

Modification history

| Release | Comments |
|-----------|--|
| Release 2 | This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0. |
| Release 1 | This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0. |

| AHCIRG431 | Supervise irrigation system installation |
|--------------------------|---|
| Application | <p>This unit of competency describes the skills and knowledge required to develop construction procedures, interpret irrigation system design, and coordinate and supervise the construction and installation of a range of irrigation systems.</p> <p>The unit applies to individuals who apply specialised skills and knowledge to the supervision of irrigation system installation and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p> |
| Prerequisite Unit | Nil |
| Unit Sector | Irrigation (IRG) |

| 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 procedures | 1.1 Develop employment and contract management procedures 1.2 Develop procedures for controlling and recording site deliveries 1.3 Develop procedures for recording the hire of plant and equipment 1.4 Assess workplace health and safety risks associated with construction activities and implement suitable controls and procedures to minimise risk 1.5 Notify client, authorities and agencies of the schedule of works 1.6 Develop procedures to minimise environmental impacts of construction work |
| 2. Interpret the irrigation 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 the designer 2.4 Select components to meet design specifications and site requirements |
| 3. Organise resource requirements | 3.1 Nominate tasks, timelines and required resources 3.2 Organise labour requirements 3.3 Verify and check parts and equipment delivered to the site 3.4 Select and maintain equipment and machinery according to operation and maintenance manual 3.5 Allocate jobs and tasks to the work team 3.6 Carry out safety induction for the task and site |
| 4. Supervise construction work | 4.1 Interpret plan and supervise construction work 4.2 Confirm site is prepared and set out appropriately 4.3 Confirm the correct lay out of the main lateral line 4.4 Supervise the insertion of sub-mains and flushing manifold 4.5 Supervise the installation of risers, emitters and other components |
| 5. Complete installation work and test components | 5.1 Connect water supply 5.2 Check emitters for optimal coverage and efficiency 5.3 Set valves to allow water to targeted areas 5.4 Start up and flush the system 5.5 Attach measuring devices and controllers to the system |

| Elements | Performance Criteria |
|--|---|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i> |
| 6. Commission system | 6.1 Identify operating faults and take corrective action to meet design specifications 6.2 Calibrate testing and monitoring equipment 6.3 Carry out testing procedures and record results 6.4 Document irrigation system operating procedures 6.5 Hand over system in operating order |

| Foundation Skills | |
|--|--|
| <i>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.</i> | |
| Skill | Description |
| Reading | <ul style="list-style-type: none"> Identify and interpret information regarding supervising irrigation system installation |
| Writing | <ul style="list-style-type: none"> Develop irrigation system construction and installation procedures Develop employment and contract management procedures Develop site delivery controlling and recording procedures Develop plant and equipment recording and hire procedures Develop workplace health and safety and environmental procedures Record irrigation system test results Document irrigation system operating procedures |
| Oral communication | <ul style="list-style-type: none"> Use clear language to notify client, authorities and agencies of installation activities Initiate discussions with client using clear language to communicate irrigation system hand over |
| Numeracy | <ul style="list-style-type: none"> Calculate timelines and resource requirements Verify and check part numbers Set valves Calibrate testing and monitoring equipment Record irrigation system test data |
| Navigate the world of work | <ul style="list-style-type: none"> Identify and describe own 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 |
| AHCIRG431 Supervise irrigation system installation Release 2 | AHCIRG431 Supervise irrigation system installation Release 1 | Minor changes to performance criteria and foundation skills | Equivalent unit |

| | |
|--------------|---|
| 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 AHCIRG431 Supervise irrigation system installation |
| Performance Evidence | |
| <p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has supervised an irrigation system installation on at least one occasion and has:</p> <ul style="list-style-type: none"> • conducted work health and safety risk assessment • developed irrigation system construction and installation procedures • developed irrigation system operating procedures • implemented employment procedures • interpreted irrigation designs • supervised installation tasks such as: <ul style="list-style-type: none"> • assembling sprinklers, pressure regulators and hose directors • checking operating specifications for pressures and flow rates • completing installation work and testing components • installing irrigation components • installing power and pumping plant • laying and joining sprinkler lateral pipelines • laying and joining supply and distribution pipeline • pressure testing the system • setting out and preparing site • setting up irrigation controllers • undertaking start-up procedures. | |
| Knowledge Evidence | |
| <p>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:</p> <ul style="list-style-type: none"> • equipment and machinery operation and maintenance manual • principles and practices of irrigation system installation supervision • behaviour of water on varying terrain and soil types • calculations for installing low volume irrigation systems • characteristics and operation of joints, valves and sprinkler components • commissioning procedures • design interpretation • distribution uniformity • employment procedures • licensing requirements for electrical work • operating specifications for pressures and flow rates • project management principles • pump capacity • safe work practices for construction • setting up fertigation equipment • setting up irrigation controllers • soil water retention testing techniques • start-up procedures • types of pumps and water flow rates • volume and pressure requirements • water quality and water filtration techniques. | |
| Assessment Conditions | |
| <p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • a workplace setting or an environment that accurately represents workplace conditions | |

| |
|------------------------------|
| Assessment Conditions |
|------------------------------|

- | |
|--|
| <ul style="list-style-type: none">• resources, equipment and materials:<ul style="list-style-type: none">• irrigation system testing and monitoring equipment and procedures• workplace procedures applicable to health and safety in the workplace, environment and irrigation system installation• relationships<ul style="list-style-type: none">• client, authorities and agencies• timeframes:<ul style="list-style-type: none">• 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.

| |
|--------------|
| Links |
|--------------|

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