



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG305A Operate pressurised irrigation systems

Release: 1

AHCIRG305A Operate pressurised irrigation systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of operating pressurised irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; carry out pre-start checks; operate and inspect the system; measure and interpret flow rates and pressures; identify adverse environmental impacts of irrigation activities and take appropriate remedial action; shut down in response to irrigation indicators.
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Application of the Unit

Application of the unit	This unit applies to workers in irrigated farming systems and is likely to be carried out under routine supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Perform pre-start checks for pressurised irrigation system	1.1. Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational. 1.2. Pumps are primed, if necessary, and valves and controls are open or closed as directed. 1.3. Pressure and flow testing equipment are calibrated and available as required. 1.4. Other pre-start system checks are carried out in accordance with manufacturer's requirements and enterprise procedures.
2. Start up and inspect system	2.1. Start up sequence is implemented in accordance with operations manual. 2.2. All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures. 2.3. Pressure at the headworks and control valves is checked against design specifications 2.4. Water distributed is checked for even coverage over the targeted areas with minimal wastage and run-off.
3. Shut down system based upon irrigation indicators	3.1. Water is applied for sufficient time to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions. 3.2. System components are shut down and drained in sequence in accordance with manufacturer's specifications and enterprise procedures. 3.3. Drainage and treatment systems are checked in accordance with enterprise procedures. 3.4. Irrigation activities are recorded and in reported accordance with regulatory requirements and enterprise procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

REQUIRED SKILLS AND KNOWLEDGE

- identify hazards and implement safe work procedures
- read and follow operations manual and irrigation schedules
- calibrate pressure and flow testing equipment
- carry out pre-start checks and prime pumps
- start up system and carry out operational checks
- measure and interpret flow rates and pressures
- perform shut down procedures
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant OHS and environmental policies and procedures relating to the operation of pressurised irrigation systems
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- general irrigation methods for pressurised systems
- main components of pressurised irrigation systems
- pump types used in pressurised irrigation systems and their operation
- environmental impacts of irrigation using water from any ground or underground source
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- shutdown sequence
- OHS, environmental and enterprise policies and procedures relating to the operation of pressurised irrigation systems.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and follow operations manual and irrigation schedules
- carry out pre-start checks
- operate and inspect the system
- measure and interpret flow rates and pressures
- identify adverse environmental impacts of irrigation activities and take appropriate remedial action
- shut down in response to irrigation indicators.

Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

System may require:

- pressurised irrigation systems such as micro-irrigation systems and spray irrigation systems.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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