Modification history

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| Release | Comments |
| Release 2 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0. |
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0. |

| AHCCHM301 | Use application equipment to apply fumigant in confined spaces |
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| 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 and use discretion and judgement in the selection and use of available resources who are not expected to physically enter or work within an enclosed or confined space.  Licensing requirements apply to this unit but vary according to state/territory jurisdictions. Users are advised to check with their relevant regulatory authority. |
| Prerequisite Unit | AHCCHM303 Prepare and apply chemicals  AHCCHM304 Transport and store chemicals |
| Unit Sector | Chemicals (CHM) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1.Plan fumigation | 1.1 Determine the need for fumigation as an option  1.2 Determine type of fumigant and application rate  1.3 Select method of fumigant application to suit type of pest, facility and grain or plant type  1.4 Assess appropriateness of facility and conditions for selected fumigation method  1.5 Identify hazards, assess risks and implement control measures in relation to the use of fumigants in enclosed spaces  1.6 Establish security measures to control access during fumigation and prescribed re-entry periods  1.7 Determine appropriate personal protective equipment according to fumigant safety requirements |
| 2.Prepare storage facility, equipment and fumigants for fumigation activity | 2.1 Erect signage and barriers to control risk of inadvertent entry to facility  2.2 Seal the facility, check the seal integrity  2.3 Take appropriate measurements and calculations to ensure the concentration of fumigant will meet specification  2.4 Check operational effectiveness of fumigation equipment  2.5 Calibrate fumigation equipment to deliver the correct rate of application  2.6 Transport and store fumigants according to manufacturer recommendations and regulations  2.7 Select and fit personal protective equipment  2.8 Prepare fumigant according to instructions from manufacturer |
| 3.Conduct and monitor fumigation | 3.1 Apply fumigation using selected equipment and fumigant  3.2 Monitor fumigation site during exposure time and prevent unauthorised access  3.3 Maintain integrity of seals throughout the active fumigation period  3.4 Respond to emergency situations using emergency response procedures |
| 4.Ventilate storage facility | 4.1 Establish ventilation and re-entry times and control risks  4.2 Ventilate facility using appropriate equipment to remove fumigant in a safe and controlled manner  4.3 Test for evidence of residual gas according to workplace procedures and manufacturer instructions  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  5.2 Remove signage and barriers according to fumigation plan |
| 6.Clean, safety-check and store equipment and fumigants | 6.1 Clean, check, decontaminate and store equipment and personal protective equipment according to workplace procedures  6.2 Dispose of all waste according to manufacturer instructions and environmental guidelines |
| 7.Record fumigation details | 7.1 Record details of fumigation applications according to workplace procedures  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. | |
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| Skill | Description |
| Reading | * Reads and interprets safety data, labels, manufacturers specifications, operating procedures, specifications, and other documentation and consolidates information to determine fumigation actions and activity |
| Writing | * Accurately records and completes organisational documents using clear language and correct spelling, grammar and terminology |
| Numeracy | * Performs mathematical calculations to determine storage facility volumes and rates of application and to check, interpret and confirm results of tests |
| Oral Communication | * Effectively participates in verbal exchanges using active listening and to convey and clarify post treatment risks and control measures |
| Navigate the world of work | * Identifies and implements manufacturer requirements for fumigants |
| Get the work done | * Takes responsibility for planning, sequencing and prioritising tasks required for fumigation activities * Addresses problems and initiates standard procedures in response to emergencies applying problem solving processes |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AHCCHM301 Use application equipment to apply fumigant in enclosed spaces | AHCCHM301 Use application equipment to apply fumigant in enclosed spaces | Updated to meet Standards for Training Packages  Minor change to Element 2. Moved Performance Criteria from Element 2 to 1 and made minor changes for clarity | Equivalent unit |

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

| TITLE | Assessment requirements for AHCCHM301 Use application to 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 * ensured personal safety by using appropriate personal protective equipment * 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 * checked, decontaminated, cleaned and stored equipment used in the fumigation process according to workplace procedures * maintained required records of fumigation and incidents and reported to appropriately. | |

| Knowledge Evidence |
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| 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:   * primary and secondary pests relevant to grain, seed, crops or plants to be treated and factors and considerations in relation to the use of fumigation * fumigant free options for pest control including, integrated pest management and 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 safety data sheets (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, personal protective equipment 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 risks 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 (MRLs) * 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 |
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| 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 suitable for fumigation * resources, equipment and materials: * use of fumigants * use of personal protective equipment * access to fumigation and ventilation equipment * access to fumigation measuring and mixing equipment * access to gas testing equipment * use of materials required to seal facilities for fumigation * specifications: * use of specific workplace documents such as work instructions and procedures for fumigation * access to fumigant labels and safety data sheets (SDS) * access to legislation, regulations, codes of practice relevant to handling, storage, transport and use of fumigants * access to manufacturers operation and maintenance instructions for fumigation equipment * access to 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. |

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