



Ass # 741
Bull # 702
State # 354

WESTERN AUSTRALIA

MINISTER FOR THE ENVIRONMENT

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**SOUTHERN LANDFILL PROJECT, SOUTH CARDUP
STAGES 1 & 2 (741)**

PIONEER - BFI WASTE SERVICES

This proposal may be implemented subject to the following conditions:

1 Proponent Commitments

The proponent has made a number of environmental management commitments in order to protect the environment.

- 1-1 In implementing the proposal, the proponent shall fulfil the commitments made in the Public Environmental Review and in response to issues raised following public submissions, provided that the commitments are not inconsistent with the conditions or procedures contained in this statement. These commitments are consolidated in Environmental Protection Authority Bulletin 702 as Appendix 1. (A copy of the consolidated commitments is attached).

2 Subsequent Stages

- 2-1 Stages 1 and 2 only may be implemented. The proponent shall refer to the Environmental Protection Authority plans for Stage 3 or subsequent stages of landfill construction and operations at or adjacent to the site.

3 Implementation

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 3-1 Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

4 Environmental Management Programme

Surface water and a stream with a 240 ha catchment must be diverted around the refuse to minimize generation of leachate and to protect downstream water quality.

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4-1 Prior to commencement of landfill operations in each stage, the proponent shall prepare an Environmental Management Programme which includes, but is not limited to consideration of the following:

- (1) the detention time of the sedimentation pond (with reference to the effects on discharge water quality);
- (2) the size and construction of the stream diversion channels;
- (3) the need for compensating basins to control flood peaks resulting from the works; and
- (4) a short-term monitoring programme to demonstrate that the works are effective.

to the requirements of the Environmental Protection Authority on advice of the Water Authority of Western Australia and the Shire of Serpentine-Jarrahdale.

4-2 Prior to commencement of landfill operations in each stage, the proponent shall implement the Environmental Management Programme required by condition 4-1.

5 Environmental Waste Acceptance Criteria

Wastes will be tested to ensure that the landfill design is suitable for the waste.

5-1 Prior to commencement of landfill operations, the proponent shall prepare an assessment procedure that determines the acceptability (or otherwise) of various classes and types of waste which takes into account protection of the environment, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Health Department of Western Australia.

6 Noise Limits

The proponent should conduct operations so that noise emissions do not unreasonably impact on the surroundings.

6-1 The proponent shall ensure that noise emissions do not exceed:

- 40 dB L_{A10}, 1 hour slow and 50 dB L_{A max} slow between 2200 hours and 0700 hours on any day when measured on any noise-sensitive premises;
- 45 dB L_{A10}, 1 hour slow and 55 dB L_{A max} slow between 1900 hours and 2200 hours on any day, and between 0700 hours and 1900 hours on Sundays and gazetted public holidays, when measured on any noise-sensitive premises;
- 50 dB L_{A10}, 1 hour slow and 70 dB L_{A max} slow between 0700 hours and 1900 hours on Monday to Saturday inclusive, when measured on any noise-sensitive premises; and
- 65 dB L_A slow when measured at or near the boundary of premises that are not noise-sensitive premises (other industries);

where such emissions would result in the noise level present at the affected premises exceeding the ambient noise level present at any time by more than 5 dB L_A slow.

6-2 The proponent shall ensure that noise emissions from those activities which are of concern to occupiers of noise-sensitive premises do not exhibit tones, amplitude and frequency modulation, and impulsiveness of a nature which increases the intrusiveness of the noise.

6-3 The proponent shall conduct noise surveys and assessments in consultation with the Environmental Protection Authority.

7 Control and Management of the Site

The Executive Director, Public Health will be responsible for ensuring appropriate management of the refuse site.

- 7-1 The proponent shall conform to the requirements of the Executive Director, Public Health with regard to the design, construction and on-going management of the waste disposal site.

8 Long-term Environmental Integrity of the Site

The environmental integrity of the site should be ensured by appropriate mechanisms to address unexpected pollution, post-closure management and contingencies.

- 8-1 Prior to commencement of landfill operations, the proponent shall ensure that mechanisms are identified and implemented to guarantee the long-term environmental integrity and performance of the site to the requirements of the Minister for Health and the Minister for the Environment.

9 Proponent

These conditions legally apply to the nominated proponent.

- 9-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

10 Time Limit on Approval

The environmental approval for the proposal is limited.

- 10-1 If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority.)

11 Compliance Auditing

In order to ensure that environmental conditions and commitments are met, an audit system is required.

- 11-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project, in consultation with the Environmental Protection Authority.

Procedure

- 1 The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

- 2 If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.

Kevin Minson MLA
MINISTER FOR THE ENVIRONMENT

- 5 MAY 1994

PROPONENT'S COMMITMENTS

**SOUTHERN LANDFILL PROJECT
SOUTH CARDUP
STAGES 1 & 2 (741)**

PIONEER - BFI WASTE SERVICES

COMMITMENTS

The Proponent, Pioneer-BFI Waste Services, provides the following commitments concerning the construction, operation and management of the proposed sanitary landfill on Lot 8 and Part Lots 6 and 3 South Cardup.

1 General Commitments

- (1) The Proponent will adhere to the proposal as described in the Public Environmental Review (PER) and as assessed by the Environmental Protection Authority (EPA), and will fulfil the commitments made therein and summarized below.
- (2) The Proponent will develop, operate and manage the proposed sanitary landfill to the satisfaction of all relevant Government agencies including the following:
 - EPA;
 - Health Department;
 - Water Authority;
 - Department of Conservation and Land Management; and
 - Shire of Serpentine-Jarrahdale.
- (3) As the proposed landfill is intended as a secure facility for the disposal of municipal, commercial and industrial waste only, the Proponent will ensure that hazardous, liquid and soluble chemical waste or other forms of intractable wastes will be excluded from the site.
- (4) The Proponent will provide a contribution of \$20 000 towards the provision of a transfer station at the existing Mundijong landfill to obviate the need for direct public access to the tipping face of the Southern Landfill.

2 Industrial Waste

- (5) The Proponent will submit an assessment procedure that determines the acceptability (or otherwise) of various classes and types of industrial waste at this facility for approval by the Health Department of Western Australia and the Environmental Protection Authority. Only industrial waste that meets the acceptability requirements will be disposed of at the landfill. Forming part of the screening program will be elutriation and flash point testing and the installation of radiation detection equipment.

3 Design Features

- (6) The landfill will be designed and constructed in accordance with accepted engineering practice for landfills, to the satisfaction of the Shire of Serpentine-

Jarrahdale. Where necessary, slope stability analyses of constructed walls and bunds will be undertaken to verify their integrity.

- (7) The Proponent will progressively develop the landfill as a series of cells. The first cell will be sized to accommodate two years' refuse, followed by cells sized to accommodate one year's refuse, in accordance with the staging plan included in the PER.
- (8) The Proponent will maintain a vegetated buffer zone with a minimum of 50 m in width around the perimeter of the landfill site.

The buffer zone will be comprehensively landscaped and will contain a perimeter fence and a firebreak track.

A landscaping plan shall be prepared, which shall be developed to achieve the following objectives:

- (i) that initial planting is undertaken between the landfill and neighbouring properties, and the landfill and the South-Western Highway in the planting season before or immediately following the commencement of site development earthworks, whichever is the earlier; and
- (ii) to provide vegetative cover on the bund walls and other earth structures as soon as practical following construction or final contouring, to minimise visual impact;
- (iii) to allow integration with the longer term Post-Closure Plan.

The landscaping plans will be submitted to the Shire of Serpentine-Jarrahdale for approval within six months of the granting of all the necessary approvals to commence landfilling operations.

All initial plantings will be maintained at all times. Failed plantings will be replaced immediately to the satisfaction of the Shire of Serpentine-Jarrahdale.

- (9) The Proponent will implement site security measures to control vandalism, theft and illegal dumping, including the construction of a 1.8 m high wire mesh with lockable gates around the landfill facilities.

4 Development and Operational Features

Site Preparation

- (10) The Proponent will ensure that prior to the commencement of construction of the landfill cells, the final excavated surface is graded to allow gravity drainage across each of the landfill cells.

Cell Sealing

- (11) During the development of landfill cells, the Proponent will ensure that a 1 m thick compacted clay liner will be constructed over the excavated surface. A 300 mm drainage blanket will be installed on the upper surface of the clay liner as part of the process of constructing the liner (refer to Commitment 17).
- (12) The Proponent will ensure that clay sources used in construction of the landfill cells will meet the following specifications, under laboratory conditions:
 - in situ permeability of 1×10^{-9} m/s or less when clay is placed and compacted; and
 - gypsum content of less than 1%.
- (13) The Proponent will engage specialist geotechnical consulting engineers to perform Quality Assurance/Quality Control (QA/QC) in the selection of clay and construction of the clay liner. A QA/QC report will be prepared for the clay liner of each cell for submission to the EPA and Health Department of Western Australia which certifies that the liner has been constructed to meet the permeability requirements with materials that have been tested and found suitable.
- (14) The Proponent will ensure that, during development of the landfill cells, the liner will be constructed and compacted in thin layers (no more than 300 mm loose thickness) and density and moisture content will be controlled by continuous compaction testing.
- (15) The Proponent will ensure that, prior to deposition of refuse within a landfill cell, a starter embankment of 2 m in height will be constructed around the perimeter of the liner to prevent leachate and stormwater from leaving the active cell. Construction techniques and controls for the starter embankment will be similar to those applying to the clay liner.
- (16) The Proponent will ensure that, on completion of the clay liner and starter embankment, a 300 mm thick sand or gravel cover (the drainage blanket) will be placed to provide protection against cracking of the clay material resulting in desiccation.
- (17) In the event that a suitable clay source for construction of the basal liner of a landfill cell or cells and the starter embankment, is not accessible, the Proponent will utilize a synthetic barrier membrane to seal the landfill cell or cells. In this event, the Proponent will submit a supplementary report to the EPA and Health Department specifying the liner system to be used and explaining the leachate collection system to be installed. This report would be submitted to the EPA and Health Department prior to commencement of construction of the cell or cells in which the alternative lining system was to be installed, and construction of the cell or cells will not commence until the EPA and Health Department are satisfied that the systems proposed are acceptable.

The Proponent will endeavour to place a layer of refuse over the completed drainage blanket at the earliest opportunity to provide additional protection against dehydration of the clay liner.

Leachate Collection

- (18) The Proponent will ensure that a leachate collection system comprising a 300 mm deep permeable (permeability rating of 1×10^{-1} cm/s or more) drainage blanket is placed immediately above the basal clay liner. A series of drains consisting of high strength drain coil pipe will be installed in this layer, leading to a collection sump within each stage of the landfill. Leachate will be pumped from the sump to permanent leachate treatment tanks. The system will be designed to the satisfaction of the relevant authorities.
- (19) The Proponent will ensure that leachate collection drains will gravity feed to a sump (lined with HDPE and filled with 20 mm gravel screenings) located within each stage of the landfill constructed integrally with the clay liner. The design storage volume of the sump will be determined by suitable modelling, to the satisfaction of the Water Authority of Western Australia.
- (20) The Proponent will ensure that leachate will be recirculated through the refuse through a series of slotted pipes buried during landfilling, or by trickle irrigation of the internal surfaces of the active landfill cell.
- (21) The Proponent will ensure that prior to depositing refuse in a newly constructed cell the leachate collection pipes are connected into the existing leachate collection system serving the completed cells allowing flow to the leachate sump within each Stage of the landfill.
- (22) The Proponent will initially construct a permanent leachate treatment tank(s) to service all landfill cells within Stages 1 and 2. A second permanent leachate treatment tank will be constructed for Stage 3. The leachate treatment tank(s) will be covered and bunded appropriately. The leachate treatment tank(s) will be sized according to the results of the computer modelling to estimate leachate generation.
- (23) As part of the normal site operational practice, the Proponent will pump leachate from the leachate sump of each Stage as required to the leachate treatment tank, or recirculate the leachate through the landfill as described earlier. Leachate within the treatment tank may be returned to the active landfill cell during dry periods for disposal through recirculation, or transferred to tanker trucks for off-site disposal.

Placement and Compaction of Refuse

- (24) During operation of the site, the Proponent will ensure that refuse will be progressively placed and compacted into thin layers to maximize the compacted refuse density.
- (25) During operation of the site, the Proponent will ensure 'Daily' cover (clean soil or other suitable material) is applied over the exposed surfaces at the active landfill area in layers (not less than 150 mm in the case of soil) so that there will be no



exposed garbage at the end of the day. The Proponent will apply 'Intermediate' cover to the top of the active landfill area and to surfaces which will be exposed to the environment for periods greater than six weeks in layers of not less than 300 mm.

Cell Completion

- (26) The Proponent will ensure that, upon completion of refuse deposition, landfill cells will be covered with a 300 mm layer of low permeability clay over the Intermediate cover. A further 300 mm layer of sub-soil and a final 100 mm layer of soil suitable for vegetation establishment will be placed over the low permeability clay layer.
- (27) The Proponent will ensure that, as part of on-going operational practice, the final landfill surface will be constructed to a predetermined crossfall to enhance surface runoff while safeguarding against erosion and to ensure that final contours of the site will blend into the surrounding environment.
- (28) The Proponent will ensure that, on completion of each landfill cell, shallow rooted native vegetation (in accordance with advice from the Department of Conservation and Land Management and the Shire of Serpentine-Jarrahdale) will be established and maintained.

Surface Water Runoff

- (29) During the active operation of a landfill cell, all surface water runoff from within the active cell will be treated as leachate and the Proponent will ensure that it will be collected and disposed of through the leachate drainage system.
- (30) The Proponent will ensure that a site drainage system will direct runoff water from areas outside the landfill boundary, undeveloped areas within the landfill boundary and from the rehabilitated surfaces of completed landfill cells, away from the active tipping areas. Water from this system will not have contacted refuse, and therefore it will be uncontaminated and may directly discharge into the stream.

Road Construction and Maintenance

- (31) The Proponent will ensure that, from the outset of the landfill operation, all roads to be used by visitors to the site will be sealed (up to the gatehouse).
- (32) The Proponent will ensure that surface runoff from internal roads within the landfill site will not contact refuse and will be directed to the on-site sedimentation pond.
- (33) The Proponent will ensure that a water tanker will be permanently on-site and available for dust suppression on all unsealed trafficked areas during dry periods or as required.



Wheel Cleaning Facilities

- (34) As part of the initial site development, the Proponent will ensure that a wheel cleaning drive through is installed on the egress from the landfill cell area to dislodge debris and sediment from vehicle wheels. Debris collected in the sump will be regularly removed and disposed of within the active landfill cell. Contaminated water within the drive-through will be treated as leachate.

5 Management of Environmental Impacts

Water Resources

Commitments regarding Cell Sealing and Leachate Collection also pertain.

- (35) The Proponent will ensure that an underdrain is constructed beneath the low permeability liner where required to collect and divert water egressing from the fractured granite to the sedimentation pond.

Odours

Commitments regarding Cell Sealing, Leachate Collection and Water resources also pertain.

- (36) The Proponent will ensure that particularly odorous refuse will only be accepted at the landfill by prior arrangement and that any such material received will be covered immediately.

Litter

Commitments regarding Placement and Compaction of Refuse also pertain.

- (37) The Proponent will ensure that any landfill related litter along the site access routes within a 2 km radius of the site is removed at least weekly.
- (38) The Proponent will ensure that, as part of normal operational practices, portable litter control screens will be placed in the vicinity of the active tipping face to intercept any material blown from the tipping face.
- (39) The Proponent will ensure that, as part of normal operational practices, any litter blown from the tipping face and intercepted by the portable screens, the site security fence or perimeter vegetation will be collected daily and returned to the tipping face.

Noise

Commitments regarding Design Features (perimeter buffers and earth bunds) also pertain.

- (40) The Proponent will ensure that all vehicles and machines operating at the landfill site and which are under its control will be fitted with effective exhaust system silencers.

- (41) The Proponent will limit the daily hours of operation of the landfill between 0600 and 1800 hours Monday to Saturday and 1000 and 1600 hours on Sundays.

Dust

Commitments regarding Design Features (perimeter buffers and earth bund), Road Construction and Maintenance, and Wheel Cleaning Facilities also pertain.

- (42) The Proponent will, during initial site development and as part of normal operational practices, ensure the stabilization by vegetation or other means of disturbed areas not immediately needed for landfill operations.
- (43) As part of normal operational practices, the Proponent will ensure that any unsealed trafficked areas are watered as necessary to lay dust.
- (44) As part of normal operational practices, the Proponent will ensure that:
- active tipping area will be dampened (either by leachate irrigation or water application) as necessary to lay dust; and
 - overburden, cover material stockpiles will be stabilized with temporary cover vegetation, mulching, watering or other technique to suppress dust generation.

Pests

Commitments regarding Placement and Compaction of Refuse also pertain.

- (45) The Proponent will ensure that, as part of normal operational practices, any large appliances, crates etc, placed in the active tipping area will be specifically crushed before covering with refuse and cover material, and that any tyres dumped, unless shredded or split, will be spread out and carefully covered.
- (46) The Proponent will implement supplementary control measures directed towards specific pest species on an as required basis in conjunction with and to the satisfaction of the EPA, Water Authority, Department of Conservation and Land Management, Shire of Serpentine-Jarrahdale or other regulatory authority.

Landfill Gas Management

- (47) Prior to the commencement of tipping operations, the Proponent shall prepare a methane gas management plan which addresses monitoring, collection, disposal and potential beneficial uses of landfill gas to the satisfaction of the Environmental Protection Authority and the Health Department of Western Australia.

Initially, gas will be disposed of by flaring. When monitoring results indicate that action to manage landfill gas emissions is warranted, the Proponent will implement the methane gas management plan to the satisfaction of the Environmental Protection Authority on advice of the Health Department of Western Australia. The

Proponent will liaise with the relevant authorities regarding beneficial uses of landfill gas over the operating and post-closure life of the landfill.

Fire

Commitments regarding Placement and Compaction of Refuse, Landfill Gas Collection, and Landfill Gas also pertain.

- (48) The Proponent will ensure that, from the outset of the landfill operation, site operational and management practices will not include utilization of fire except for the controlled flaring of landfill gas.
- (49) The Proponent will ensure that from the outset of the landfill operation, adequate manpower and machinery resources to combat any fires which may occur within the landfill site will be maintained on-site during operating hours.
- (50) The Proponent will make the water tanker truck available to the Shire of Serpentine-Jarrahdale or the Bush Fires Board to assist in fighting fires subject to the proximity of the problem and the Proponents needs at that time.

Social Impacts

Effectively all Commitments given pertain directly or indirectly to the amelioration of social impacts.

6 Environmental Monitoring

Water Resources

- (51) The Proponent will progressively construct a series of dedicated groundwater monitoring bores to specifications acceptable to the EPA and the Geological Survey Division of the Department of Minerals and Energy. It is anticipated that monitor bores will need to be installed on the basis of geological considerations to ensure effective groundwater monitoring along sections of the site boundary down hydraulic gradient from areas used for landfilling.
- (52) On commissioning of each monitor bore and prior to the commencement of tipping, groundwater will be sampled and analysed for a range of potential contaminants to provide background information on groundwater quality. Parameters determined will include pH, salinity (as TDS), redox potential, major ions, nutrients, total organic carbon, and heavy metals to the satisfaction of the Environmental Protection Authority on advice from the Chemistry Centre and the Water Authority of Western Australia.
- (53) The Proponent will implement a programme of regular sampling from the monitor bores. This programme will be determined by the site hydrogeological considerations and to the satisfaction of the EPA and other relevant authorities, although, initially, sampling on a three-monthly basis is envisaged. Water samples collected will be analysed for a select range of parameters. These will include pH,



salinity (as TDS), zinc, total organic carbon, five-day biochemical oxygen demand, ammonia-nitrogen, and total alkalinity to the satisfaction of the Environmental Protection Authority on advice from the Chemistry Centre and the Water Authority of Western Australia.

- (54) The Proponent will sample privately owned bores on selected properties in the vicinity of the landfill, initially on an annual basis, and analyse samples for a select range of parameters. These will include pH, salinity (as TDS), and ammonia-nitrogen to the satisfaction of the Environmental Protection Authority on advice from the Chemistry Centre and the Water Authority of Western Australia.
- (55) Groundwater samples will be collected and analysed in accordance with recognized standard procedures, and to the satisfaction of the EPA and the Water Authority of Western Australia.
- (56) If monitoring indicates that groundwater quality is being affected to an unacceptable degree, as determined by the Environmental Protection Authority, the Proponent shall prepare a strategy for clean-up of groundwater contamination, to the satisfaction of the Environmental Protection Authority on advice of the Water Authority of Western Australia.
- (57) The Proponent shall implement the strategy for clean-up of groundwater contamination required by Commitment 56 (above) to the satisfaction of the Environmental Protection Authority on advice from the Water Authority of Western Australia.
- (58) Should groundwater analyses indicate contamination by landfill leachate, the Proponent will immediately undertake further sampling and analysis for a more extensive range of parameters in consultation with, and to the satisfaction of, the EPA and the Water Authority of Western Australia.
- (59) Any complaint about a deterioration in groundwater quality reasonably attributable to the landfill operation will be immediately investigated by the Proponent in consultation with, and to the satisfaction of, the EPA and the Water Authority of Western Australia.
- (60) The Proponent will implement a programme of regular water sampling of the sedimentation pond, into which groundwater collected by the landfill underdrain flows. Water samples collected will be analysed for the same parameters as for samples taken from the groundwater monitoring wells to the satisfaction of the Environmental Protection Authority on advice from the Chemistry Centre and the Water Authority of Western Australia.
- (61) As soon as leachate is detected in the leachate collection sump, and thereafter in conjunction with the groundwater monitoring programme, samples will be collected and analysed for comparison with anticipated leachate chemistry. Continuing sampling and analysis will be co-ordinated with the groundwater monitoring programme, and analytical results will be included in the periodic performance reports.

Other Environmental Monitoring

- (62) From the outset of the landfill operation, the Proponent will maintain a complaints register in which details of any complaints from local residents, within the Serpentine-Jarrahdale municipality about the landfill operation will be recorded to the satisfaction of the EPA.
- (63) The Proponent will monitor the activity of Silver Gulls at the landfill site, from the outset of landfilling operations, in consultation with, and to the satisfaction of, the Department of Conservation and Land Management.
- (64) Following the installation of the landfill gas extraction system, the Proponent will measure landfill gas flow rates at six-monthly intervals. Results will be forwarded directly to the EPA and will also be incorporated into the periodic performance reports.

7

Performance Reporting

- (65) The Proponent will submit annual performance reports to the EPA, Health Department and the Shire of Serpentine-Jarrahdale within three months following each anniversary of the commencement of the landfilling operation. These reports will address such matters as:
 - the stage reached in the various operational and management programmes being implemented;
 - results from monitoring programmes instituted, including the complaints register, and the response to any complaints received;
 - modifications to the various programmes that have been implemented in response to monitoring results; and
 - any unforeseen or extraordinary event associated with the landfill that has adversely affected off-site environmental quality (and the Proponent's response to that event) occurring during the preceding twelve months.

The final report submitted during a reporting period will provide a detailed review of performance over the entire period and of any modifications to operational and management programmes intended.

- (66) The Proponent will respond, through an interactive process with the EPA, Health Department and the Shire of Serpentine-Jarrahdale, to any issues those agencies may raise following receipt of the performance reports.
- (67) At the same time that periodic performance reports are submitted to the EPA, Health Department and Shire of Serpentine-Jarrahdale, the Proponent will make the reports available to relevant community organizations within the Shire of Serpentine-Jarrahdale



- (68) Any unforeseen or extraordinary events associated with the landfill that adversely affected off-site environmental quality, and the Proponent's response to any such event will be reported immediately (by the Proponent) to the EPA, Health Department, and Shire of Serpentine-Jarrahdale.

8 Contingency Planning

- (69) The Proponent will submit, for review by and approval from the Shire of Serpentine-Jarrahdale prior to commencement of landfilling activities, a contingency plan for emergency situations after consultation with the Shire of Serpentine-Jarrahdale, Environmental Protection Authority, Health Department of Western Australia, Bush Fires Board, Water Authority of Western Australia and the Department of Conservation and Land Management.
- (70) The Proponent will respond to any unforeseen contingency associated with the landfill and which is producing a demonstrable and unacceptable off-site impact in consultation with the EPA, Health Department of Western Australia, the Shire of Serpentine-Jarrahdale, and to the satisfaction of the Minister for the Environment as appropriate.

9 Management Following Closure

- (71) The Proponent recognizes that certain management responsibilities will continue following closure of the landfill site and will ensure that such responsibilities will be discharged in consultation with the relevant regulatory authorities (presently the EPA and the Health Department of Western Australia).
- (72) The Proponent shall be responsible for construction, operation, decommissioning and post-closure management of the site until such time as the waste has fully degraded, to the satisfaction of the Environmental Protection Authority.
- (73) Within two years after the date of commencement of construction, the Proponent shall prepare a draft decommissioning and post-closure management plan, to the satisfaction of the Environmental Protection Authority.
- (74) At least two years prior to closure, the Proponent shall prepare the final decommissioning and post-closure management plan, to the satisfaction of the Environmental Protection Authority.
- (75) The Proponent shall implement the final decommissioning and post-closure management plan required by Commitment 74, to the satisfaction of the Environmental Protection Authority.

10 Financial Assurances

- (76) Within six months of commencement of landfilling operations, the Proponent will establish financial assurances in favour of the Shire of Serpentine-Jarrahdale to cover emergency contingencies and long-term risks in a form and to an amount acceptable to the Environmental Protection Authority, Health Department of Western Australia and the Shire of Serpentine-Jarrahdale.
- (77) The amount of the financial assurances shall be reviewed every five years by the Environmental Protection Authority in consultation with the Shire of Serpentine-Jarrahdale and the Health Department of Western Australia.
- (78) Company guarantees, if offered by the Proponent, shall be supported by annual audited accounts from each guaranteeing entity.
- (79) The preparation of the legal agreement relating to the financial assurances shall be executed by the Proponent's solicitors at the Proponent's expense.

