



Australian Government

Assessment Requirements for AHCIRG440 Manage a moving sprinkler irrigation system

Release: 1

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Modification History

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

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 managed a moving sprinkler irrigation system on at least two occasions and has:

- developed and supervised procedures for moving sprinkler irrigation system, including:
 - pre-start valve adjustment, and filter and emitter checking
 - start up
 - shutdown
 - isolation
 - system flushing
- removed and installed system components according to operation and maintenance manual and workplace environmental procedures
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- measured, interpreted and adjusted flow rates and pressures
- monitored and recorded system effectiveness, including:
 - application rates
 - depth of irrigation
 - infiltration and runoff
 - irrigation times
 - pressure variations and blockages
 - salinity levels and water quality
 - soil moisture levels
 - sprinkler coverage and output
- measured and recorded output and efficiency of an irrigation system
- used records to review an irrigation system.

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:

- irrigation schedules
- general irrigation methods for moving sprinkler systems
- main components of moving sprinkler irrigation systems
- best practices for reducing environmental impacts of irrigation
- component specifications
- environmental hazards of runoff and compaction
- environmental impacts of irrigation using water from any ground or underground source
- moving sprinkler irrigation technologies
- moving sprinkler and travelling mechanism operation and maintenance manual servicing and maintenance procedures
- critical measures for moisture availability, including:
 - field capacity
 - readily available water
 - wilting point
- soil compaction and drainage monitoring
- soil moisture testing techniques
- soil, plant and water relationships
- water requirements of plants and crops consistent with sound environmental management
- pump types used in moving sprinkler irrigation systems and their output and efficiency ratings
- pump types used in moving sprinkler irrigation systems and their operation
- energy efficiency indicators and benchmarks for moving sprinkler irrigation, including:
 - application efficiency
 - average application rate
 - instantaneous application rate
- physical soil characteristics, including:
 - infiltration rate
 - water holding capacity
 - wetted volume in the root zone.

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:
 - moving sprinkler irrigation system equipment and tools
 - moving sprinkler irrigation system measuring, and recording equipment and manual

- specifications:
 - moving sprinkler and travelling mechanism operation and maintenance manual
 - environmental procedures applicable to moving sprinkler irrigation systems
 - industry energy and water efficiency benchmarks
- timeframes:
 - according to the job requirements
- relationships:
 - staff members.

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

Links

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