

PRMWM60A Apply cleaner production techniques

Unit descriptor

This unit of competency describes the skills and knowledge required to apply cleaner production techniques to avoid and/or reduce waste generation. It requires the ability to first identify the opportunities for cleaner production techniques to be applied, analyse those opportunities to established criteria, and then develop an implementation program.

ELEMENT	PERFORMANCE CRITERIA
1 Determine the effectiveness of current resource management practices	<ul style="list-style-type: none">1.1 Obtain management support for the development and implementation of a cleaner production program1.2 Establish in-house cleaner production working group1.3 Measure current waste <i>streams</i> in total in regard to source(s), types, quantities and materials, with waste generation rates linked to <i>key waste indicators</i> or benchmarks1.4 Assess existing waste management practices against legislation, industry standards, best practice and company requirements and expectations1.5 Discuss practices and processes with operators and other stakeholders to gain in depth information on why waste is generated1.6 Conduct a cost analysis to identify the <i>real cost of waste</i> per production process and/or waste stream
2 Determine strategies to reduce/avoid waste	<ul style="list-style-type: none">2.1 Identify barriers to implementation and develop appropriate strategies to counter these2.2 Establish goals and targets for the cleaner production program2.3 Undertake an identification of all potential changes to <i>practices, products or processes</i> that would reduce waste generation2.4 Prioritise potential cleaner production opportunities2.5 Hold discussions with <i>interested parties</i> to investigate viability of identified changes2.6 <i>Conduct feasibility</i> analysis of options Feasibility to include full cost-benefit analysis, as well as technical, environmental, OHS aspects2.7 Resource requirements are identified and costed2.8 Identified opportunities are ranked in regard to

implementation schedules

2.9 Findings are documented accurately and promptly for full review by appropriate authority level

3 Develop implementation program

3.1 Allocate specific tasks and develop a timetable for implementation

3.2 Conduct specific implementation activities and/or install equipment

3.3 Communicate change to all relevant employees and other stakeholders. Conducted in conjunction with a specific education program

3.4 Establish monitoring and review programs to determine effectiveness and amendments instituted as required

3.5 Establish reporting mechanisms to provide feedback to management on progress in respect to the cleaner production initiatives

3.6 Implement a company cleaner production promotion program in conjunction with a staff awareness program

RANGE STATEMENT

The range statement links the required knowledge and organisational and technical requirements to the workplace context. It describes any contextual variables that will be used or encountered when applying the competency in work situations. It allows for different work practices and work and knowledge requirements as well as for differences between organisations and workplaces. The following variables may be present for this particular unit.

Feasibility of options should include but is not limited to:

- cost-benefit analysis
- employee impacts – workflow, training, redundancy, workload and upskilling
- environmental impacts
- energy efficiency policies
- logistical impacts
- OHS issues
- technical capability
- time constraints.

Interested parties may include but are not limited to:

- customers
- employees – direct, purchasing, quality, safety and maintenance
- legislators
- machine manufacturers

- related businesses
- similar businesses
- suppliers
- technology suppliers
- waste and recycling contractors.

Key waste indicators may include but are not limited to:

- dollar sales
- employee hours
- output units
- percentage waste per unit of product
- productive hours
- square metres occupied.

Measurement of waste may include:

- number
- proportion/percentage
- source
- volume
- weight.

Performance of this unit is carried out in accordance with relevant requirements of the following:

- relevant state/territory regulations.
- environmental regulations
- manufacturers' specifications
- Australian Standards
- legislative requirements
- organisational procedures
- industry standards and best practice examples.

Real cost of waste may include but is not limited to:

- cost of transport and disposal
- cost price of product/items disposed
- site overhead costs of managing the waste system
- infrastructure and capital costs
- OHS costs associated with waste-related incidents
- consumables such as bins, bin liners
- staff costs.

Review of alternative options for resource improvement may include:

- housekeeping
- purchasing practices
- quality of materials supplied
- product packaging

- handling and storage practices
- machine suitability
- technology improvements
- employee training and competence
- correct application of work procedures
- changes in product or process
- customer standards
- quality standards
- material specification – quantity, portion control, quality
- energy efficiency systems/action plans and procedures.

Site may include:

- plant/factory
- business premises
- landfill site
- waste processing plant
- resource recovery facility
- any other site where business activities occur.

Waste streams may include:

- general waste stream
- recycling streams
- reprocessed (on-site) material stream
- re-used product stream
- liquid waste stream
- gaseous waste stream
- prescribed waste stream (i.e. legislative wastes).

EVIDENCE GUIDE

Critical aspects of competency

- Identification of waste – stream and materials.
- Understanding of impacts and drivers of waste.
- Understanding of material flows and organisational processes.
- Ability to recognise cleaner production opportunities and to evaluate their feasibility against internal and external criteria.

Knowledge needed to achieve the performance criteria

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

- Waste streams.
- Waste classifications.
- Company procedures and practices.
- Company standards and requirements.
- Product safety and integrity requirements.
- Occupational health and safety requirements.

- Duty of care in provision of services.
- Relevant industry standards and codes.
- Relevant legislation.
- Relevant environmental regulations.
- Energy efficiency systems.

Specific skills needed to achieve the performance criteria

To achieve the performance criteria, some complementary skills are required. These are:

- oral communication skills including questioning, listening, following instructions
- mediating skills
- capacity to motivate
- visual quantity estimates
- reading and interpreting skills
- research skills
- written communication skills for documentation and report writing
- analytical capability
- accuracy and attention to detail
- computer skills
- investigative abilities
- hazard identification
- safe and efficient work practices.

Other units of competency that could be assessed with this unit

This unit could be assessed on its own or in combination with other units relevant to the job function for example:

- PRMWM01B Plan waste audit
- PRMWM05B Identify and segregate waste
- PRMWM59B Carry out waste assessment
- PRMCMN201A Participate in workplace safety arrangements.

Resources required to assess this unit

The following resources should be available:

- MSDS
- client waste history
- specific information related to cleaner production opportunities such as alternative actions and associated cost-benefit information.

Gaining evidence to assess this unit

For valid and reliable assessment of this unit, the competency should be demonstrated over a period of time and be observed by the assessor. The competency is to be demonstrated in a range of situations, which may include logical progression of information gathering, analysis of development and evaluation of cleaner production opportunities, together with a specific implementation program.

Evidence of competency is best obtained by reviewing developed cleaner production opportunities, together with supporting information, to ascertain the validity of the opportunity and its feasibility. Workplace examples could be developed and used to assess process and understanding of key issues.

Consistency in performance

Cleaner production programs require that strategies meet the waste reduction goals and targets of the business, and are feasible. It may be necessary to assess the unit within a variety of waste management environments or different organisational needs to assess competency in the development of cleaner production opportunities and specific implementation programs.

Oral questioning or written hypothetical situations (scenarios) may be used to assess underpinning knowledge. (In situations where the candidate is offered a preference between oral or written questioning, questions are to be identical.)

Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff.

Note: All practical demonstrations must adhere to the safety and environmental regulations relevant to each state or territory.

Key competency levels

There are a number of processes that are learnt throughout work and life that 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.

Information below highlights how these processes are applied in this competency standard.

1 Perform the process	2 Perform and administer the process	3 Perform, administer and design the process
How can communication of ideas and information be applied?	3	Discuss cleaner production options with clients and employees. Discuss alternative options with other interested parties.
How can information be collected, analysed and organised ?	3	Gather and analyse information from a number of sources (including regulatory sources, client organisation, relevant personnel and company specifications).
How are activities planned and organised ?	3	Prepare action plan of key priority areas after reviewing waste quantities and other relevant information/data by department/process
How can teamwork be applied?	2	Discuss the process and activities with interested parties.

How can the use of mathematical ideas and techniques be applied?	3	Conduct feasibility analysis of alternative processes
How can problem-solving skills be applied?	3	Utilise problem-solving skills when reviewing processes or practices that generate waste and in developing preferred cleaner production options
How can the use of technology be applied?	2	Manage and analyse data. Demonstrate understanding of technology and its impacts on the waste stream in terms of achieving organisational goals and targets.