



Australian Government

Department of Education, Employment and Workplace Relations

AHCLPW306A Undertake sampling and testing of water

Release: 1

AHCLPW306A Undertake sampling and testing of water

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of sampling and testing water quality as part of a monitoring program and defines the standard required to: plan a water sampling program under direction; test and correlate equipment; sample and test water; record results on data sheets.
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Application of the Unit

Application of the unit	This unit relates to undertaking sampling and testing of water and is likely to be under limited supervision from others with checking only related to overall progress. Sampling and testing water quality requires knowledge of monitoring schedules, hydrological cycle, water quality determinations and standards, principles of water quality control, sampling and testing methods and groundwater salinity.
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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

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1. Plan for sampling and testing field work	<p>1.1. Monitoring schedule is read/heard and confirmed with manager.</p> <p>1.2. Advanced water quality and environmental parameters are identified.</p> <p>1.3. Samples to be collected to determine water quality and environmental parameters are identified by supervisory staff.</p> <p>1.4. Equipment requirements for water sampling and testing are determined and arranged.</p> <p>1.5. Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on sampling and testing.</p>
2. Prepare equipment and resources	<p>2.1. Equipment required for sampling and testing is sourced according to monitoring procedures.</p> <p>2.2. Equipment is checked for availability and serviceability in accordance with enterprise procedures.</p> <p>2.3. Testing and correlation is carried out to verify correct and accurate performance of equipment.</p> <p>2.4. Repairs and maintenance of field-based equipment and instruments are carried out in accordance with enterprise procedures and manufacturer's instructions.</p> <p>2.5. Data or record sheets/books are collected for use.</p> <p>2.6. Equipment, data sheets and personnel are moved to sampling sites without injury or damage and readied for use.</p> <p>2.7. Equipment is installed and protected according to manufacturer's specifications, safety and enterprise requirements.</p> <p>2.8. Staff undertaking sampling and testing are briefed on and are aware of responsibilities in accordance with monitoring schedule.</p> <p>2.9. Testing equipment is confirmed and serviceable for monitoring procedures in field conditions to enterprise and manufacturers' requirements.</p>
3. Carry out sampling and testing of water	<p>3.1. Tests are undertaken in accordance with monitoring plan and enterprise procedures to avoid erroneous readings.</p> <p>3.2. Samples are taken and tested in accordance with monitoring standards and guidelines.</p> <p>3.3. Samples for external analysis are prepared, packaged</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and sent to laboratory in accordance with monitoring schedule and laboratory standards.</p> <p>3.4. Specific and general observations including information on relevant ambient and antecedent environmental conditions are made in accordance with monitoring schedule.</p> <p>3.5. Personnel undertaking sampling and testing tasks are supervised and feedback given on work performance.</p> <p>3.6. Equipment operation and work practices conform to OHS requirements.</p>
4. Complete water sampling and testing activities	<p>4.1. Equipment and clothing is cleaned, sanitised, repaired and stored in accordance with enterprise procedures.</p> <p>4.2. Damaged or malfunctioning equipment is repaired on site or sent to manufacturer or specialist.</p> <p>4.3. Test results and observations are accurately recorded on data sheets and forwarded in accordance with enterprise procedures.</p> <p>4.4. Changes in field conditions and equipment are conveyed to supervisor according to enterprise procedures.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- plan for sampling and testing
- prepare equipment and resources
- carry out sampling and testing
- complete water sampling and testing activities
- 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 numeracy skills to estimate, calculate and record routine workplace measures

REQUIRED SKILLS AND KNOWLEDGE

- 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

- hydrological cycle
- water monitoring schedules and guidelines
- standards for water quality
- sampling and testing methods
- groundwater contamination evaluation
- sources of groundwater contamination
- groundwater salinity - mechanisms, occurrence and management
- irrigation induced salinity, mechanisms and management.

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:

- plan a water sampling program under direction
- test and correlate equipment
- sample and test water
- record results on data sheets.

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.

Sampling may include:

- the range of water quality and environmental parameters such as dissolved oxygen, hardness, ammonia, nitrite, nitrate, carbon dioxide, alkalinity, temperature, salinity, pH and turbidity.

Unit Sector(s)

Unit sector

Lands, parks and wildlife

Co-requisite units

Co-requisite units		

Competency field

Competency field	
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