



Australian Government

Department of Education, Employment and Workplace Relations

HLTPOP319C Conduct testing and interpretation of results of community water supply

Release: 1

HLTPOP319C Conduct testing and interpretation of results of community water supply

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit aims to describe the competencies needed to assess the quality of the water supply source in the community, and implement measures to address issues of concern if necessary

Application of the Unit

Application

Working in compliance with relevant legislation and regulations within which the worker's organisation operates is essential

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Determine *processes* used to monitor water quality in the community

1.1 Obtain information on the responsibilities of *key people and outside agencies* for monitoring the quality and safety of water supply in the community, and surrounding outstation(s) if appropriate

1.2 Recognise and demonstrate understanding of processes used by key people and outside agencies to sample and treat water supply in the community/outstation(s)

1.3 Determine and/or negotiate responsibilities of the worker in relation to the processes used, with supervisor, key people and outside agencies

2. Monitor and maintain water quality in the community

2.1 Assist relevant others with monitoring and maintaining the quality and safety of water supply in the community and/or surrounding outstations in accordance with *job role*

2.2 Report *findings* to supervisor in accordance with organisational policies and procedures

2.3 Discuss *follow up measures* with supervisor, key people and outside agencies where relevant to determine the most appropriate option(s) to address any issues of concern

ELEMENT

PERFORMANCE CRITERIA

3. Implement follow-up procedures

3.1 Implement follow up measures in accordance with established procedures and job role

3.2 Monitor and evaluate follow up measures to determine the success of methods being used

ELEMENT

PERFORMANCE CRITERIA

4. Provide feedback and *advice*
- 4.1 *Document evaluation* of follow up measures in accordance with organisation policies and procedures
 - 4.2 Provide feedback to supervisor, key people and outside agencies where appropriate
 - 4.3 Provide advice on alternative or additional strategies to maintain water quality if required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Environmental health issues in relation to water supply
- How to interpret water testing results
- Sources of water in the community and how the community accesses its water supply
- The signs and indicators of possible contamination
- Water contaminants and where they come from
- Water quality guidelines, e.g. The Australian Water Quality Guidelines
- Water sampling techniques and treatment/disinfection processes
- Water uses and the quality of water required for different purposes, e.g. drinking and cooking water requires the highest quality of water, the next highest is water used for bathing, washing or swimming, the lowest level of water quality is water used for flushing the toilet, washing cars or watering gardens etc.

Essential skills:

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Apply problem solving skills in order to be able to identify what the likely contaminants

REQUIRED SKILLS AND KNOWLEDGE

might be nearby

- Demonstrate understanding of the roles and responsibilities of the worker, key people and outside agencies in relation to water sampling and disinfection/treatment processes
- Liaise effectively with other key people and outside agencies in relation to water supply
- Use English literacy skills in order to be able to interpret water testing results
- Use networking skills with key people and agencies responsible for monitoring and maintaining water supply and quality

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, the Range Statement and the Assessment Guidelines for this Training Package.

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

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Assessment of this performance should take place more than once and over a period of time

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

EVIDENCE GUIDE

Context of and specific resources for assessment:

- Competency is best demonstrated in the workplace as part of on the job activities
- Competency can also be assessed in constructed simulation
- Access to resources required to take water samples, such as:
 - specimen jar
 - pen for recording date and time of sample
 - a gas or methylated spirit burner if sampling from a tap (can use a piece of cotton wool attached to the end of a length of wire and soaked in methylated spirits if resources are not available), eskies and freezer bricks, etc
- Simulation of realistic workplace setting for assessment

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any 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.

Key people and outside agencies may refer to:

- Essential Services Officers
- Environmental Health Officers
- Water Treatment Plant Operator (ESO)
- Aboriginal Technical Worker
- Relevant water authority

RANGE STATEMENT

Processes used may include, but are not limited to some of the following:

- Analysing where the water source is, and using problem solving skills to determine what the likely contaminants are nearby, e.g. If a water source is near a known mine site it might be useful to have the water tested for the metals that are found in the mine etc.
- Analysing physical properties of water, e.g. colour, taste and odour
- Sampling water for chemical and/or biological properties. For example, for biological samples taken from a tap, the tap must first be sterilised
- Water needs to be run through the tap to clear any water that may still be sitting in the pipes.
- The spout of the tap then needs to be heated for approximately one minute to kill any bacteria before taking the sample
- It is important that whoever is taking the sample does not let their hands or fingertips come into contact with the water, neck of the container, or inside of the container
- A date and a time should be written on the container, and the sample chilled
- The sample needs to get to the laboratory within 5-12 hours of it being taken. In remote areas, sample taking needs to be co-ordinated appropriately in accordance with flight schedules etc.
- For biological samples taken from flowing or still water different sampling techniques are used to prevent contamination from the hands or arm of the person taking the sample
- Analysing test results in accordance with water quality guidelines, e.g. the Australian Water Quality Guidelines
- Water treatment and disinfection e.g. filters, chlorination, distillation, boiling water for approximately 10 minutes if there is no form of disinfection in the community or outstation, etc.

RANGE STATEMENT

Responsibilities of the worker will depend upon the negotiated job role and may include the following:

- Observing the water for strange tastes, smells or colours and making referrals where appropriate
- Identifying likely contaminants from everyday community knowledge
- Sampling and/or assisting in taking water samples
- Participating/assisting with water treatment and disinfection processes
- Analysing and/or assisting in analysing test results in accordance with water quality guidelines e.g. the Australian Water Quality Guidelines

Findings may include:

- Signs of possible contamination, e.g. strange tastes, smells or colours,
- Contaminants identified from everyday community knowledge and/or observations
- Results from water tests
- Local indicators of contaminants e.g. additional presentations at the clinic for problems such as stomach pains, vomiting or diarrhea, particularly with children

Follow up measures and options may include:

- Discussing strategies to address water quality issues e.g. alternative forms of treatment/disinfection, further sampling to clarify results if required, etc.
- Health promotion/education to community members e.g. care of water supply systems, and strategies to prevent contamination of the water supply source in the community
- Promoting the boiling of water if necessary, etc.

The follow up measures implemented in accordance with established procedures and job role may include:

- Filing test results and following up on any issues of concern if appropriate
- Assisting with treatment/disinfection procedures if necessary
- Repeating water sampling tests to determine if there has been any improvement in the water quality after disinfection
- Assisting the council to obtain information on alternative treatment processes and costs if required

RANGE STATEMENT

Evaluation of follow up measures may include:

- Determining whether or not there has been an improvement in water quality test results
- Assessing if there has been a drop in clinic presentations for conditions such as stomach pains, vomiting or diarrhoea, particularly with children if relevant
- Evaluating the success of community education/health promotion strategies used in terms of community control and disease prevention
- Evaluating the success of networks formed between the worker, key people and outside agencies

Documented may include:

- Verbal or written reports in either first language or English
- Oral reports on tape in either first language or English ie: comparing water quality test results on tape to determine if there has been any improvements, interviewing Aboriginal Health Workers or other clinic staff in relation to possible drops in clinic presentations for conditions such as stomach pains, vomiting or diarrhoea, particularly with children if relevant etc.

Advice may be in relation to:

- Alternative treatment/disinfection strategies, costs etc.
- Strategies to promote more successful education/health promotion outcomes in the community
- Specific environmental health issues in relation to water supply

Unit Sector(s)

Not Applicable