



Australian Government

AHCDRG403 Coordinate and supervise installation of an irrigation drainage system

Release: 1

AHCDRG403 Coordinate and supervise installation of an irrigation drainage system

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 develop and implement irrigation drainage system construction procedures, coordinate, supervise and commission irrigation drainage system installation and supervise work area rehabilitation.

The unit applies to individuals who apply specialised skills and knowledge in coordinating and supervising the installation of irrigation drainage systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

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

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

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. Develop and implement construction and environmental procedures	1.1 Develop employment and contract management procedures for contractors 1.2 Develop procedures for controlling and recording site deliveries 1.3 Develop procedures for recording the hire of plant and equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Determine workplace health and safety procedures, including risk assessment for installation works 1.5 Develop procedures for dealing with and minimising environmental impacts associated with construction work 1.6 Notify client, authorities and agencies of the scheduled works
2. Interpret the irrigation drainage system design for the site	2.1 Determine the purpose, scale and required output of the irrigation system 2.2 Assess the landscape of the site 2.3 Determine construction requirements and verify with designer 2.4 Select components to meet design specifications and site requirements
3. Organise resource requirements	3.1 Nominate tasks and timelines for the scheduled works, including the coordination of required resources 3.2 Organise and coordinate labour requirements 3.3 Verify the correct parts and equipment have been delivered to the site and checked 3.4 Select and check equipment and machinery 3.5 Allocate tasks to the work team 3.6 Carry out safety induction for the task and site
4. Supervise preparatory work	4.1 Interpret construction plan to confirm works to be carried out 4.2 Take levels and plan earth works based on irrigation drainage design 4.3 Confirm site is cleaned and marked out 4.4 Confirm drainage structures are pegged out
5. Supervise construction and testing of the drainage system	5.1 Interpret plan and supervise construction work 5.2 Confirm trenches are excavated to specification 5.3 Confirm earth works are carried out appropriately 5.4 Confirm construction of drainage structures are to specifications 5.5 Inspect the lay out and joining of pipes 5.6 Check fitting and adjustment of fittings and valves and confirm all joints are secured

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.7 Supervise the installation and testing of pumping system
6. Commission the irrigation drainage system	6.1 Start up the system according to operating instructions 6.2 Identify operating faults and take corrective actions as required 6.3 Use testing and monitoring equipment to monitor system performance 6.4 Make adjustments as required
7. Supervise the rehabilitation of the works area	7.1 Monitor the resurfacing and sealing earthworks 7.2 Confirm the planting and maintenance of vegetation areas have been carried out 7.3 Confirm disposal of waste and surplus materials has been carried out 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	Identify and interpret information regarding installation requirements for irrigation drainage system
Oral communication	Initiate discussions with staff, contractors, suppliers and designer using clear language to communicate installation requirements, tasks, timelines, and procedures
Numeracy	- Calculate soil quantity and volume to be removed - Confirm trench excavation against design specifications
Navigate the world of work	- Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility - Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	Use appropriate language and communication skills to disseminate information about installation timelines and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG403 Coordinate and supervise installation of an irrigation drainage system	AHCDRG401 Coordinate and supervise installation of an irrigation drainage system	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 AHCDRG403 Coordinate and supervise installation of an irrigation drainage system

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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 coordinated and supervised the installation of an irrigation drainage system on at least one occasion and has:

- developed operational procedures
- conducted a workplace health and safety risk assessment
- interpreted irrigation designs
- documented requirements for structures
- estimated quantities and volumes of soil to be moved.

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:

- environmental impacts and role of drainage systems
- regulatory requirements, codes of practice and relevant workplace service standards relating to blockage removal, disconnection and reconnection activities
- water authority standards and procedures
- principles and practices of irrigation drainage system installation, including:
 - components used in drainage systems
 - drainage appliances, fixtures and fittings
 - isolation processes and procedures
 - levelling and alignment processes
 - types and operational parameters of drains
- soil moisture measurement procedures
- water quality monitoring methods and techniques
- water table and salinity measures
- development of procedures
- supervision of task allocation, coordination of resources and induction procedures

- trench excavation and earth works procedures
- measuring and monitoring procedures for factors contributing to drainage system performance.

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
- specifications:
 - irrigation drainage system design specifications
 - workplace procedures applicable to health and safety in the workplace and installation of an irrigation drainage system
 - water authority standards and procedures
- timeframes:
 - according to the job requirements.

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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