caution and a safe distance is maintained, in accordance with organisational procedures and advice from appropriate authorities
- 1.2 Hazardous materials are identified from a safe distance and information is conveyed through the chain of command, in accordance with organisational procedures
- 1.3 Information sources are accessed to determine potential behaviour of hazardous materials, in accordance with organisational procedures

2 Identify and assess hazards at incident

- 2.1 Site hazards are identified, in accordance with organisational procedures
- 2.2 Specific hazards relating to materials and containers are identified, in accordance with organisational procedures
- 2.3 Relevant hazard information is incorporated into detection strategy
- 2.4 Hazards are assessed, in accordance with organisational procedures, and information is conveyed through the chain of command

3 Develop an entry plan

- 3.1 Entry plan objectives are identified and conveyed through the chain of command
- 3.2 Entry plan is developed, in accordance with organisational procedures
- 3.3 Appropriate detection equipment is assessed and selected, in accordance with organisational procedures
- 3.4 Personal protective clothing and equipment is identified, selected and checked, in accordance with organisational policies, procedures and response situation
- 3.5 Hazard control zones are established, in accordance with organisational procedures
- 3.6 Decontamination procedures are identified

- 3.7** Organisations required to assist with the operation are determined and documented
- 3.8** Detection strategy is documented, in accordance with organisational procedures
- 4 Implement entry plan**
 - 4.1** Entry plan is implemented in accordance with organisational procedures
 - 4.2** Detection equipment is prepared for use, in accordance with organisational procedures
 - 4.3** Detection equipment is used and maintained, in accordance with organisational procedures
 - 4.4** Personal protective clothing and personal protective equipment is donned and operated, in accordance with organisational policies and procedures
 - 4.5** Results are recorded and reported, in accordance with organisational procedures
 - 4.6** Upon leaving area of operations, decontamination procedures are undertaken, in accordance with organisational procedures
- 5 Review entry plan**
 - 5.1** Entry plan is reviewed and safety of entry team is monitored, in accordance with organisational procedures
 - 5.2** Contamination incidents are recorded and reported to appropriate personnel, in accordance with organisational procedures
 - 5.3** Entry plan is reviewed and documentation is completed, in accordance with organisational procedures

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 Companion Volume Implementation Guide.

identification of hazardous materials must include

- HAZMAT (hazardous materials) information
- initial information
- placarding
- product or trade names
- site manager
- visual signs and material indicators
- CHEMDATA
- Safety Data Sheets (SDS)
- technical specialist

information sources must include

and must include one of the following

- electronic databases
- environment
- reference texts

entry plan must include

- action levels
- decontamination
- detection strategy
- personal protective clothing and equipment
- safe approach entry and exit

detection equipment must include

- carbon monoxide and hydrogen sulphide detectors
- flammable gas detector
- oxygen detector

and must include three or more of the following

- air sampling apparatus
- biological agent detectors
- chemical agent monitors
- colourimetric detection tubes
- field sampling kit
- flame ionisation detectors and flame photometric detectors
- Fourier Transform Infrared (FTIR) spectrometers
- Hazard Categorisation (HAZCAT) kits
- indicator paper
- ionisation mobility spectrometers
- photoionisation detectors
- radiation detectors and dosimeters
- radioisotope identifiers and neutron detectors
- Raman spectrometers

- remote air sampling equipment
 - sampling tubes
 - specific electrochemical detectors such as formaldehyde, chlorine, mass spectrometers and explosive detection kits and/or detectors
- personal protective clothing must include
- chemical protective clothing including splash suits
 - gas tight suits
 - turnout uniform and gloves
- personal protective equipment must include
- breathing apparatus
 - control boards
 - Distress Signal Units (DSU)
- response situations must include three or more of the following
- confined spaces
 - hazardous materials storage sites
 - hazardous waste sites
 - motor vehicle accidents
 - post fire situations
 - ships
 - storage tanks and silos
 - transport vehicles
 - unknown substance incidents

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR316 Identify, detect and monitor hazardous materials at an incident.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>