



Australian Government

Department of Education, Employment and Workplace Relations

PRMWM56A Implement landfill rehabilitation plan

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency describes the rehabilitation of a landfill site, including recontouring, profiling soil, constructing drains and berms, and planting flora. This unit would usually be carried out under routine supervision and within organisational guidelines.

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

ELEMENT	PERFORMANCE CRITERIA
1 Organise for rehabilitation	1.1 Review <i>environmental</i> management and site development plans to clearly identify all job requirements 1.2 Identify and manage potential risks and hazards to job requirements, in accordance with <i>company requirements</i>, OHS, and other <i>relevant legislation</i> 1.3 Identify and obtain appropriate <i>plant and equipment</i> required for work in accordance with company requirements 1.4 Identify and obtain appropriate tools and <i>materials</i> required for work, in accordance with company requirements 1.5 Select and fit <i>emergency and personal protective equipment</i> in accordance with job requirements, <i>manufacturers' specifications</i>, company requirements and relevant legislation 1.6 Erect safety barriers and signage at work sites to ensure safety of surrounding personnel and public, in accordance with company requirements and relevant legislation
2 Recontour rehabilitation area	2.1 Ensure recontouring blends into the surrounding environment or as specified in the closure/rehabilitation plan 2.2 Minimise creation of dust using appropriate earthmoving techniques 2.3 Ensure final landform replicates surrounding environment or as specified by closure/rehabilitation plan and environmental guidelines 2.4 Determine <i>catchment</i> construction by site and weather conditions according to closure/rehabilitation plan and environmental guidelines
3 Profile soil	2.5 Carry out recontouring activities in accordance with closure/rehabilitation plan <i>and environmental guidelines</i> 3.1 Construct the <i>soil profile</i> in accordance with environmental guidelines, which are designed to stabilise contamination of materials and present contamination of soil and surrounding

ELEMENT**PERFORMANCE CRITERIA**

- areas
- 3.2 Choose appropriate selection of materials for sub-soil, taking into account vegetation requirements
- 3.3 Ensure that construction of soil profile horizons emulate the surrounding environment or are in accordance with closure/rehabilitation plan
- 3.4 Check landform construction for completion prior to placement of final soil layer
- 3.5 Ensure that soil horizon construction follows land contour to reduce water flow down slope and increase water storage capabilities
- 3.6 Add nutrients to soil in accordance with closure/rehabilitation plan and environmental guidelines
- 4 Construct drains and berms
- 4.1 Peg and construct *drain* locations in appropriate locations and angles to ensure the control of water flow, in accordance with closure/rehabilitation plan
- 4.2 Place *drain mechanisms* at required dimensions and provide appropriate *catchment* locations for sediment in accordance with closure/rehabilitation plan
- 4.3 Construct berms to ensure water flows into designated areas in accordance with closure/rehabilitation plan
- 4.4 Control *erosion* of drain edges through the placement of appropriate drain mechanisms to reduce the speed of water flow
- 4.5 Reduce erosion by placing berms and intervals in accordance with closure/rehabilitation plan
- 5 Plant flora
- 5.1 Ensure planting activities are undertaken within appropriate season and growing conditions
- 5.2 Plant, protect and maintain seeds, ground covering, plants and trees in accordance with planting requirements and specifications
- 5.3 Apply fertiliser according to plant type, soil quality, manufacturers' specifications, company requirements and rehabilitation plan
- 5.4 Ensure planting arrangement conforms to contour of site and pattern specification as

ELEMENT**PERFORMANCE CRITERIA**

detailed in closure/rehabilitation plan

6 Document rehabilitation activities

6.1 Document all details of landfill site rehabilitation accurately and promptly in accordance with company requirements and relevant legislation

Required Skills and Knowledge

Refer to Evidence Guide

Evidence Guide

EVIDENCE GUIDE

Critical aspects of competency

- Correct determination of rehabilitation work required (including reviews closure/rehabilitation plan and job requirements).
- Accurate determination of plant, equipment, tools, and materials requirements.
- Correct selection of appropriate emergency and personal protective equipment requirements.
- Accurate identification of potential risks and hazards to rehabilitation activities.
- Rehabilitation of site in accordance with closure/rehabilitation plan.
- Recontours rehabilitation area in accordance with closure/rehabilitation plan.
- Profiles soil in accordance with closure/rehabilitation plan.
- Constructs drains and berms in accordance with closure/rehabilitation plan.

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.

- Closure/rehabilitation plan.
- Material placement procedures.
- Recontouring characteristics.
- Recontouring procedures.
- Catchment systems.
- Principles of erosion and water run-off.
- Dust suppression procedures.
- Soil profiling methods.
- Soil horizon construction methods.
- Flora, soil and nutrient requirements.
- Draining methods.
- Seed and plant varieties.
- Seed and plant planting methods.
- Watering principles.
- Soil dynamics.
- Fertiliser characteristics and application methods.
- Company requirements.
- Occupational health and safety requirements.
- Duty of care in provision of services.
- Relevant industry standards.
- Relevant legislation.
- Relevant environmental regulations.
- OHS hierarchy of control.

Specific skills needed to achieve the performance criteria

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

- communication including liaison, report writing, interpersonal, listening, questioning, following instructions
- use of personal protective equipment

- interpretation of ground conditions
- interpretation of plans, reports, maps, specifications
- driving techniques
- dumping techniques
- pushing techniques
- use of relevant hand tools
- directing
- monitoring
- construction skills
- planting seedlings (machine or hand)
- mixing and applying fertiliser
- watering
- applying diagnostic techniques
- organising work tasks
- use of communications equipment (two-way radio and mobile phone)
- hazard identification
- time management
- safe and efficient work practices
- following MSDS.

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 all the units covering landfill maintenance at a similar level may be able to be assessed in conjunction.

Where assessment covering a cluster of units is to be conducted, it may be useful to assess the units together as far as practicable. This may be most useful when an experienced applicant is being assessed for the purpose of recognition of current competency.

Resources required to assess this unit

The following resources should be available:

- company environmental management strategy
- plant and equipment for rehabilitation
- safety barriers and signage
- materials for rehabilitation
- PPE
- OHS requirements
- environmental protection legislative requirements
- site safety plan.

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 (or assessment team working together to conduct the assessment). The competency is to be demonstrated in a range of situations, which may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace.

Evidence of competency is best obtained by observing activities in the field and reviewing the rehabilitation of a landfill site under normal industry operating conditions. If this is not practicable, observations in realistic simulated environments may be substituted.

Consistency in performance

Assessment requires that strategies meet the objectives of clients and comply with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it will be necessary to assess the unit within a variety of waste management environments or different client needs to assess competency in the rehabilitation of a landfill site.

Oral questioning or written assessment and hypothetical situations (scenarios) may be used to assess underpinning knowledge. (In assessment situations where the candidate is offered a preference between oral questioning and written assessment, 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?	1	Discuss aspects of rehabilitation with clients and colleagues.
How can information be collected, analysed and organised ?	2	Gather and analyse information from a number of sources (including regulatory sources, relevant personnel and company specifications).
How are activities planned and organised ?	2	Prepare appropriately for rehabilitation of landfill site.
How can teamwork be applied?	1	Conduct discussions with clients and/or colleagues during client contact.
How can the use of mathematical ideas and techniques be applied?	1	Conduct and document appropriate mathematical calculations.
How can problem-solving skills be applied?	1	Discuss possible problems and solutions throughout the rehabilitation of landfill site process.
How can the use of technology be applied?	1	Demonstrate understanding of technological principles and physical skills to use appropriate equipment.

Range Statement

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.

Catchment devices may include diversion channels, holding structures (banks, drains and dams) and sediment dams.

Company includes all forms of business enterprises in this context including local governments/councils.

Company requirements are found in briefing papers, letters, quality assurance documents, tender/contract documents and verbal or written instructions.

Contamination may include:

- exposure to sunlight
- infestation
- mixing with other waste types
- rot or mould
- waterlogging.

Drain and berm may be concrete, plastic, rock and soil.

Drain mechanisms may include berm, flora coverage (grasses and small bushes) and netting.

Emergency and personal protective equipment must include:

- communications equipment
- eye protection
- eyewash kit
- fire extinguishers
- First Aid kit
- gloves
- overalls and protective clothing
- protective boots.

Emergency and personal protective equipment could also include:

- breathing apparatus
- emergency procedure guides
- face shield/mask
- hard hat
- hearing protection
- material safety data sheets (MSDS)
- spill kit.

Emergency response action/procedures include but are not limited to:

- clean up
- contain emergency
- equipment/plant isolation and shut-down
- evacuation
- First Aid
- make safe
- notification of authorities
- use of appropriate personal protective equipment.

Environmental issues may include:

- environmental incidents
- minimisation of waste
- recycling
- reduction in use of non-renewable resources
- relevant environmental protection legislation
- resource efficiency
- voluntary environmental agreements entered into with external organisations.

Erosion may be water run-off and wind.

Manufacturers' specifications are found in equipment operators' manuals.

Materials include:

- drainage materials
- fertiliser
- gravel
- ground covers
- lawn seed

- netting
- pesticides
- plant protection covers
- plants
- seedlings
- seeds
- shrubs
- stakes
- topsoil
- water.

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

- Australian Standards
- environmental regulations
- legislative requirements
- manufacturers' specifications
- OHS regulations and procedures
- organisational procedures
- relevant state/territory regulations.

Personal protective equipment required will be cleaned, stored, worn/fitted in accordance with company requirements, equipment specifications, and occupational health and safety and other legislation.

Plant and equipment includes but is not limited to:

- communications equipment
- compactor
- dozer
- grader
- lawnmower
- loader
- planting equipment
- roller
- scraper
- signage
- tractor
- truck
- whipper snipper.

Relevant legislation and codes cover state and federal:

- duty of care
- industry codes of conduct
- occupational health and safety legislation
- Australian Standards
- environmental protection legislation
- road laws.

Safe operating procedures include any activity or operation, conducted on site to ensure health and safety of personnel/equipment in the area.

Soil profile may include gravel, topsoil and various grades and types of materials.

Unit Sector(s)

Not Applicable