MINISTER FOR THE ENVIRONMENT

Statement No. 000668

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

SODIUM CYANIDE PLANTS (LIQUID AND SOLID) AT KWINANA AND TRANSPORT OF SODIUM CYANIDE BY ROAD AND RAIL, KWINANA

Proponent: Australian Gold Reagents Pty Ltd

Proponent Address: PO Box 345, Kwinana WA 6167

Assessment Number: 1497

Previous Assessments: 113, 197, 300, 300-1, 846, 908, 1390, and 1422

Previous Statements: Statement No. 006 published on 15 October 1987,
Statement No. 073 published on 24 August 1989,
Statement No. 099 published on 1 June 1990,
Statement No. 129 published on 15 March 1991,
Statement No. 347 published on 17 March 1994,
Statement No. 384 published on 12 May 1995,
Statement No. 579 published on 6 December 2001, and
Statement No. 602 published on 2 August 2002.

Report of the Environmental Protection Authority: Bulletin 1132

Previous Reports of the Environmental Protection Authority: Bulletins 274, 284, 387, 427, 450, 727, 772, 1028 and 1047.

The implementation of the proposals to which the above reports of the Environmental Protection Authority relate is subject to the following conditions and procedures, which replace all previous conditions and procedures:

1 Implementation

1-1 The proponent shall implement the proposals referred to above and described collectively within schedule 1 of this statement subject to the conditions of this statement.

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2 Proponent Commitments

2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposals until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposals.

3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposals will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposals shall also be provided.

3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

4 Compliance Audit and Performance Review

4-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:

1. the status of implementation of the proposals as defined in schedule 1 of this statement;

2. evidence of compliance with the conditions and commitments; and

3. the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

4-2 The proponent shall submit a performance review report within three years following the date of publication of this statement and every five years thereafter, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, which addresses:

1. the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;

2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;

3. significant improvements gained in environmental management, including the use of external peer reviews;

4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and

5. the proposed environmental targets over the next five years, including improvements in technology and management processes.

4-3 The proponent may submit a report prepared by an auditor approved by the Department of Environment under the "Compliance Auditor Accreditation Scheme" to the Chief Executive Officer of the Department of Environment on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating that the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.

5 Decommissioning Plans

5-1 Within six months following the date of publication of this statement, the proponent shall prepare a Preliminary Decommissioning Plan, which provides the framework to ensure that the plant site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Preliminary Decommissioning Plan shall address:

1. conceptual plans for the removal or, if appropriate, retention of plant and infrastructure;

2. a conceptual rehabilitation plan for all disturbed areas and a description of a process to agree on the end land use(s) with all stakeholders;

3. a conceptual plan for a care and maintenance phase; and

4. management of noxious materials to avoid the creation of contaminated areas.

5-2 At least 12 months prior to the anticipated date of decommissioning, or at a time agreed with the Environmental Protection Authority, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the plant site is left in an environmentally acceptable condition to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Final Decommissioning Plan shall address:

1. removal or, if appropriate, retention of plant and infrastructure in consultation with relevant stakeholders;

2. rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and

3. identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.

5-3 The proponent shall implement the Final Decommissioning Plan required by condition 5-2 until such time as the Minister for the Environment determines, on advice of the Environmental Protection Authority, that the proponent's decommissioning responsibilities have been fulfilled.

5-4 The proponent shall make the Final Decommissioning Plan required by condition 5-2 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

6 Review of Options for the Transport of Solid Sodium Cyanide (Kwinana to Fremantle)

6-1 The proponent shall complete the review of transport options and related matters referred to in commitment 13 by 30 November 2004, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, unless the rail improvements (which are expected to be completed along with significant progress in relation to how freight moves between Kwinana and Fremantle) have not been completed in the opinion of the Minister for the Environment on advice of the Environmental Protection Authority.

In that event, the proponent shall complete the review by 31 August 2005, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

7 Duration of Road Transport of Solid Sodium Cyanide (Kwinana to Fremantle)

7-1 The proponent may use road transport of solid sodium cyanide for a period of not more than three years from 31 August 2002, unless the rail improvements referred to in condition 6-1 have not been completed in the opinion of the Minister for the Environment acting on advice of the Environmental Protection Authority.

8 Transport of Liquid Sodium Cyanide

8-1 The proponent shall use rail transport of liquid sodium cyanide from Kwinana wherever practicable, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

8-2 The proponent may use road transport of liquid sodium cyanide from Kwinana in the following circumstances:

1. When there is temporary interruption of rail service, such as industrial disputes and rail washaways;

2. When there is no rail service or when scheduled rail services have been terminated; or

3. Where goldmines cannot be serviced practicably and/or efficiently by rail from Kwinana.

8-3 At intervals not exceeding two years from the date of publication of this statement, the proponent shall undertake a review of and report on the transport options for liquid sodium cyanide referred to in conditions 8-1 and 8-2, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

9 Safety Report

9-1 The proponent shall develop a Safety Report in accordance with National Standard 1014(2002) - *Control of Major Hazard Facilities* (National Occupational Health and Safety Commission), to the requirements of the Minister for the Environment on advice of the Chief Inspector of Explosives and Dangerous Goods.

9-2 The proponent shall operate the facility in accordance with the provisions of the Safety Report referred to in condition 9-1, to the requirements of the Minister for the Environment on advice of the Chief Inspector of Explosives and Dangerous Goods.

Procedures

1 Where a condition states "to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment for the preparation of written notice to the proponent.

2 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment.

3 Where a condition lists advisory bodies, it is expected that the proponent will obtain the advice of those listed as part of its compliance reporting to the Department of Environment.

Notes

1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.

2 Within this statement, to "have in place" means to "prepare, implement and maintain for the duration of the proposal".

3 The Department of Industry and Resources manages all safety aspects of the storage and transport of dangerous goods under the *Explosives and Dangerous Goods Act 1961* and relevant regulations.

4 The sodium cyanide facility is a "Major Hazard Facility" and the proponent is required to develop a Safety Report which meets the requirements of National Standard 1014(2002) - *Control of Major Hazard Facilities* (National Occupational Health and Safety Commission) to the requirements of the Chief Inspector of Explosives and Dangerous Goods.

Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT

11 NOV 2004

Schedule 1

The Proposals (Assessment No. 1497)

The main characteristics of the proposals are summarised in Table 1 below.

Table 1 - Key Proposal Characteristics

Characteristic	Description
General	
Location	Kwinana Beach Road – Kwinana South east corner of the CSBP site and west of Coogee Chemicals – Kwinana Industrial Area (See figure 2).
Disturbance Areas	
Plant areas	Approx 4 hectares
Total area disturbed	4.3 hectares
Liquid Sodium Cyanide Plants	
Plant 1 Commissioned	1988
Plant 2 Commissioned	1998
Plant facilities (x2)	Gas reactor, cooler, absorber, distillation column, and incinerator.
Process Description	• Natural gas, air and ammonia are mixed in the correct ratio; • The mixed gases enter a high temperature reactor where hydrogen cyanide is produced using a catalyst; • Caustic soda is then used to absorb the hydrogen cyanide gas in an absorption tower to produce a 30% sodium cyanide solution; • The gas leaving the absorption tower is burnt in a continuously operating incinerator.
Production Capacity (Plants 1 & 2 combined)	Capacity to produce a combined total of 70,000 tpa sodium cyanide (expressed as 100% sodium cyanide) as a 30% solution
Inputs (nominal)	• 2,200 TJ per year natural gas • 40,000 t per year ammonia • 60,000 dmt per year caustic soda • 24,500 MWhr electricity
Outputs (nominal)	• 14,500 t of steam • 60,000 MWhr electricity
Storage – liquid sodium cyanide	• steel tanks with total capacity of 5,500 m^3 (2,000 t of 100% sodium cyanide) on site. • Up to 140 t in ISO-tainers in transit
Gaseous Emissions	• Tail gases from the incinerator; • Discharge gases from the start-up blower; and • Discharge gases from the shut down stack
Liquid Effluent Discharges	Up to 16 m^3/hr cooling tower blowdown Stormwater
Solid Sodium Cyanide Plant	
Plant Commissioned	2002
Plant Facilities	Two batch evaporators, vacuum pump incorporating a scrubber, condensate tank, slurry tank, centrifuge, spin flash dryer incorporating scrubber system, powder hopper and compacting machine.
Process Description	• The solids plant receives a continuous feed of sodium cyanide solution produced at the liquid sodium cyanide plants which will be directed to one of two batch evaporation units. • Following concentration by evaporation, the sodium cyanide crystals are centrifuged, dried and compressed into briquettes. • The briquettes are then packaged and transported.
Production Capacity	Nominal 25,000 tpa
Inputs	30% sodium cyanide solution
Outputs	Briquettes containing >97% sodium cyanide.

Characteristic	Description
Storage	Area designed to store a maximum of 3,000 t solid sodium cyanide. Solid sodium cyanide will be stored in IBCs packed into sea containers or a warehouse. Small quantities may be stored in ISO-tainers (equipped to allow injection of water to dissolve the sodium cyanide at the mine site).
Gaseous Emissions	Ammonia, hydrogen cyanide and sodium cyanide.
Liquid Effluent Discharges	• 10 m^3/hour wastewater, containing up to 12 kg/day of nitrogen. • All liquid effluent is treated and then pumped to CSBP's effluent pond.
Transport	
Liquid Sodium Cyanide	By road and rail. *The Dangerous Goods (Transport) (Road and Rail) Regulations 1999*, Australian Dangerous Goods Code and recommendations of the Department of Industry and Resources Guidance Note T117 "Recommendations for Route Selection for the Transport of Dangerous Goods in the Perth Metropolitan Area" are adhered to at all times for transport and packaging.
Solid Sodium Cyanide	The *Dangerous Goods (Transport) (Road and Rail) Regulations 1999*, Australian Dangerous Goods Code and recommendations of the Department of Industry and Resources Guidance Note T117 "Recommendations for Route Selection for the Transport of Dangerous Goods in the Perth Metropolitan Area" are adhered to at all times for transport and packaging.

Key
dmt – dry metric tonne
kg/day – kilograms per day
m^3 – cubic metres
m^3/hr – cubic metres per hour
MWhr – megawatt hours
t - tonnes
Tj – terajoules
tpa – tonnes per annum
IBC – intermediate bulk container

Figures (attached).

Figure 1 - Project location
Figure 2 – Site Layout.

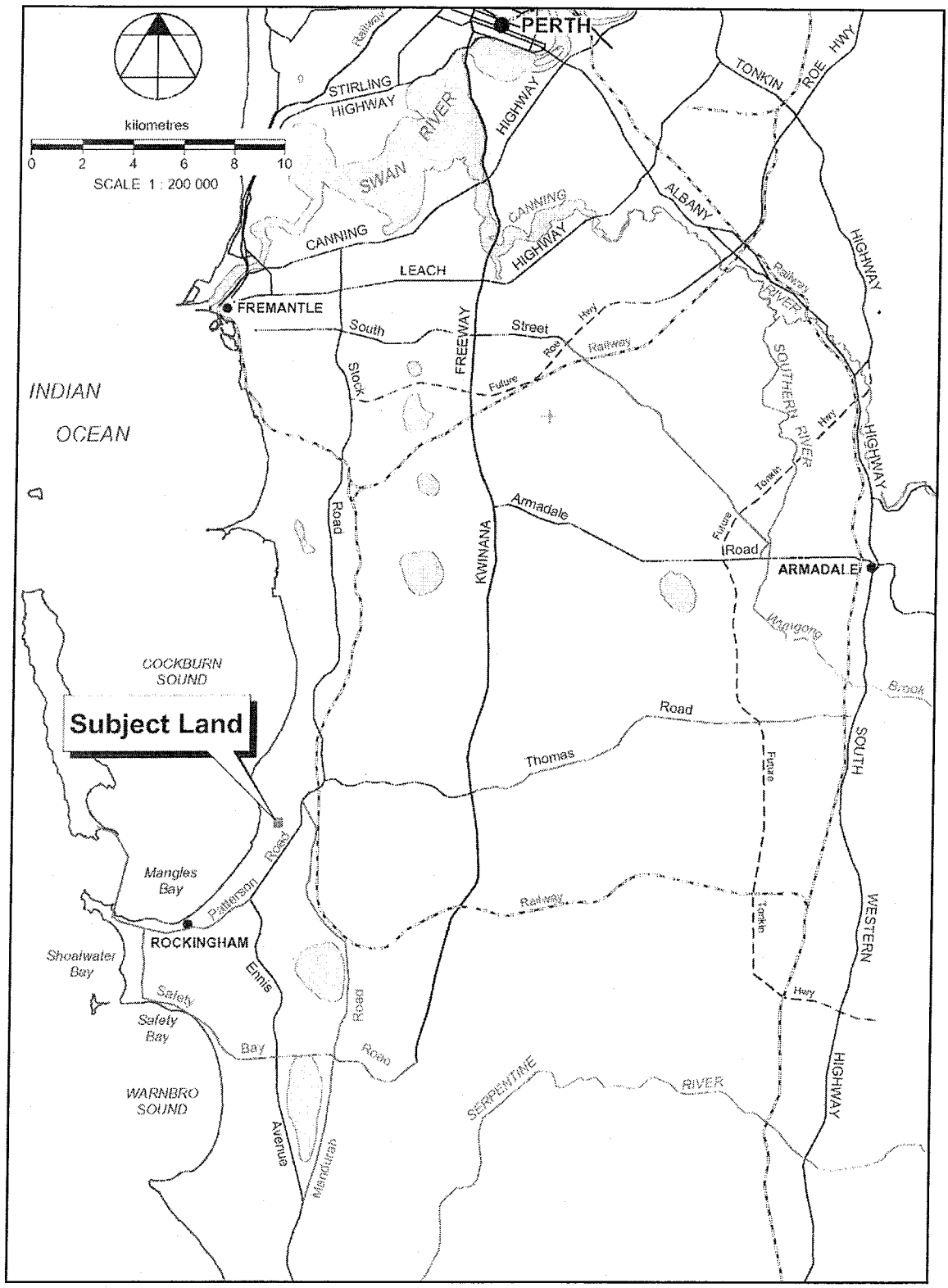

Figure 1: Project Location

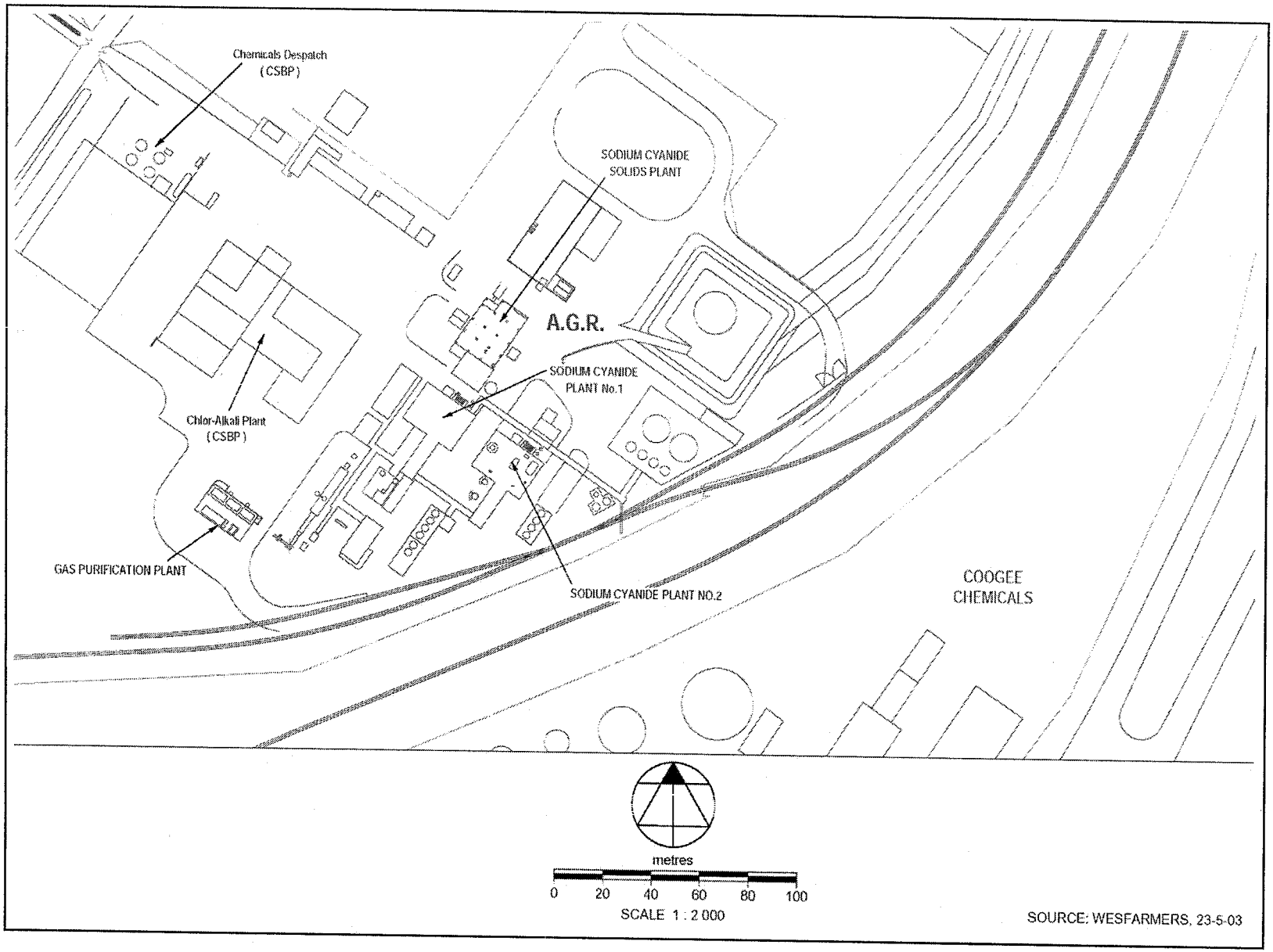

Figure 2: Site Layout

Schedule 2

Proponent's Environmental Management Commitments

October 2004

SODIUM CYANIDE PLANTS (LIQUID AND SOLID)
AND
TRANSPORT OF SODIUM CYANIDE BY ROAD AND RAIL, KWINANA

(Assessment No. 1497)

AUSTRALIAN GOLD REAGENTS PTY LTD

SODIUM CYANIDE PLANTS (LIQUID AND SOLID) AND TRANSPORT OF SODIUM CYANIDE BY ROAD AND RAIL, KWINANA (ASSESSMENT NO. 1497)
October 2004

Note: The term "commitment" as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the 'action' to be undertaken by the proponent;
- the objective of the commitment;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
Manufacture and Storage of Sodium Cyanide					
1	Environmental Management	Have in place an Environmental Monitoring and Management System, which details procedures for the management and monitoring of the solid and liquid sodium cyanide manufacturing facility. This System will include the following: 1. Water (Surface and Waste) Management Plan (see commitment 3); 2. Solid Waste Management Plan (see commitment 5); 3. Noise Management Plan (when required) (see commitment 7); 4. Transport Management Plan (see commitment 10); and 5. All monitoring and management procedures for cyanide manufacture and storage.	To protect the environment in the event of an incident.	Implemented and on-going.	
2	Environmental Management	Review the Environmental Monitoring and Management System as described in commitment 1.	To protect the environment in the event of an incident.	At intervals not exceeding 3 years.	

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
3	Water Management	Have in place a Water (Surface and Waste) Management Plan, which details procedures for the management of water discharge from the site. This plan includes the following: 1. Management of contaminated stormwater; 2. Management of liquid spills and washdown water; 3. Liquid waste storage requirements; 4. Process and storage area sealing and bunding requirements; 5. Requirements for monitoring/testing prior to disposal; 6. Discharge requirements including concentration of cyanide and copper each to be less than 1 ppm and emission of nitrogen to be no greater than 14 kg/day on monthly average; 7. Contingency/emergency procedures; and 8. Reporting requirements.	To protect marine flora and fauna and groundwater.	Implemented and on-going.	
4	Water Management	Review the Water (Surface and Waste) Management Plan referred to in commitment 3.	To protect marine flora and fauna and groundwater.	At intervals not exceeding 3 years.	
5	Solid Waste Management	Have in place a Solid Waste Management Plan, which details procedures for the management of solid waste disposal from the site. This plan will include the following: 1. Recyclable wastes will be removed by an approved contractor; 2. General refuse (domestic and industrial solid waste) will be disposed of at an appropriate landfill; 3. Solid waste storage requirements; and 4. Reporting and review requirements.	To ensure that waste is relocated to the correct locations to minimise potential contamination to the receiving environment.	Implemented and on-going.	
6	Solid Waste Management	Review the Solid Waste Management Plan referred to in commitment 5.	To ensure that waste is relocated to the correct locations to minimise potential contamination to the receiving environment.	At intervals not exceeding 3 years.	

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
7	Noise Management	Develop a Noise Reduction Management Plan for the site. This Plan will be comprehensive and will specify the noise reduction measures and the timeframe for implementation of the measures. This Plan will also include: 1. The acoustical model of the plant; 2. Best practicable measures to minimise noise emissions; 3. Operating procedures to be adopted for particular activities to minimise noise impacts; 4. The noise monitoring program; and 5. The complaint management procedure.	To achieve compliance with the *Environmental Protection (Noise) Regulations 1997* or to reduce noise emissions to as low as reasonably practicable.	Within 6 months after the review of the Noise Regulations.	Town of Kwinana
8	Noise Management	Implement the Noise Reduction Management Plan referred to in commitment 7 if required. (See commitment 7 – "Timing")	To ensure compliance with prescribed standards and minimise where practicable noise impacts.	As soon as the Noise Reduction Management Plan is approved by the EPA.	
9[1]	Facility Emergency Response	Be represented in KIMA and KIPS and maintain emergency response capabilities in accord with the Safety Report and approved Transport Management Plan.	To ensure that the emergency response and fire-fighting capability is appropriate to respond to all emergency and fire scenarios.	Implemented and on-going.	DoIR
Transport of Sodium Cyanide					
10	Transport Management Plan	Have in place a Transport Management Plan, which details procedures for the management of the transport of solid and liquid sodium cyanide. This plan will include: 1. Procedure for Transport Emergency Response for both liquid and solid sodium cyanide; 2. Procedure for obtaining DoIR authorisation for changes to the approved (as outlined in submission) sodium cyanide transport routes;	To protect the environment in the event of an incident.	Implemented and on-going.	DoIR

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
		3. Process for liaison with Local Government Authorities, relevant government departments, State emergency authorities and the local emergency management advisory committees before transport commences along approved transport routes, to address local and specific issues, including setting up emergency plans and training programs; 4. Procedure for reviewing the approved transport routes and updating the transport risk assessment based on updates to Dangerous Goods Transport Routes, changes to facilities adjoining the route and a review of traffic data as required or otherwise three yearly; 5. Specifications for the use of Intermediate Bulk Containers which meet the IMDG Code for the transport of solid sodium cyanide; 6. Procedures for sea container inspections; 7. Procedure for Port disruption; 8. Procedure for communications with the transport operations base as each vehicle travels along a transport route to a mine and until that vehicle logs off; 9. Procedure for maintenance of a log, which includes time of departure from the Kwinana area, and a general goal will be to clear the metropolitan area before significant traffic build-ups occur. 10. Location and description of the most effective and suitable neutralising agents used to treat any spilled sodium cyanide; 11. Procedure for external and internal audits of all aspects of the TMP; 12. Procedure for annual emergency exercises in association with FESA; 13. Procedure for incident follow-up; and 14. Procedure for review and update of the plan every two years or when required.			
11	Transport Management Plan	Review Transport Management Plan described in commitment 10 above.		Two yearly	DoIR

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
12	Solids Export Emergency Response	Audit the Stevedore's operations, Safety Management System and Emergency Response Plans for handling of solid sodium cyanide.	To verify that: • control measures and assumptions identified in the QRA are provided and/or implemented; • the Port operations are compliant with Dangerous Goods in Ports Regulations with respect to solid sodium cyanide; and • drainage from the solid sodium cyanide laydown area is contained and emergency response is adequate.	At intervals not exceeding 2 years (from November 2002).	DoIR FPA
13	Transport Options	Review other transport options, including road/rail viability and risk assessment.	To ensure that the most effective transport mode is used and public safety is protected.	Within three years from 31 August 2002.	DoIR City of Fremantle

[1] CSBP Limited is a full member of KIMA and is AGR's representative.

Abbreviations:

DoIR	Department of Industry and Resources
EPA	Environmental Protection Authority
FESA	Fire and Emergency Services Authority
FPA	Fremantle Port Authority
IMDG	International Marine and Dangerous Goods
KIMA	Kwinana Industries Mutual Aid
KIPS	Kwinana Industries Public Safety
QRA	Qualitative Risk Assessment
TMP	Transport Management Plan