



Ass # 895

Bull # 779

State # 390

WESTERN AUSTRALIA

MINISTER FOR THE ENVIRONMENT

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

**INCREASE IN ALUMINA PRODUCTION TO 3.3 MILLION TONNES PER ANNUM  
AT WAGERUP ALUMINA REFINERY,  
AND ASSOCIATED BAUXITE MINING ACTIVITIES (895)**

**ALCOA OF AUSTRALIA LIMITED**

This proposal may be implemented subject to the following conditions and procedures. The conditions replace all previous conditions set under Part IV of the Environment Protection Act for this project (See note 1). The conditions define the requirements to be met by the proponent. The procedures 4, 5 and 6 are to be managed by the Mining and Management Programme Liaison Group established under clause 5 of the Agreement under the Alumina Refinery (Wagerup) Agreement and Acts Amendment 1978 which has the responsibility of reviewing the proponent's annual mining plan.

**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 Consultative Environmental Review and in correspondence to the Department of Environmental Protection of 11 April 1995; provided that the commitments are not inconsistent with the conditions or procedures contained in this statement.

A schedule of Environmental Management Commitments which will be audited by the Department of Environmental Protection was published in Environmental Protection Authority Bulletin 779 (Appendix 8) and a copy, as edited on 27 July 1995, is attached.

**2 Implementation**

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

- 2-1 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.

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2-2 Where, in the course of the detailed implementation referred to in condition 2-1, the proponent seeks to change the designs, specifications, plans or other technical material submitted to the Environmental Protection Authority 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.

### 3 Long-term Bauxite Residue Management

3-1 The proponent shall develop a "closure strategy" for the residue storage areas at Wagerup, to the requirements of the Minister for the Environment.

3-2 The proponent shall implement the "closure strategy" required by condition 3-1 to the requirements of the Minister for the Environment, at a timing to be determined by the Minister for the Environment on advice of the Minister responsible for administering the Alumina Refinery (Wagerup) Agreement and Acts Amendment 1978.

X 3-3 The proponent, in consultation with the Residue Planning Liaison Group, shall report annually to the Department of Environmental Protection on the progress towards developing the "closure strategy" required by condition 3-1.

Note:

A "closure strategy" means that the bauxite residue storage areas at Wagerup shall either no longer require management at the time the proponent ceases refining operations, or if the Minister for the Environment determines that further management is necessary, the proponent shall make adequate provision for future management with no liability to the State.

### 4 Atmospheric Emissions

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4-1 The proponent shall provide details on the control of NOx emissions and greenhouse gases in the annual reporting of environmental research and operations (see procedure 3).

### 5 Social Impacts

5-1 To reduce social disruption to the Waroona district, the proponent shall maintain formal liaison and monitoring processes at appropriate times with the Shire of Waroona.

X 5-2 The proponent shall provide details on formal liaison and monitoring processes with the Shire of Waroona in its annual reporting of environmental research and operations (see procedure 3).

### 6 Community Consultation

6-1 The proponent shall consult with the affected local government authorities in the preparation of mining plans and report the results to the Mining and Management Programme Liaison Group.

6-2 The proponent shall consult with residents of private property whose amenity (dust, noise, vibration, visual) or hydrology are likely to be affected by the mining operations, and report the results to the Mining and Management Programme Liaison Group. In the first instance the proponent shall consult with those residents within the predicted 35 dB(A) noise contour (worst case) for the mining operations.

6-3 In implementing conditions 6-1 and 6-2, the proponent shall apply best practice environmental management principles (see procedure 7).

## 7 Decommissioning (Refinery Site)

- 7-1 The proponent shall achieve the satisfactory decommissioning and rehabilitation of the refinery site and its environs.
- 7-2 At least six months prior to decommissioning, the proponent shall prepare a decommissioning and rehabilitation plan to achieve the objectives of condition 7-1.
- 7-3 The proponent shall implement the plan required by condition 7-2.

## 8 Proponent

These conditions legally apply to the nominated proponent.

- 8-1 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.

## 9 Time Limit on Approval

The environmental approval for the proposal is limited.

- 9-1 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 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.)

## 10 Compliance Auditing

To help determine environmental performance, periodic reports on progress in implementation of the proposal are required.

- 10-1 The proponent shall submit periodic Progress and Compliance Reports, in accordance with an audit programme prepared by the Department of Environmental Protection in consultation with the proponent.

## Procedure

- 1 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions and procedures contained in this statement and for issuing formal clearance of conditions.
- 2 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.
- 3 Where the proponent is required to provide reports to the Minister for the Environment, unless otherwise required, it will be adequate to incorporate such reports within those required under the Alumina Refinery (Wagerup) Agreement and Acts Amendment 1978,

and the Minister responsible for administering that Act will forward the relevant information to the Minister for the Environment.

4 Final rehabilitation completion criteria:

- (1) The Mining and Management Programme Liaison Group established under clause 5 of the Alumina Refinery (Wagerup) Agreement and Acts Amendment 1978 shall have carriage of the rehabilitation completion criteria programme.
- (2) The rehabilitation criteria programme shall include public consultation prior to the finalisation of the criteria.
- (3) Upon finalisation, the final rehabilitation completion criteria shall be made public.
- (4) The proponent and the Mining and Management Programme Liaison Group shall regularly review and revise the final rehabilitation completion criteria, using procedures 4(1) and 4(2).
- (5) Best practice environmental management principles shall be applied (see procedure 7).
- (6) where areas have met all appropriate criteria, a certificate of acceptance will be supplied to the proponent by the Department of Conservation and Land Management, on behalf of the State.

5 ~~Buffer distances and amenity provisions to manage the impacts on the local community from the impacts of mining:~~

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- (1) ~~The proponent and the Mining and Management Programme Liaison Group shall prepare and implement a plan to manage the impacts of mining operations on the local community in consultation with the affected local government authorities.~~
  - (2) ~~In developing appropriate buffer distances and amenity provisions, the proponent and the Mining and Management Programme Liaison Group shall take into account any local agreements between the proponent and local property owners and issues that concern local property owners, including:
    - 1 likely noise, vibration and dust impacts on residents and property from the type of mining proposed;
    - 2 aesthetic and conservation values of the forest affected in relation to the properties; and
    - 3 potential hydrological impacts on private properties.~~
  - (3) ~~Best practice environmental management principles shall be applied (see procedure 7).~~

6 The Mining and Management Programme Liaison Group comprises representatives of State Government agencies whose areas of responsibility are affected by the mining operations of the proponent. This group will continue to review the mining plans of the proponent and manage issues relating to its mining operations. The group will co-ordinate environmental auditing of the proponent's Mining and Management Programme. Best practice environmental management principles shall be applied (see procedure 7).

7 Best Practice Environmental Management Principles:

For the purposes of this statement, best practice environmental management principles to be employed by the proponent and the Mining and Management Programme Liaison Group should include:

- (1) the development of an environmental policy and its transmittal to the Environmental Protection Authority to ensure its coverage of issues;
- (2) commitment to continuous improvement;
- (3) the setting of agreed environmental protection objectives;

- (4) commitment to manage to those objectives;
- (5) the auditing of performance against performance indicators;
- (6) regular reporting to the Environmental Protection Authority;
- (7) a 5-yearly review; and
- (8) commitment to a quality assurance system.

#### Note

- 1 The original conditions and procedures for this project were issued on 8 March 1990 (Wagerup Alumina Refinery Expansion, Assessment No. 317). The conditions and procedures in this statement replace those original conditions and procedures which are no longer applicable for this project.
- 2 The proponent is required to hold a licence under the provisions of Part V of the Environmental Protection Act.

Hon. Peter Foss, MLC  
MINISTER FOR THE ENVIRONMENT

09 AUG 1995

**Schedule of Environmental Management Commitments  
which will be audited  
by the Department of Environmental Protection**

**(27 July 1995)**

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(895)**

**ALCOA OF AUSTRALIA LIMITED**

## Consolidated list of proponent's commitments

### Mine Programme and forest management

- (1) In addition to the 10-year mining plans to be submitted to the State under Clause 5 of the Wagerup Agreement, Alcoa will also prepare and submit to the State mining and management programmes which will specify such matters as the areas which it is proposed to mine, the method of mining, and the proposed methods of rehabilitation in accordance with the procedures to be agreed between Alcoa and the State. Alcoa undertakes to consult closely with the State on the preparation of these programmes and not to implement these programmes until agreement to them has been reached with the State or they have been determined by arbitration.
- (2) Alcoa will plan and manage its mining operations to minimise disturbance to biologically diverse areas fringing major rock outcrops and stream zones. Appropriate buffers will be maintained between these areas and minepit boundaries. Stream crossings will be constructed in a manner which facilitates their removal and rehabilitation after use, unless required for ongoing forest management or other purposes agreed with the State's Mining and Management Programme Liaison Group (MMPLG).
- (3) Alcoa will continue its programme of biological surveys and support of activities contributing to the conservation of rare, endangered and priority species existing within the vicinity of its mining operations.

### Water resources

- (4) Bauxite mining will not take place in the eastern, lower rainfall portion of Alcoa's lease, until research shows that mining operations can be conducted without significantly increasing the salinity of water resources.

### Mine rehabilitation

- (5) Alcoa undertakes to formulate its detailed rehabilitation proposals to best suit the land use priorities established by the State for the particular mining areas concerned.
- (6) Alcoa will monitor the success of all its rehabilitated mined areas in co-operation with the Department of Conservation and Land Management (CALM) and, if necessary, is prepared to carry out further treatments up to the time when it is agreed that CALM should resume full management responsibility.

### Forest conservation

- (7) Alcoa will forego the bauxite resources in the jarrah forest conservation areas agreed in consultation with the State's Reserves Review Committee and specified in the Alumina Refinery Agreement Amendment Act, No 99 of 1986, for as long as their conservation values remain. Mining adjacent to the conservation areas will utilise site-specific environmental management procedures agreed in consultation with the MMPLG. These will include particular consideration of dieback management and mine rehabilitation requirements.
- (8) Alcoa will defer mining indefinitely the bauxite resources in the facilities section of the recreation zone of the Lane Poole Reserve as defined in Figure 10 of the 1994 Consultative Environmental Review. Ore extraction in the remaining areas of the recreation zone will exclude the steep slopes of the Murray River valley and will be undertaken in accordance with site-specific environmental management procedures agreed with the State's MMPLG after consultation with CALM and the Lane Poole Reserve Advisory Committee.

### Dieback management

- (9) Alcoa will implement a comprehensive dieback management programme designed specifically for its mine operations in the jarrah forest. This will include the rehabilitation

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to use if  
necessary

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of dieback-affected areas adjacent to its mine operating areas, in accordance with procedures agreed with State agencies, and irrespective of the cause of introduction of the disease.

### **Residue disposal**

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- (10) Alcoa will prepare detailed design reports on future residue disposal areas and submit them to the Water Authority of Western Australia (WAWA) for approval. The design reports will include consideration of slope stability, seepage control, groundwater monitoring and construction and operating procedures. Results from monitoring programmes will be reported to WAWA at intervals determined by agreement with WAWA.
  - (11) Alcoa will develop long-term management plans for the residue deposit including consideration of surface drainage, seepage control, effluent treatment and discharge, groundwater management, slope stability, surface rehabilitation, aesthetic impact and future land use. Such plans will be formulated in consultation with the State's Residue Programme Liaison Group and will include agreement with the State on responsibilities for any ongoing management requirements after decommissioning of the refinery. Initial concept plans will be formulated by the end of 1994 and reviewed periodically thereafter. Alcoa will recover and reuse, or treat and discharge, alkaline solutions draining from or flowing off the residue storage areas until such times as it demonstrated that such solutions do not pose an environmental hazard.

### **Environmental research**

- (12) Alcoa is committed to an ongoing research programme into all aspects of its operation that have the potential to adversely affect the environment, and into those environmental characteristics that could be adversely be affected by its operations.
- (13) Alcoa will submit a brief review of its research and management programme to the Department of Resources Development on an annual basis. Copies will be made available to relevant State agencies and the Shire of Waroona. A more detailed review will be prepared on a triennial basis.

### **Social impact**

- (14) Alcoa will co-operate in a joint community services programme in conjunction with the State and the Shire of Waroona to monitor socio-economic effects of the project and provide input for community services Programme.

### **Decommissioning**

- (15) Alcoa will dismantle its facilities at the termination of mining and refinery operations and carry out reasonable restoration measures at the sites of those operations providing such facilities are not required for other purposes.

### **Noise monitoring**

- (16) Noise monitoring undertaken for assessment purposes in association with the commitments outlined below will be undertaken by a recognised acoustical consultant, in consultation with the Department of Environmental Protection (DEP). Ongoing monitoring will be undertaken by Alcoa personnel appropriately trained in the measurement of environmental noise.
- (17) Noise levels will be monitored periodically at designated reference points and reported in the Review of Environmental Research and Operations submitted annually to the Department of Resources Development, and distributed to relevant state and local government agencies.

### **Noise management (fixed plant) - current operations**

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- (18) Alcoa will commission additional studies to verify predicted noise levels in the vicinity of the Wagerup Refinery and Willowdale Mine operations. Where these studies confirm that noise abatement is necessary, a program will be developed to reduce noise emissions by



all practicable means as defined in the Environmental Protection Act 1986. This program will aim to comply with the draft (1995) environmental noise regulations under the Environmental Protection Act; or should they differ, with the environmental noise regulations promulgated subsequently. A copy of the noise control program, together with timelines for the completion for the measures specified in it, will be forwarded to the DEP by 31 August 1995. The program will be implemented by 30 November 1996 and a report demonstrating its effect will be forwarded to the DEP by 31 December 1996. The report will contain details of proposed reference points for future noise monitoring purposes.

#### **Noise management (fixed plant) - proposed expansion**

- (19) Alcoa will design the mining and refining plant and bauxite conveyor systems associated with the expansion to meet the draft (1995) environmental noise regulations under the Environmental Protection Act, and operate them in accordance with the environmental noise regulations promulgated subsequently.

#### **Noise management - mobile mining operations**

- (20) Alcoa will commission an authoritative assessment of noise emissions associated with its mobile mining operations at Willowdale, and will reach agreement with the DEP by 31 December 1995 on a practicable noise management procedure for future mining operations in the vicinity of noise sensitive premises. Details of the noise management plan for operations within areas subject to the noise management procedure, including any noise monitoring to be undertaken and reporting of results obtained, will be included in subsequent five year mining and management plans submitted annually to the MMPLG.

#### **Noise management - transport**

- (21) Alcoa will review the proposed extension of the hours of its contracted lime trucking operation in consultation with the Shires of Waroona and Murray, taking into account relevant factors including safety, noise, cost and traffic density. The results from this review will be communicated to the DEP by 31 August 1995. Future contractual arrangements will incorporate an appropriate reference to a recognised vehicle noise standard such as ADR 28/01.