



**Australian Government**

# **AHCCHM308 Use application equipment to apply fumigant in confined spaces**

**Release: 1**

# AHCCHM308 Use application equipment to apply fumigant in confined spaces

## Modification History

| Release   | Comments                                                                                                                    |
|-----------|-----------------------------------------------------------------------------------------------------------------------------|
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0. |

## Application

This unit of competency describes the skills and knowledge required to use application equipment to fumigate grain, seed, crops and plants housed in enclosures or confined spaces.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions for the purchase and use of fumigants.

## Pre-requisite Unit

Nil

## Unit Sector

Chemicals (CHM)

## Elements and Performance Criteria

| Elements                                         | Performance Criteria                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                           |
| 1. Plan fumigation                               | 1.1 Determine the need for fumigation as an option for pest management strategy of the workplace<br>1.2 Assess the facility and conditions for suitability of fumigation as a method to use<br>1.3 Select method of fumigant and application equipment to suit type of pest, facility and material to be treated |

| Elements                                                                     | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>                             | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                              | <p>1.4 Identify and select fumigant to be used and its application rate according to chemical label</p> <p>1.5 Identify hazards, assess risks and implement control measures for fumigation in confined spaces</p> <p>1.6 Establish security measures to control access during fumigation and prescribed re-entry periods according to chemical label and workplace procedures</p> <p>1.7 Determine appropriate personal protective equipment (PPE) according to fumigant safety requirements</p>                                                                                                                                                                                                                                                                                                                                                                         |
| 2. Prepare storage facility, equipment and fumigants for fumigation activity | <p>2.1 Erect signage and barriers to control risk of inadvertent entry to facility</p> <p>2.2 Seal the facility and check the seal integrity</p> <p>2.3 Take appropriate measurements and calculations to ensure the concentration of fumigant will meet specification</p> <p>2.4 Check operational effectiveness of fumigation equipment according to operating procedures</p> <p>2.5 Calibrate fumigation equipment to deliver the correct rate of application according to chemical label and operating instructions</p> <p>2.6 Transport and store fumigants according to chemical label and safety data sheets (SDS) and regulatory requirements</p> <p>2.7 Select, ensure serviceability, fit and use PPE for selected fumigant according to chemical label and SDS</p> <p>2.8 Prepare fumigant according to chemical label and equipment operator instructions</p> |
| 3. Conduct and monitor fumigation                                            | <p>3.1 Apply fumigant according to planned application method, pest management strategy and chemical label</p> <p>3.2 Monitor fumigation site during exposure time and prevent unauthorised access</p> <p>3.3 Maintain integrity of seals throughout the active fumigation period</p> <p>3.4 Respond to emergency situations according to workplace emergency procedures</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4. Ventilate storage facility                                                | <p>4.1 Establish ventilation and re-entry times and risk controls according to chemical label and withholding periods</p> <p>4.2 Ventilate facility using appropriate equipment to remove fumigant</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Elements                                                | Performance Criteria                                                                                                                                                                                                                                        |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>        | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                      |
|                                                         | in a safe and controlled manner<br>4.3 Test for evidence of residual gas according to workplace procedures, and maximum residue limits for the material being treated<br>4.4 Notify appropriate personnel of any further risk control measures required     |
| 5.Restore storage facility                              | 5.1 Collect and remove all equipment, sealants, fumigants and waste materials according to workplace procedures<br>5.2 Remove signage and barriers according to site security measures                                                                      |
| 6.Clean, safety-check and store equipment and fumigants | 6.1 Clean, decontaminate, check and store equipment and PPE according to workplace procedures, chemical labels, SDS and regulatory requirements<br>6.2 Dispose of all waste according to chemical label instructions and workplace environmental procedures |
| 7.Record fumigation details                             | 7.1 Record details of fumigation applications according to workplace procedures<br>7.2 Record and report safety incidents according to workplace procedures                                                                                                 |

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.*

| Skill    | Description                                                                                                                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading  | <ul style="list-style-type: none"><li>Read and interpret safety data, labels, manufacturers specifications, operating procedures, specifications, and other documentation and consolidates information to determine fumigation actions and activity</li></ul> |
| Writing  | <ul style="list-style-type: none"><li>Accurately record and complete organisational documents using clear language and correct spelling, grammar and terminology</li></ul>                                                                                    |
| Numeracy | <ul style="list-style-type: none"><li>Perform mathematical calculations to determine storage facility volumes and rates of application and to check, interpret and confirm results of tests</li></ul>                                                         |

| Skill                      | Description                                                                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oral Communication         | <ul style="list-style-type: none"><li>Effectively participate in verbal exchanges using active listening to convey and clarify post treatment risks and control measures</li></ul>                                                                                             |
| Navigate the world of work | <ul style="list-style-type: none"><li>Identify and implement manufacturer requirements for fumigants</li></ul>                                                                                                                                                                 |
| Get the work done          | <ul style="list-style-type: none"><li>Take responsibility for planning, sequencing and prioritising tasks required for fumigation activities</li><li>Address problems and initiate standard procedures in response to emergencies applying problem solving processes</li></ul> |

## Unit Mapping Information

| Code and title current version                                              | Code and title previous version                                          | Comments                                                                                                                                                                                  | Equivalence status |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| AHCCHM308<br>Use application equipment to apply fumigant in enclosed spaces | AHCCHM301 Use application equipment to apply fumigant in enclosed spaces | Change to sequencing of Elements and Performance Criteria and editing changes for clarity<br><br>Removal of prerequisite units<br><br>Updated Performance Evidence and Knowledge Evidence | Equivalent unit    |

## Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

## Assessment Requirements for AHCCHM308 Use application equipment to apply fumigant in confined spaces

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### Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to safely apply a fumigant on materials housed in an enclosure, ensuring they have:

- determined need, appropriateness and method for fumigating a storage facility
- determined hazards and risks and established safety and security resources and control measures required
- prepared facility for safe fumigation
- determined fumigant requirements and prepared the fumigant and equipment for treatment according to chemical label instructions and safety data sheets (SDS)
- ensured personal safety by using appropriate personal protective equipment (PPE)
- applied fumigant and monitored the safety and integrity of the fumigation process, responding appropriately to emergencies
- rendered the storage facility safe through ventilation, conducted tests to establish safe air quality notifying personnel of residual risks
- removed fumigation materials, waste and temporary resources from storage facility and disposed of waste according to workplace and environmental procedures
- complied with workplace and environmental procedures and chemical label instructions and SDS
- checked, decontaminated, cleaned and stored equipment used in the fumigation process according to workplace procedures
- maintained records of fumigation activities and incidents and reported according to workplace procedures.

### Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pests relevant to materials to be treated and factors and considerations in relation to the use of fumigation
- pest management strategies and relation to the use and selection of fumigation methods, including:
  - chemical
  - mechanical
  - biological
  - cultural
  - integrated pest management including resistance management principles
- types of fumigant used for treating storage facilities, their mode of action, methods of application, transport, storage and handling
- fumigant labels and SDS and how to interpret and apply label requirements for specific crops and facilities
- equipment used in fumigation, their setup, calibration, operation, shutdown, care and maintenance
- storage facilities and their suitability for fumigation, techniques used to seal a facility, and methods and calculations required to determine fumigant rates of application
- monitoring procedures during a fumigation process and methods of assessing leakage
- safety requirements including signage, equipment, PPE for use when handling fumigants and conducting fumigation activities
- legislation, regulations, licensing and codes of practice relevant to fumigant use
- risks associated with working near confined spaces including signage, gas detection and relevant entry and exit procedures
- chemical hazards and risk factors including human and animal health, leakage, spillage, environment damage and control measures required to mitigate risk
- methods for ventilating storage facilities and the equipment required
- how to assess for residual gas and safe re-entry periods including the consequence of fumigant residues and maximum residue limits
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up
- procedures and processes for rendering a storage facility safe and operational after fumigation
- records required when conducting fumigation activities and related safety reporting procedures.

## Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
  - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
  - access to storage facility and materials for fumigation
- resources, equipment and materials:
  - fumigants

- PPE
- fumigation and ventilation equipment
- fumigation measuring and mixing equipment
- gas testing equipment
- materials required to seal facilities for fumigation
- specifications:
  - workplace documents, including work instructions and procedures for fumigation
  - fumigant labels and SDS
  - legislation, regulations, codes of practice relevant to handling, storage, transport and use of fumigants
  - manufacturers' operation and maintenance instructions for fumigation equipment
  - relevant standards for air quality for test results.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

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