



Australian Government

AHCIRG343 Operate irrigation injection equipment

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare, start up, operate and shut down irrigation injection equipment, monitor impacts of injection process and record information of irrigation injection equipment operation.

The unit applies to individuals who operate irrigation injection equipment under broad direction and take responsibility for their own work.

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

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

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. Prepare equipment for injection operation	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required tools and equipment and check for safe operation 1.3 Select, fit and use suitable personal protective equipment applicable to the task 1.4 Select materials and services and confirm they are available and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	ready for operation 1.5 Prepare equipment and materials to meet injection requirements
2. Operate injection equipment process	2.1 Start up injection process according to operation and maintenance manual 2.2 Monitor control points to confirm performance is maintained within specification 2.3 Identify, rectify and report out-of-specification equipment performance 2.4 Deliver injection requirements 2.5 Put emergency procedures in place for spillage or chemical accidents
3. Shut down injection equipment	3.1 Carry out shut down on injection equipment according to operation and maintenance procedure 3.2 Clean injection equipment according to maintenance procedure 3.3 Collect, treat, dispose or recycle waste generated by both the process and cleaning procedures
4. Monitor plant response and environmental impacts of injection	4.1 Monitor plant response to injection 4.2 Record and report environmental hazards of injection process 4.3 Maintain withholding periods for chemical application on food crops 4.4 Restrict access to areas where chemicals have been applied through injection if required
5. Record information	5.1 Record workplace information in the appropriate format 5.2 Record chemical application and storage details according to recording 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	Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	Document environmental hazards of injection process
Oral communication	Use clear language to report out-of-specification equipment performance
Numeracy skills	Calculate chemical dilution rates
Navigate the world of work	Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG343 Operate irrigation injection equipment	AHCIRG326 Operate irrigation injection equipment	Performance criteria clarified Foundation skills added Assessment requirements updated	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 AHCIRG343 Operate irrigation injection equipment

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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 operated irrigation injection equipment on at least two occasions and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- selected and prepared injection materials
- completed relevant calculations such as dilution rates
- identified injection requirements
- implemented routine maintenance and minor repairs of the system
- reported and recorded corrective action
- taken corrective action in response to out-of-specification results or non-compliance
- handled hazardous chemicals safely
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- implemented routine system cleaning requirements
- monitored usage and dilution rates.

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:

- workplace requirements applicable to health and safety in the workplace for operating irrigation injection equipment, including backflow prevention
- purpose and operation of equipment and instrumentation components
- chemicals, cleaning agents and fertilisers used for injection and their purpose
- safety data sheet (SDS) information for substances to be injected
- services required
- irrigation injection equipment operation and maintenance manual

- basic irrigation injection equipment operating principles and process control systems where relevant
- procedures for prevention of backflow
- process specifications, procedures and operating parameters
- control points and significance and methods of monitoring
- common causes of variation and corrective action required
- correct chemical handling techniques
- environmental issues and controls
- shutdown sequence
- lock-out and tag-out procedures
- irrigation injection equipment cleaning requirements and procedures
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation injection equipment operation and maintenance manual
 - irrigation injection equipment
 - injection chemicals, cleaning agents and fertilisers
 - personal protective equipment applicable to operating irrigation injection equipment
- specifications:
 - work instructions and workplace procedures applicable to operating irrigation injection equipment workplace requirements applicable to health and safety in the workplace and operating irrigation injection equipment
 - irrigation injection tools and equipment and procedures
 - SDS for substances being injected
 - recording procedures
 - environmental procedures for collection, treatment, disposal or recycling of waste
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

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

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