



Statement No.

MINISTER FOR THE ENVIRONMENT AND HERITAGE

000579

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**SODIUM CYANIDE (LIQUID) PLANT, EXPANSION TO 40 000 TPA
(DEBOTTLENECKING), KWINANA
(Includes Downstream Solids Plant)**

Proponent: Australian Gold Reagents Pty Ltd

Proponent Address: PO Box 345, Kwinana WA 6167

Assessment Number: 1390

Previous Assessment Numbers: 300, 300-1 and 846

Previous Statement Numbers: Statement No. 099 published on 1 June 1990,
Statement No. 129 published on 15 March 1991, and
Statement No. 347 published on 17 March 1994.

Report of the Environmental Protection Authority: Bulletin 1028

Previous Reports of the Environmental Protection Authority: Bulletins 427, 450 and 727

The implementation of this proposal to which the above reports of the Environmental Protection Authority relate is subject to the conditions and procedures contained in Ministerial Statements Nos. 099 (1 June 1990), 129 (15 March 1991) and 347 (17 March 1994), as amended by the following:

Condition 1A (Proponent Commitments) of Statement No. 347 is deleted and the following condition is inserted:

1A Proponent Commitments

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

Published on

- 6 DEC 2001

In implementing the proposal, including the modifications to allow each plant to produce up to 35, 000 tpa, and to produce solid sodium cyanide, as reported on in Environmental Protection Authority Bulletins 727 and 1028, respectively, the proponent shall fulfil the commitments made on 28 March 1990 and those made on 12 November 2001. (Copies of both the commitments of 28 March 1990 and 12 November 2001 are attached).

Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT AND HERITAGE

- 6 DEC 2001

**Proponent's Consolidated Environmental Management
Commitments**

28 March 1990

&

12 November 2001

**SODIUM CYANIDE (LIQUID) PLANT,
EXPANSION TO 40,000 TPA
(DEBOTTLENECKING), KWINANA (1390)
(Includes Downstream Solids Plant)**

AUSTRALIAN GOLD REAGENTS PTY LTD

SODIUM CYANIDE PLANT - EXPANSION TO 40 000 tpa (DEBOTTLENECKING)

SUMMARY OF MANAGEMENT COMMITMENTS

The commitments which the proponent has made to environmental management during the design, construction and operation of the expanded facilities are as follows:

1. Prior to implementing any modifications to the design of the existing plant, the following safety checks will be undertaken:
 - (1) referral of the proposed modification to the process licensor, Roehm GmbH;
 - (2) liaison with the risk consultant on the proposed changes if they are likely to affect the risk analysis; and
 - (3) HAZOP analysis of the proposed modifications to the plant design.
2. Construction of the proposed expansion will be undertaken in accordance with a Construction Stage Management Report similar to that prepared for the existing plant, but recognising the potential hazards of the existing plant, together with relevant conditions imposed by the Environmental Protection Authority.
3. All construction materials and practices will be in accordance with the relevant Australian codes and international standards where appropriate.
4. The plant design will ensure that emissions of nitrogen oxides during normal operating conditions will be within the National Health and Medical Research Council (NH&MRC) recommended guidelines and will also comply with guidelines adopted by the Victorian Environment Protection Authority.
5. Safety features incorporated in the existing plant will be incorporated in the expanded facilities.
6. Wastewater from the plant will be managed according to the wastewater management strategy approved by the Environmental Protection Authority for the existing plant.
7. The process and storage areas will be sealed and bunded so that any washings, contaminated stormwater run-off or spills will be collected and directed to the wastewater treatment plant sump, and analysed and treated prior to disposal. Any discharge of treated wastewater into Cockburn Sound will comply with the criteria specified in Bulletin No. 103 or the terms of the Environmental Protection Authority licence.
8. Approval for any additional storage of sodium cyanide will be sought from the Chief Inspector, Explosives and Dangerous Goods, Department of Mines.
9. A fire protection system will be incorporated in the expanded facilities in accordance with the requirements of the plant design and the Western Australian Fire Brigades Board. CSBP works personnel will be trained in the appropriate fire-fighting techniques. In addition to the fire-fighting capability of CSBP's Kwinana works, the fire-fighting co-operative established by the industrial operators in the Kwinana district will be available for emergency assistance.

(Cont'd)

10. All employees will be trained in the safe work practices and emergency procedures appropriate to the operation of the plant and handling of all associated materials. The management structure for the expanded facilities will incorporate at least two tiers of personnel technically qualified to manage hazardous chemical operations.
11. On-site emergency facilities at CSBP's Kwinana works will continue to include a dedicated emergency response vehicle, fire tender and an ambulance at all times, and an occupational health sister will be in attendance during normal working hours.
12. A detailed operating manual has been prepared for the existing plant from information supplied by the licensor, covering all process work, including start-up, shut-down, plant testing, inspection and emergency action. The procedures manual will be amended as necessary to include the expanded facilities.
13. The proponent will arrange for observers from the licensor to be at the plant during commissioning of the expanded facilities if it is deemed necessary by the licensor and the proponent.
14. The expanded facilities and any interconnections to the existing plant will be subject to a full HAZOP study and follow-up prior to commissioning.
15. Stocks of neutralizing agent (ferrous sulphate) are located along the transport routes at agreed locations. They will be inspected regularly to ensure that they are kept in good order.
16. Emergency response practice sessions will take place on a basis agreed with the relevant authorities.
17. The plant operator will maintain a dedicated emergency response vehicle at the Kwinana works and this will be available to service any off-site incident involving the transport of sodium cyanide.
18. Upon commissioning, monitoring of the existing plant will be undertaken in accordance with a comprehensive Environmental Monitoring and Management Programme, and the proposed expansion will be incorporated into this Environmental Monitoring and Management Programme to the satisfaction of the Environmental Protection Authority.
19. Liaison with local Shires, the Environmental Protection Authority, the Department of Mines, Westrail and counter-disaster groups will occur as appropriate in regards to proposed changes to the agreed transport routes or the addition of new market areas.
20. The proponent will prepare a Total Hazard Control Plan to the satisfaction of the Chief Inspector, Explosives and Dangerous Goods, Department of Mines, for the sodium cyanide plant and the expanded facilities at Kwinana.

Proponent's Consolidated Supplementary Commitments of 12 November 2001 – Sodium Cyanide (Liquid) Plant, Expansion to 40,000 tpa (Debottlenecking), Kwinana (Assessment No. 1390)

No	Topic	Action	Objective	Timing	Advice
1	Risk	<p>1) Provide a revised QRA of the "as constructed" 25,000 tpa solid sodium cyanide plant in conjunction with the existing liquids plants.</p> <p>2) Determine cumulative individual off-site risk contours for the liquids and 25,000 tpa sodium cyanide plants.</p> <p>3) Undertake the required plant modifications if the revised QRA indicates that the combined plants will not meet the EPA risk criteria.</p>	<p>To demonstrate that the EPA's Guidance Statement No. 2, Off-site Individual Risk from Hazardous Plants criteria will be met.</p>	<p>Pre-commissioning</p> <p>Pre-commissioning</p> <p>Pre-commissioning</p>	<p>DMPR</p>
2	Risk	<p>1) Submit a Construction Safety Management Plan.</p> <p>2) Amend the Safety Report.</p>	<p>To meet DMIPR's requirements.</p>	<p>1) Pre-construction</p> <p>2) Prior to commissioning additional plant</p>	<p>DMPR</p> <p>Chief Inspector of Explosives & Dangerous Goods</p>
3	Noise	<p>1) Develop a Noise Reduction Management Plan for the site. The plan will be comprehensive and will specify the noise reduction measures and the time frame for implementation of the measures.</p> <p>2) Reduce irregular noise emissions from the Peter Brotherhood turbine by the installation of a silencer on a start-up vent.</p>	<p>To achieve compliance with the Environmental Protection (Noise) Regulations 1997 or to reduce noise emissions to as low as reasonably practicable.</p>	<p>Within 6 months after the review of the Noise Regulations.</p> <p>Pre-commissioning of solid sodium cyanide plant.</p>	<p>Town of Kwinana</p>

4	Groundwater Protection	<p>1) The plant will be fully bunded to DMPR and DEP requirements, and all pipelines containing cyanide solutions which are located outside of the bund will be double-contained.</p> <p>2) The sea container storage area to be designed and constructed to meet AS 4452.</p> <p>3) Develop and implement a "contingency and emergency plan".</p>	<p>To protect soil and groundwater from contamination and to deal with the onsite spillage of solid sodium cyanide.</p>	<p>Pre-commissioning</p> <p>Pre-commissioning</p> <p>Pre-commissioning</p>	DMPR
5	Wastewater Discharge	<p>Prepare a wastewater discharge plan to control emissions in the wastewater leaving the site, which includes:</p> <ul style="list-style-type: none"> • Continuous on-line monitoring of the cyanide concentration. • The concentration of cyanide and copper to be less than 1 ppm. • The emission of nitrogen to be no greater than 14 kg/day on average. 	<p>To protect marine flora and fauna.</p>	<p>Pre-commissioning</p>	
6	Atmospheric Emissions	<p>Operate the liquids and solids plants to cumulatively meet the existing DEP licence limits for total cyanide (as CN) and ammonia emissions from the site.</p>	<p>To maintain the existing level of protection to public health and the environment.</p>	<p>On going.</p>	
7	Approvals	<p>Request a Section 46 review of the existing Ministerial Conditions for the production, storage and transport of sodium cyanide, with the intention of including the transport and storage of solid sodium cyanide off-site.</p>	<p>To clarify existing conditions and incorporate transport of solid sodium cyanide.</p>	<p>Complete review prior to off-site transport of solid sodium cyanide.</p>	DMPR

Abbreviations

EPA = Environmental Protection Authority
DEP = Department of Environmental Protection
DMPR = Department of Mineral and Petroleum Resources
QRA = Quantitative Risk Assessment

AS = Australian Standard
ppm = parts per million
tpa = tonnes per annum