



Australian Government

Department of Education, Employment and Workplace Relations

CPPPMT3011A Conduct fumigation

Release: 1

CPPPMT3011A Conduct fumigation

Modification History

Revised unit

Unit updated and equivalent to PRMPM11B Conduct fumigation

Unit Descriptor

This unit of competency specifies the outcomes required to conduct fumigations to manage organisms. The unit requires the ability to assess the nature and extent of the organism and organism activity, a thorough understanding of client requirements, and the application of company information in order to perform the task. The selection of appropriate equipment, fumigants and methods is essential for performing the task safely and efficiently. These work functions are often conducted by teams of at least two people and according to company guidelines.

Persons wishing to demonstrate competency in management of complex fumigation operations should submit for assessment in this unit, and:

- CPPPMT3019A Organise and monitor pest management operations
- CPPPMT3043A Prepare and present pest management proposals
- BSBSBM407A Manage a small team.
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Application of the Unit

This unit of competency supports individuals responsible for controlling, by fumigation, organisms and organism activity that impacts on the health, safety or amenity of persons, commodities or environments in domestic, commercial, industrial or maritime situations. This unit is not intended for use in horticultural or agricultural situations involving the growing of crops.

Licensing/Regulatory Information

This unit is one of the essential requirements for a fumigation pest management licence. The full requirements for different licences may vary in different states and territories.

Pre-Requisites

Not applicable.

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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| 1 | Access and assess work site. | 1.1 | <i>Site environment</i> is accessed according to <i>company requirements</i> . |
| | | 1.2 | <i>Work order</i> is reviewed according to company requirements and issues are clarified with <i>appropriate persons</i> . |
| | | 1.3 | Authority of <i>client</i> requesting fumigation services is confirmed according to company requirements. |
| | | 1.4 | <i>Hazards</i> are identified and <i>risks</i> controlled at work site according to company, <i>legislative, occupational health and safety (OHS), and public health and safety requirements</i> . |
| | | 1.5 | Work site and work site application characteristics are assessed according to legislative and company requirements. |
| | | 1.6 | Size and usage pattern of work site are determined to ensure safety of <i>personnel</i> and efficient use of equipment and <i>fumigants</i> . |
| | | 1.7 | Work site is assessed for access and security arrangements, according to legislative, OHS and company requirements. |
| 2 | Determine type and method of fumigation. | 2.1 | Types of <i>organisms</i> and <i>commodities</i> are confirmed according to company requirements. |
| | | 2.2 | <i>Fumigation method</i> is selected to suit types of organisms, work site and commodities according to <i>manufacturer specifications</i> and legislative, OHS, company and <i>environmental requirements</i> . |

- 2.3 Type of fumigant is selected and accessed according to manufacturer specifications and client, environmental, legislative, OHS and company requirements.
 - 2.4 Capacity to create fumigation conditions is established according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 2.5 Factors preventing completion of work order are identified and appropriate persons are promptly notified.
- 3 Prepare work site for fumigation.
 - 3.1 Hazards of using fumigants at the work site are identified and risks controlled according to legislative, OHS and company requirements.
 - 3.2 Appropriate personnel in adjoining properties and regulatory and other relevant authorities are advised of proposed fumigation according to legislative and company requirements.
 - 3.3 **Signage and barriers** are installed, as required, to maximise protection of public health and safety during fumigation according to legislative and company requirements.
 - 3.4 Security measures to control unauthorised access to work site during fumigation and prescribed non re-entry periods are implemented according to manufacturer specifications and legislative, OHS and company requirements.
 - 3.5 Conditions to ensure that required concentration of fumigant is retained for required period within **fumigation enclosure** are created according to manufacturer specifications and public health and safety and company requirements.
- 4 Prepare equipment and fumigants.
 - 4.1 Suitable **personal protective equipment** (PPE) is selected and used according to manufacturer specifications and legislative, OHS and company requirements.
 - 4.2 **Equipment** for fumigation is selected according to manufacturer specifications and company requirements.

- 4.3 Calibration and operational effectiveness equipment is checked according to manufacturer specifications and company requirements.
 - 4.4 Equipment is set up and adjusted to suit operator's requirements according to manufacturer specifications and company requirements.
 - 4.5 Selected fumigants are transported, and dosages calculated and prepared to control risk of non-target contamination or exposure according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 5 Apply fumigants.
 - 5.1 Fumigation enclosure is treated using equipment, fumigants and fumigation methods according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 5.2 Airtight seal on fumigation enclosure is checked and adjusted, where applicable, according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 5.3 Fumigant escape is assessed to control impact on public health and safety, according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 5.4 ***Emergency response procedures*** are implemented when necessary according to environmental, legislative, OHS and company requirements.
- 6 Monitor fumigation.
 - 6.1 Fumigation work site is monitored continuously to prevent unauthorised access and to maintain safe conditions according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 6.2 Fumigant concentrations are monitored and maintained over active period according to manufacturer specifications and environmental, legislative, OHS and company requirements.
 - 6.3 Integrity of airtight seals is maintained, where applicable, throughout the active fumigation period

- according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 6.4 Ongoing assessment of fumigant escape is maintained to control impact on public health and safety according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 7 Ventilate fumigation enclosure.
- 7.1 Suitable conditions for ventilation are established to control risks to public health and safety according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 7.2 Approved method of safe release of fumigant is implemented according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 7.3 Fumigation enclosure is ventilated to remove fumigant in a safe and controlled manner according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 7.4 **Fumigation enclosure** and commodities are aerated according to manufacturer specifications and company requirements.
- 7.5 Fumigation enclosure and commodities are tested for evidence of residual fumigant according to manufacturer specifications and environmental, legislative, OHS and company requirements.
- 7.6 Client and other appropriate persons are notified of further risk control measures required according to manufacturer specifications and legislative, OHS and company requirements.
- 8 Restore work site.
- 8.1 Equipment, fumigants and **waste** are collected and removed according to environmental, legislative, OHS and company requirements.
- 8.2 Work site is restored according to work order and client, environmental and company requirements.
- 8.3 Signage and barriers are removed when work site is available for re-use, according to environmental,

legislative, OHS and company requirements.

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| 9 | Clean, safety-check and store equipment and fumigants. | 9.1 | Equipment and PPE are cleaned and decontaminated according to manufacturer specifications and environmental, OHS and company requirements. |
| | | 9.2 | Equipment and PPE are safety-checked and required maintenance is recorded according to manufacturer specifications and OHS and company requirements. |
| | | 9.3 | Cleaned equipment and PPE are stored to allow ready access and re-use according to company requirements. |
| | | 9.4 | Fumigants are transported and stored according to manufacturer specifications and OHS and company requirements. |
| | | 9.5 | Collected waste is disposed of according to work order, manufacturer specifications and environmental, legislative, OHS and company requirements. |
| | | 9.6 | Exposed skin is treated to remove any contamination according to manufacturer specifications and OHS and company requirements. |
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| 10 | Update regulatory and company documentation. | 10.1 | Regulatory and company documentation is completed and distributed according to environmental, legislative and company requirements. |
| | | 10.2 | Client records are updated according to company requirements. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- problem-solving skills to apply knowledge of buildings and structures to planning of fumigation operations
- language, literacy and numeracy skills for:
 - communicating clearly and concisely verbally and in writing
 - reading and interpreting directions and safety instructions, including:
 - equipment manuals
 - chemical labels
 - material safety data sheets (MSDS)
 - requesting advice or further information
 - seeking and receiving feedback
 - sourcing, organising and recording information
 - performing mathematical calculations when measuring volumes and dosage rates, based on:
 - room or site volume
 - required concentrations at various stages of fumigation period
 - writing certification and fumigant logs
- skills to work safely when:
 - applying fumigant
 - handling, managing and disposing of chemicals
 - identifying hazards and controlling risks, especially for:
 - environmental safety
 - occupational health and safety
 - public health and safety
 - manual handling
 - using and maintaining PPE
 - using fumigation equipment
 - working at heights and in confined spaces
 - working with breathing and associated protective equipment
- customer service skills to:
 - establish rapport with clients
 - perceive and respond to clients' attitudes to pest problems
- planning and organising work, including:
 - accurately estimating timeframes

- attending to detail in observing work site conditions
- scheduling efficiently
- self-management skills to work alone and in a team

Required knowledge

- legislation, regulations, codes of practice and industry advisory standards that apply to fumigation operations, including:
 - OHS legislation
 - quarantine provisions according to Customs Act
 - Australian and international standards
 - fumigation regulations and licence requirements
- commodity absorption and desorption rates
- company management structure and procedures, including:
 - dangerous goods use
 - injury, dangerous occurrence and incident reporting requirements
 - OHS procedures, including hierarchy of hazard control
 - reporting procedures
- fumigation methods, including:
 - fumigant application equipment
 - fumigation work site requirements
 - hazardous substances in the workplace
 - organisms eradicated through fumigation
 - product knowledge, including manufacturer specifications for equipment and products being used
 - risks of effect of fumigants on public health and environment
 - routes of entry and potential symptoms of exposure to chemicals
 - test methods and readings for monitoring fumigant concentrations
 - types of fumigants, including:
 - application methods
 - safety requirements
 - environmental conditions, such as withholding periods
 - preparation
- work order specifications

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by observing practical demonstration in the field and by reviewing the outcome of at least one complete fumigation under normal industry operating conditions or, if this is not practicable, observations in a realistic simulated work environment. Site environment for demonstrated fumigation may relate to candidate's preferred sub-category or sub-categories on fumigation licence, for example: • chambers • containers • silos • ships • stacks (tarps).
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit. In particular the person should demonstrate the ability to: • accurately confirm type of organism and its associated key behavioural characteristics • apply emergency response procedures • comply with company, legislative and regulatory requirements • achieve outcomes in relation to work order • identify hazards and risks associated with pest management fumigation and apply knowledge of hierarchy of hazard control • select equipment and fumigants and apply them safely.
Context of and specific resources for assessment	Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements. Resource implications for assessment include access to: • suitable work site or venue • suitable equipment and fumigants • safety equipment, including PPE • equipment operating manuals, MSDS, company procedures and manufacturer specifications • plain English version of relevant statutes and procedures • relevant databases and information

	assessment instruments, including personal planner and assessment record book.
Method of assessment	Assessment methods must: - satisfy the endorsed Assessment Guidelines of the Property Services Training Package - include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application - reinforce the integration of employability skills with workplace tasks and job roles - confirm that competency is verified and able to be transferred to other circumstances and environments.
Guidance information for assessment	Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support. Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed. This unit could be assessed on its own or in combination with other units relevant to the job function, for example: - CPPPMT3002A Assess pest management options - CPPPMT3006A Apply pesticides to manage pests - CPPPMT3043A Prepare and present pest management proposals.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Site environments</i> for fumigation may include:	• airports and aircraft • bond stores • buildings • burrows • chambers • commercial premises • container ship holds • customs and immigration centres • docks • domestic premises • glasshouses • grain • marine craft • plant nurseries • produce storage facilities • quarantine centres • rail yards and rolling stock • sealed spaces • ships • silos • soil • specialised company fumigation facilities • sporting fields • stacks (tarps) • trains • transport containers and depots.
<i>Company requirements</i> may include:	• access and equity policy, principles and practice • business and performance plans • client communication procedures • client confidentiality procedures • client service standards • company goals, objectives, plans, systems and processes • company issued identification badge, card or pass • company policies and procedures • defined resource parameters

	• dress and presentation requirements • duty of care, code of conduct and code of ethics • emergency response and evacuation procedures • employer and employee rights and responsibilities • establishing operator identity with client • internal communication channels and reporting procedures • maintenance procedures for equipment and PPE • OHS policies and procedures • personnel practices and guidelines • policies and procedures relating to own role, responsibility and delegation • quality and continuous improvement processes and standards • records and information systems and processes • training (induction and refresher) materials • work site access security clearance procedures.
Work order information may include:	• access to work site, including: • timing of access • access and egress points • budget allocations • completion times and dates • dress and presentation requirements • job requirements and tasks • legislative and local government requirements • OHS requirements and emergency response procedures • requirements for working in isolated and remote locations • resource requirements – equipment and materials • specific client requirements, such as: • noise control • sensitivity of occupants to pests or pest management • relationships with other customer activities • use of signage and barriers • work schedules • work site contact persons.
Appropriate persons may include:	• clients • colleagues • managers • persons in control of work site • supervisors.
Clients may include:	• bodies corporate • companies or organisations • customs agents

	• environmental health officers • owners • owners' agents • persons in control of work processes • quarantine officers.
Hazards may include:	• allergic reactions to chemicals, pests and/or equipment, including latex allergies • biological and animal waste • bites and stings • blood and blood-stained products • confined or restricted spaces • contaminated clothing, materials and equipment • damaged or inappropriate equipment • dust and fibres • electrical hazards arising from: • cables • electrical fittings: • switches • lights • untested electrical equipment • fatigue • fire • gas • heights • inadequate lighting and ventilation • infectious and zoonotic diseases, such as: • scabies • Q fever • misunderstanding label information and instructions • over familiarity with routine procedures causing lack of attention to manufacturer's label instructions • unclear or ambiguous work order information • mobile equipment or vehicle hazards around plant and vehicles • moving and unguarded parts • noise • occupational violence and bullying • poor personal hygiene practices • release of substances with negative environmental impact • spills, splashes and sprays • unsafe manual-handling techniques, including awkward and repetitive postures • unsafe underfoot conditions, such as slippery, uneven and rough

	- surfaces - work environment temperature extremes - work in unfamiliar isolated and remote environments.
Risks may include:	- OHS - public health and safety - environmental concerns.
Legislative requirements may include:	- Australian standards, quality assurance and certification requirements - award and enterprise agreements - industry advisory standards and codes, such as: - building codes - dangerous goods codes - relevant commonwealth, state and territory legislation and local government regulations that affect company operation, such as: - anti-discrimination and diversity - chemical controls - chemical registers and manifests - consumer protection legislation - dangerous goods Acts and regulations - declared pest (plant and animal) reporting - environmental protection issues - equal employment opportunity - freedom of information - fumigator licence requirements - industrial relations - motor and commercial vehicle transportation - motor licence and endorsement regulations - OHS Acts and regulations - privacy - public health - trade practices - workplace consultative arrangements.
Occupational health and safety (also known as workplace health and safety) requirements may relate to:	- allergic reactions, such as contact dermatitis - animal management and control procedures - communication devices for isolated or remote locations, such as: - mobile phone - two-way radio - dermatotoxicological control and prevention measures - emergency procedures for contact with toxic substances, such as: - splashes in eye or on skin

	• inhalation • ingestion • hazard identification and risk assessment mechanisms • health surveillance and monitoring, such as regular blood testing • hierarchy of hazard control procedures • industry advisory standards • information provided by national registration authority for chemical approval and state government authorities, such as: • agriculture • environment protection • health • primary industry • injury and dangerous occurrence reporting • national and industry codes of practice • OHS control procedures, such as: • health and safety plans • job plans • job safety analyses • risk assessments • safe operating practices and procedures • safe work instructions • safe work method statements • routes of entry and potential symptoms of exposure to chemicals • safe work practices for equipment, PPE and chemical storage, including interpretation of: • MSDS • hazardous substance information, such as long latency periods • safety, induction and refresher training • selection and use of PPE and clothing appropriate to hazard • up-to-date electrical test and tag compliance.
Public health and safety may affect:	• animals • client staff • company staff • customers • distributors • facility users • general public, including neighbours and bystanders • inspectors • retailers • suppliers

	• trade and service providers.
Personnel may include:	• client's staff • colleagues • persons who handle and wash technician's contaminated work clothes • site visitors, including bystanders • venue, facility, building or shopping centre staff or management.
Fumigants are:	• chemicals which at a particular temperature and pressure can exist in a gaseous state in sufficient concentration and for sufficient time to be lethal to insects or other animals, weeds or other organisms.
Organisms may be living animal or plant, including:	• bacteria • insects • mites • molluscs • rodents • seeds.
Commodities may include:	• containers • fabrics • furniture • grains • household items • plant materials • soil • structures • timber.
Manufacturer specifications may include:	• emergency response resources • equipment operating manuals • government publications • instructional guides • MSDS • other resources supplied by manufacturer, such as: • laminated cards • notices • wall posters • product labels • safety instructions pre-printed on equipment.
Environmental requirements may include:	• clean up, containment or isolation • company policies and guidelines • emergency chemical spill control measures • hazardous materials handling

	• regulations, by-laws and guidelines of environmental protection agencies and government departments, such as: • agriculture • emergency services • national parks and wildlife.
Signage and barriers may include:	• physical barriers and restraints erected to restrict access to work site • signs complying with legislative requirements and/or Australian standards that warn of danger or adverse conditions.
Fumigation enclosure is:	• any space which has been or is intended to be made sufficiently gas tight to contain the fumigant.
Personal protective equipment may include:	• air-line and self-contained respirators • chemical-impervious gloves • contaminated clothing bags • cradles • dust masks • face shields • breathing apparatus • full-face masks • hair nets • hard hats • overalls • safety shoes or boots • safety harnesses • soap and towels • sunscreen • washable hats.
Equipment may include:	• brooms • bunding materials • calibrated fumigant dispensers • calibrated gas detection and monitoring equipment • cameras • clips and other sealing devices • detector tubes • dispersal fans • drills • dusters • electrical extension cords • elevated work platforms • equipment decontamination materials • finger manifolds • flexible lights

	• flushing agents • fumigant testing devices • fumigation sheets • generators • hoses • injectors • knives • ladders • magnifying glasses • measuring jugs • mirrors • monitoring lines • nozzles • portable residual current devices • pressure manometers • probes • pumps • safety harnesses • sand and other absorbers • sand snakes • screwdrivers • specimen bottles • thermometers • torches • vaporisers • waste disposal containers • water flumes • weight scales.
<i>Emergency response procedures</i> include:	• clean up • containment • decontamination • first aid • isolation • notification of authorities • use of firefighting appliances • use of PPE • work site or workplace evacuation.
<i>Waste</i> may be solid or liquid and include:	• contaminated or hazardous biological waste • used containers • used or contaminated PPE, such as disposable gloves.
<i>Regulatory and company</i>	• accident and incident reports

documentation may include:	• certificates and notices • customer files and databases • invoices • job sheets • logbooks • receipts.
Client records may be a computer or manual file and include:	• contact details • customer files and databases • details of previous: • assessments • quotations • service provision • government orders, for example from Australian Quarantine and Inspection Service (AQIS) • logbooks • reports • specific details about work site, nature of organism problem • use of contractors.

Unit Sector(s)

Pest management

Custom Content Section

Not applicable.