Australian Government

Department of Education, Employment and Workplace Relations

RTE2602A Assist with the operation of pressurised irrigation

Release: 1

RTE2602A Assist with the operation of pressurised irrigation

Modification History

Not applicable.

Unit Descriptor

This competency standard covers the process of assisting with the operation of pressurised irrigation systems under routine supervision. It requires the ability to handle and shift loads, follow enterprise policy and procedures relating to irrigation duties, identify adverse environmental impacts of gravity fed irrigation system and take appropriate remedial action, estimate water levels and volumes/flow, and follow OHS procedures. Assisting with the operation of pressurised irrigation systems requires knowledge of basic operation of pressurised irrigation system, irrigation times to deliver sufficient volume without over watering, manual handling procedures, and OHS procedures relating to pressurised irrigation systems.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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Element	Performance Criteria
1 Assist with setting up of movable **irrigation** components	1.1 Irrigation equipment is handled safely in accordance with **OHS** practices.
	1.2 Irrigation equipment is positioned, if necessary, in accordance with enterprise requirements.
	1.3 **Irrigation components** are checked and **action** taken, as required, in accordance with enterprise policy and procedures.
	1.4 Assemble and join irrigation system components where required.
	1.5 Water **outlets** are checked in accordance with enterprise practices.
2 Carry out irrigation operations	2.1 Valves are opened and shut, as necessary, in accordance with enterprise procedures.
	2.2 Required pressures and water flows are achieved and maintained to ensure sufficient water availability.
	2.3 Equipment is relocated, if necessary, in accordance with enterprise procedures and OHS guidelines.
3 Clean and store irrigation equipment as required	3.1 Equipment is cleaned and prepared for storage, as necessary, in accordance with enterprise policy and procedures.
	3.2 Equipment is loaded for **transport** safely, if necessary, in accordance with OHS practices.
	3.3 Equipment is stored, as required, in accordance with enterprise policy and procedures.

Required Skills and Knowledge

Not applicable.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in assisting with the operation of pressurised irrigation systems requires evidence that a person can set up irrigation systems, operate, check, clean and store irrigation equipment, and carry out all basic activities involved in irrigation under routine supervision.

The skills and knowledge required to carry out basic irrigation duties for pressurised irrigation systems must be **transferable** to a different work environment. For example, this could include different systems, irrigation techniques, and plants/crops to be irrigated.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

basic operation of pressurised irrigation system

irrigation times to deliver sufficient volume without over watering

manual handling procedures

OHS procedures relating to using pressurised irrigation systems.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

shift and transfer loads

follow enterprise policy and procedures relating to irrigation duties

assemble and join irrigation system components

operate irrigation systems (i.e., turn on and off)

regulate system to achieve and maintain correct operating pressures and water flows

estimate water flow.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

1. How can **communication of ideas and information** (**1**) be applied?	Checking irrigation set up.
2. How can **information be collected**, **analysed and organised** (**1**)?	Monitoring pressures and water flows.
3. How are **activities planned and organised** (**1**)?	Organising irrigation activities to occur simultaneously or as required.
4. How can **team work** (**1**) be applied?	Co-ordinating irrigation activities with others.
5. How can the use of **mathematical ideas and techniques** (**1**) be applied?	Estimating irrigation time and water volume for sufficient availability to plants/crops.
6. How can **problem-solving skills** (**1**) be applied?	Determining required action once set up information has been checked.
7. How can the **use of technology** (**1**) be applied?	Using computerised irrigation systems.

Are there other competency standards that could be assessed with this one?

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

Range Statement

Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available

What pressurised **irrigation** systems are relevant to this standard?	These may include micro-irrigation systems and spray irrigation systems. Micro-irrigation systems may be mains pressure, low pressure, below or above ground, sprays systems, drip emitter trickle, t-tape, mini-sprinklers, capillary pop ups and gear driven sprinklers. Spray irrigation systems may be travelling irrigators (soft hose, hard hose boom type) centre pivot, linear move, powered side roll hand shift permanent (installed), and bike shift/easy shift. Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.
What **OHS** requirements may be relevant to this standard?	These may include safe systems and procedures for the operation and maintenance of machinery and equipment, for outdoor work (including protection from solar radiation, dust and noise), manual handling, prevention of electrical injury, handling, transportation, use and storage of farm chemicals, protection against chemical residues including that in/on foliage, water, soil and other items, and the use and maintenance of relevant personal protective clothing and equipment.
What **irrigation components** need to be checked?	Components may include pumps, pipes, valves (including solenoids), and sprinkler heads/emitters.
What **action** may be required after checking components?	Action may include remove, repair, replace or clean components. It may also include bleeding solenoid valves, lubrication and priming pumps.
What **outlets** should be checked?	Outlets may include drip lines, pipes, risers, valves, sprinklers and emitters.

How might equipment be **transported**?	Transport may include utility, flat bed trucks, pipe trailer, or four-wheel motorbike.

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

Unit Sector(s)

Not applicable.