



Australian Government

Department of Education, Employment and Workplace Relations

PMASUP520A Review procedures to minimise environmental impact of process

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency covers the minimization of waste and environmental threat by a plant and/or a process. It covers all resources used and products made.

Prerequisites

This unit **has** the prerequisite of:

PMASUP320A - Implement and monitor environmental policies.

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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 Establish procedures for environmental management	1.1 Establish workplace procedures of proactive environmental management, which include resource conservation, pollution and waste minimization. 1.2 Determine primary source of respective aspects. 1.3 Describe the negative impact of these aspects on the environment and the society if they are mismanaged. 1.4 Prioritise management options according to the greatest benefit to environment and the society. 1.5 Develop management procedures. 1.6 Complete required documentation of implement change.
2 Review procedures for environmental management	2.1 Review the procedures on a regular basis by consulting various work groups for feedback.. 2.2 Incorporate relevant feedback into the revised procedures in consultation with the relevant personnel. 2.3 Inform relevant work groups of any changes and implement changes in the procedures.
3 Implement and review an environmental management training program	3.1 Understand the workplace environmental management training program. 3.2 Review the program on a regular basis by consulting various work groups for feedback. 3.3 Incorporate relevant feedback into the revised program in consultation with the relevant personnel. 3.4 Inform relevant work groups of any changes and implement changes in the training program.

- 4 Implement and review environmental management recording system
 - 4.1 Understand the workplace environmental management recording system.
 - 4.2 Review the system on a regular basis by consulting various work groups for feedback.
 - 4.3 Incorporate relevant feedback into the revised system in consultation with the relevant personnel.
 - 4.4 Inform relevant work groups of any changes and implement changes in the management of environmental records.

Required Skills and Knowledge

Not applicable.

Evidence Guide

Assessment context and methods

Assessment for this unit of competency will be on an operating plant. The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation.

Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual plant and will include walk throughs of the relevant competency components. Simulations may also include the use of case studies/scenarios and role plays.

This unit of competency requires a significant body of knowledge, which will be assessed through questioning and the use of what if scenarios both on the plant (during demonstration of normal operations and walk throughs of abnormal operations) and off the plant.

Critical aspects

Competence must be demonstrated in the ability to apply plant and process knowledge to identify and analyse environmental hazards, and establish and review **procedures** for environmental management.

Consistent performance should be demonstrated. In particular look to see that:

a holistic, 'clean production' approach to waste minimisation is taken

potential effects on the environment are understood

terms initiated are followed through until final resolution has occurred

the process/plant is understood and proposals are capable of implementation

training needs are addressed

records are kept.

These aspects may be best assessed using a range of scenarios/case studies/what ifs as the stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and extreme situations that may have been generated from the past incident history of the plant, incidents on similar plants around the world, hazard analysis activities (e.g. HAZOP) and similar sources.

Resource implications

Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios/case studies/what ifs will be required as will a bank of questions, which will be used to probe the reasoning behind the observable actions.

Other assessment advice

In all plants it may be appropriate to assess this unit concurrently with relevant teamwork units, communication units and units relevant to the process equipment.

In a major hazard facility, it may be appropriate to assess this unit concurrently with:

PMAOHS400 - Contribute to workplace OHS management system

PMAOHS401 - Assess risk.

Essential knowledge

Knowledge and understanding of the control of environmental incident process and the importance of critical parameters enough to establish and review environmental management **procedures** within an organisation.

Competence includes the ability to:

apply and explain:

nature and severity of potential environmental hazards caused by the plant/process

sensitivity of local environment to these environmental threats
pathways of entry to the environment from the plant

regulatory requirements such as:
environment protection regulations
OHS
HAZCHEM
duty of care
dangerous goods

external licensing requirements such as:
EPA
water authorities
local councils
enterprise **procedures** and practices.

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Range Statement

Context

This competency covers process manufacturing plants which may involve workplace hazards such as:

chemicals and hazardous materials
gases and liquids under pressure
materials handling.

This competency unit includes:

legislation, codes and national standards relevant to the workplace which may include:
award and enterprise agreements and relevant industrial instruments
relevant legislation from all levels of government that effects business operation, especially in regard to OHS, environmental issues and industrial relations
relevant industry codes of practice

awareness of the environment and the effects on the environment of the organisation's:

liquid waste
solid waste
gas/fume/vapour/smoke emissions, including fugitive emissions
hazardous materials
excessive energy and water use
excessive noise

and the workplace practices that can be used to minimize or prevent these effects.

Information may include:

organisational policies and **procedures**
relevant environmental legislation/regulation requirements
licence conditions
environmental treaties, conventions and national policies and strategies
National Pollutant Inventory
State of the Environment reports
voluntary environmental agreements entered into with external organisations/authorities
continuous improvement policies and processes for the organisation.

Work group may include:

formal or unstructured groups
two or more people.

Proactive environmental management may include:

resource conservation and efficiency
minimisation of waste
recycling
reduction in use of non-renewable resources
maximisation of product yield from raw materials
reduction in volume of pollutants made
reduction in concentration/intensity of pollutants made
reduction in emissions.

Some approaches to proactive environmental management may include:

preventing and minimising the production of pollution (e.g. discharges to air, land and water, hazardous waste)

improving housekeeping (e.g. using a broom instead of a hose, using old rags for cleaning instead of toxic cleaners or water)

substituting materials (e.g. replacing toxic solvent based coatings with water based ones)

changing processes (e.g. mechanical cleaning, re-design of products/ **procedures** so that materials are used more efficiently).

Environmental management policies must be appropriate to the scope and scale of the enterprise and may include:

environmental load reduction and waste minimisation

tenders for the provision of goods and services that specify environmentally preferred selection criteria

protection of land and habitat

environmentally sustainable work practices.

Typical functions may include:

examining plant records

examining operating **procedures** and practices

liaising with a range of internal people

modifying/updating standard operating **procedures** to 'lock in' any changes.

HSE

All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence.

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Unit Sector(s)

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