



Australian Government

Department of Education, Employment and Workplace Relations

RTE4607A Plan on-site irrigation system installation and construction work

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Include checklist for excavation in relation to aspects such as landfill or heritage constraints and legislation.

Ref to working with main soil types both excavation and irrigation applicator type selection. This competency standard covers the process of appraising contract documentation for irrigation installation and translating this into operational requirements, developing strategies for implementing construction, preparing a project schedule and dilapidation report, and determining all the required resources for the work. Planning on-site installation and construction usually occurs without supervision but with general guidance on progress.

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 Appraise contract documentation and translate into operational requirements	1.1 Copy of building approval and conditions is obtained as required. 1.2 Contract documentation is reviewed for any unusual aspects of construction, use of materials and penalties. 1.3 Availability of sub-contractors is ascertained and selected to suit job requirements. 1.4 Availability of materials is checked with suppliers. 1.5 Site access limitations are assessed. 1.6 Relevant authorities controlling construction work advised of commencement date for project as required.
2 Develop strategies for implementing the construction operations	2.1 Procedures for controlling and recording site deliveries are established. 2.2 Procedures for recording the hire of plant and equipment are determined. 2.3 OHS procedures are established, including hazard/risk management. 2.4 Procedures are established for dealing with environmental issues associated with irrigation construction work. 2.5 Procedures required for the control of multiple projects are determined.
3 Prepare project schedule for irrigation installation and construction	3.1 Construction operations are prepared in sequence. 3.2 Operations are entered into a manually prepared schedule or computer based software package. 3.3 'Critical path' is identified and schedule revised with new activities/projects, as needed, and

documented.

- 3.4 **Timeframe is adjusted to take account of anticipated delays.**
- 4 Determine all the required resources for project
 - 4.1 **Temporary services and site accommodation is determined as required.**
 - 4.2 **Plant requirements and dates are selected and accessed.**
 - 4.3 **On site labour requirements are determined.**
- 5 Prepare dilapidation report
 - 5.1 **Records are made of the condition of existing building(s) to be retained and structures on the adjacent site boundaries.**
 - 5.2 **Copies of reports are submitted to adjacent building owners prior to commencing construction.**

Required Skills and Knowledge

Not applicable.

Evidence Guide

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

Competence in planning on-site irrigation system installation and construction work requires evidence that a person can appraise contract documentation and translate this into operational requirements, develop strategies for implementing construction operations, prepare a project schedule and dilapidation report, and determine all the required resources for the project.

The skills and knowledge required to plan on-site irrigation system installation and construction work must be **transferable** to a different work environment. For example, this could include different irrigation systems, crops and enterprise procedures.

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:

- installation and construction processes for on-site irrigation systems

- logical construction sequence for the system

- analysis of the required project resources

- environmental impacts of irrigation using water from any ground or underground source

- relevant enterprise OHS and environmental procedures

- relevant Australian Standards (e.g. AS3500)

- effect of main soil types on approach to

- excavation work and installation of irrigation components.

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:

- analyse contract conditions
- develop strategies
- schedule projects
- determine resources
- identify adverse environmental impacts of irrigation activities and appropriate remedial/preventative action
- follow relevant enterprise OHS and environmental procedures.

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** (2) be applied?

Developing project schedules and disseminating information on on-site processes.

2. How can **information be collected, analysed and organised** (2)?

Reading and interpreting plans and determining resources.

3. How are **activities planned and organised** (2)?

Sequencing installation and construction processes.

4. How can **team work** (2) be applied?

Co-ordinating activities with installation and construction teams.

5. How can the use of **mathematical ideas and techniques** (2) be applied?

Developing schedules and estimating resource requirements.

6. How can **problem-solving skills** (2) be applied?

Analysing project plans, developing schedules and analysing resource requirements.

7. How can the **use of technology** (2) be applied?

Using relevant project scheduling and resource management technology.

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 **OHS procedures** may be relevant to this standard?

OHS procedures may include identification and reporting of hazards to health and safety, risk assessment procedures and implementation of risk control measures, safe operation of machinery and equipment, safe manual handling procedures, selection, use and maintenance of relevant personal protective clothing and equipment, safe procedures for working at heights, and for outdoor work including protection from solar radiation, dust and noise.

What **environmental issues** may be associated with irrigation construction work?

Environmental issues include excavation work such as dealing with landfill, heritage constraints and legislation, removal of existing services, and using hazardous materials. Reference should be made to Environment Protection Agencies and respective legislation where environmental issues are encountered.

To which systems does **irrigation installation and construction** relate?

These may include gravity fed and pressurised systems.

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

Unit Sector(s)

Not applicable.