



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG326A Operate irrigation injection equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This Unit covers the process of operating injection equipment as part of an irrigation system and defines the standard required to: carry out pre-start checks; identify OHS and environmental hazards; operate and monitor the injection system; shut down the injection system; and keep records.

Application of the Unit

This Unit applies to skilled workers in the food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

Licensing/Regulatory Information

Workers are required by legislation to have completed training in chemical handling and use before using agricultural chemicals.

Pre-Requisites

Not applicable.

Employability Skills Information

This Unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare equipment for <i>injection operation</i>	1.1 Materials and services are confirmed as available and ready for operation 1.2 Materials are prepared to meet injection requirements 1.3 Equipment is checked to confirm readiness for use 1.4 Equipment is set to meet injection requirements
2 Operate the injection process	2.1 Safety procedures are put in place including the use of PPE 2.2 The injection process is started up according to workplace procedures 2.3 Control points are monitored to confirm performance is maintained within specification 2.4 Out-of-specification equipment performance is identified, rectified and/or reported 2.5 Injection requirements are delivered according to instructions 2.6 Equipment is maintained in good working order 2.7 Emergency procedures are put in place for spillage or chemical accidents
3 Shut down injection equipment	3.1 Injection equipment is shut down according to workplace procedures 3.2 Injection equipment is cleaned according to workplace procedures 3.3 Waste generated by both the process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures
4 Monitor plant response and environmental impacts of injection	4.1 Plant response to injection is monitored 4.2 Environmental hazards of injection are recorded and reported 4.3 Withholding periods for chemical application on food crops are maintained 4.4 Access is restricted to areas where chemicals have been applied through injection if required
5 Record information	5.1 Workplace information is recorded in the appropriate format 5.2 Chemical application and storage details are recorded as per legislative requirements

Required Skills and Knowledge

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

Required skills include:

Ability to:

- access workplace information to identify injection requirements
- select, fit and use personal protective clothing and/or equipment
- select and prepare injection materials as required
- complete relevant calculations such as dilution rates
- monitor usage and dilution rates
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- demonstrate safe handling of hazardous chemicals
- implement routine maintenance and minor repairs of the system
- implement routine system cleaning requirements
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, 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 numeracy skills to estimate, calculate and record routine workplace measures
- 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 includes:

Knowledge of:

- chemicals, cleaning agents and fertilisers used for injection and their purpose
- label and MSDS information for substances to be injected
- purpose and operation of equipment and instrumentation components
- basic operating principles and process control systems where relevant
- services required
- control points and significance and methods of monitoring
- common causes of variation and corrective action required
- process specifications, procedures and operating parameters
- correct chemical handling techniques
- backflow prevention

- OHS hazards and controls
- lock-out and tag-out procedures
- environmental issues and controls
- procedures for prevention of backflow
- cleaning requirements of system
- maintenance requirements of system
- shutdown sequence
- recording requirements and procedures
- cleaning procedures.

Evidence Guide

<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>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:</p> <ul style="list-style-type: none"> • carry out pre-start checks • identify OHS and environmental hazards • operate and monitor the system • shut down the injection system • keep records.
Context of and specific resources for assessment	<p>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.</p>

Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Injection operations</i> may include:	<ul style="list-style-type: none"> • fertilisers • chlorine • acids • cleaning agents.

Unit Sector(s)

Irrigation