



Australian Government

PUAFIR324 Render hazardous materials incidents safe

Release: 1

PUAFIR324 Render hazardous materials incidents safe

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 safely combat incidents involving hazardous materials.

The unit applies to personnel who respond to incidents involving hazardous materials and who have the skills and knowledge to identify and assess hazards and risks and contribute to the development, implementation and review of the plan constructed to mitigate the risks they pose to the public and the environment.

Hazardous materials incident is a generic term used to refer to an incident involving any hazardous materials based on physico-chemical, chemical, biological or radiological properties that pose 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

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Recognise hazardous materials incident	1.1 Pre-incident plans, site control and containment plans are identified and directives from supervisor are implemented 1.2 Hazardous materials incident is approached using care and caution with a safe distance maintained, in accordance with organisational procedures and advice from appropriate authorities 1.3 Hazardous materials are identified from a safe distance using a range of sources and information which is then conveyed through the chain of command, in accordance with organisational procedures
2 Identify and assess hazards	2.1 Site hazards are identified, in accordance with organisational procedures 2.2 Hazards relating to materials and containers are identified, in accordance with organisational procedures 2.3 Risks are assessed, in accordance with organisational guidelines and information is conveyed through chain of command
3 Assist with development of plan for mitigation of HAZMAT incident	3.1 Incident objectives are identified, in accordance with organisational procedures 3.2 Risk control measures are identified and conveyed through the chain of command 3.3 Entry objectives to hazardous materials incident site are identified and conveyed to supervisor 3.4 Entry plan is developed and documented, in accordance with supervisor directives and organisational procedures 3.5 Appropriate personal protective clothing and equipment is identified, selected and checked, in accordance with organisational procedures 3.6 Decontamination procedures are identified, in

- accordance with organisational policies
- 3.7** Requirement for detection and confinement and/or containment strategies are identified, in accordance with organisational procedures
- 3.8** Organisations required to assist with operations are identified and notified
- 4 Assist with implementation of plan for mitigation of a HAZMAT incident**
- 4.1** Individual roles and responsibilities within the organisation's Incident Action Plan (IAP) are identified and followed
- 4.2** Hazardous materials incident scene is isolated and secured and hazard control zones and decontamination corridor are established, in accordance with organisational procedures
- 4.3** Entry plan is implemented, in accordance with organisational procedures
- 4.4** Hazardous materials response equipment is applied, in accordance with organisational procedures
- 4.5** Personal protective clothing and equipment is donned and operated, in accordance with organisational procedures
- 4.6** Decontamination procedures are applied, as required, in accordance with organisational procedures
- 4.7** Detection and confinement or containment strategies are applied, in accordance with organisational procedures
- 4.8** Results are recorded and reported, in accordance with organisational procedures
- 5 Assist with review of plan**
- 5.1** 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 and/or authorities, in accordance with organisational procedures
- 5.3** Entry, decontamination, detection and mitigation effectiveness is reviewed, 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.

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| systems for hazards associated with chemicals to be classified must include | <ul style="list-style-type: none">• ADR hazard identification system• class labels• fixed site or community emergency response plans• Global Harmonised System (GHS)• HAZCHEM emergency action code• identification of materials and their properties through onsite analytical testing• NFPA 704 Hazmat marking system• Packing groups |
| products that constitute hazardous chemicals and dangerous goods identification must include | <ul style="list-style-type: none">• chemical abstract Service (CAS) number• chemical names• emergency information panel• emergency procedure guide• product or trade names• proper shipping names• storage manifests and transportation documents• United Nations Number (U.N No.) |
| personal protective clothing must include | <ul style="list-style-type: none">• chemical protective clothing including:<ul style="list-style-type: none">• gas tight suits• splash suits• turnout uniform and gloves• and must include one or more of the following<ul style="list-style-type: none">• biological protective clothing• limited use (disposable)• multiuse (reusable)• radiological protective clothing• thermal protective clothing |
| personal protective equipment must include | <ul style="list-style-type: none">• breathing apparatus |

information sources must include

- control boards
- Distress Signal Units (DSU)
- CHEMDATA (HAZMAT action guides)
- emergency response guide books
- HAZCHEM Emergency Action Codes
- Safety Data Sheets (SDSs)
- technical specialists

and must include one or more of the following

- dangerous goods - initial emergency response guide
- electronic chemical database
- external organisational assistance
- International Maritime Dangerous Goods (IMDG) code
- reference texts
- safe storage and handling information cards
- site and community emergency response plans
- defensive and offensive strategies

detection and confinement or containment strategies must include

and must include three or more of the following

- damming – using booms, pads, overflow and underflow dams
- field product transfer including gases or liquids using both closed and open loop methods
- flaring
- freeze (ice) patching
- grounding and bonding
- neutralisation of other materials including adsorption, gelation, emulsification and other chemical methods
- over packing including recovery drums or original containers
- plugging and patching
- rescue
- retention, absorbent materials and neutralisation of acids or bases
- vapour suppression or blanketing and diking or diversion
- ventilation and dispersion

- venting or vent and burn

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR320 Render hazardous materials incidents safe.

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>

Assessment Requirements for PUAFIR324 Render hazardous materials incidents safe

Modification History

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

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- assisting in the establishment, implementation and review of an incident action plan
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements and demonstrating safe work practices
- collecting and interpreting safety and hazard information
- complying with legislation
- demonstrating safe working practices
- donning, operating in, decontaminating and removing personal protective clothing and equipment
- ensuring mitigation techniques are used
- establishing hazard control zones and decontamination corridors
- following instructions and procedures
- identifying and assessing hazardous materials at an incident
- identifying, selecting, checking, testing and maintaining personal protective clothing and equipment for a range of hazardous materials
- identifying and assessing hazards at an incident
- implementing organisational policies procedures
- interpreting safety and hazard information
- operating breathing apparatus
- undertaking decontamination procedures
- using mitigation techniques
- using response equipment
- working as a team member
- working with a range of information sources to assist in the identification of hazardous materials

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes

knowledge of

- containment plans
- decontamination principles and procedures
- detection methods and strategies for identifying hazardous materials
- effects on humans exposed to commonly encountered hazardous materials including local and systemic effects of industrial toxins
- hazard mitigation (confinement or containment) techniques including control zones
- information sources used to identify product and provide information for safe handling
- legislation relevant to the organisation and hazardous materials incidents
- main routes of entry of toxins into the human body
- maintenance and testing procedures for breathing apparatus
- methods of identifying hazardous materials
- nature and properties of hazardous materials
- organisational documentation, policies and procedures
- personal protective clothing and equipment procedures - use and limitations for a range of hazardous materials
- principles of incident control
- scene control and site isolation processes and procedures
- support organisations assisting with operations
- types of hazard control zones including
 - area of likely contamination - hot zone
 - area of operations - warm zone
 - controlled exits, entrances, refuges and emergency exits
 - criteria applied to determine the extent of hazardous areas
 - support zone - cold zone
- types of decontamination and decontamination procedures including
 - alternative water decontamination techniques
 - alternative wet decontamination techniques
 - decontamination area including holding area, wash area, disrobing area and rest area
 - decontamination plan and corridor
 - decontamination techniques including emergency, emergency mass and technical decontamination
 - detection strategies applied for decontamination
 - dry decontamination techniques
 - use of breathing apparatus, control boards and Distress Signal Units (DSU)
- use and limitations of workplace exposure standards
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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