



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L6110/1990/13
Licence Holder	Australian Gold Reagents Pty Ltd
ACN	009 140 121
File Number	DEC4869/1
Premises	Australian Gold Reagents Kwinana Beach Road KWINANA BEACH WA 6167 Legal description – Part Lot 20 on Diagram 78086 Certificate of Title Volume 1918 Folio 244 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of Report	18 December 2024
Proposed Decision	Revised licence granted

MANAGER, PROCESS INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L6110/1990/13 is held by Australian Gold Reagents Pty Ltd (Licence Holder) for Australian Gold Reagents (the Premises), located at part Lot 20 on Diagram 78086 Kwinana Beach Road, Kwinana Beach.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L6110/1990/13 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 27 August 2024, the Licence Holder submitted an application to the department to amend Licence L6110/1990/13 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Remove reference to monitoring and limits of total cyanide for both sodium cyanide liquid plants. This is based on research showing that particulates captured did not contribute to cyanide emissions and that hydrogen cyanide (HCN) is the only cyanide emission of concern from the liquid plants. For the purposes of the licence particulate matter has been assumed to be 100% sodium cyanide.
- Amend condition 6 or condition 1(d) to remove a contradiction in licence conditions. Condition 6 requires that emissions from an incinerator that has tripped or shutdown will always be directed to the operational incinerator, condition 1(d) allows that emissions from a tripped or shutdown incinerator may also be directed to the shutdown stack.
- Alter the reporting date for the annual environmental report and the annual audit compliance report from 10 February to 31 March.
- Remove redundant infrastructure construction conditions because construction is complete, and a compliance document submitted.

2.3 Part IV of the EP Act

Ministerial Statement 1196 authorises the operation of sodium cyanide liquid and solids and the transport of sodium cyanide by road and rail. The proposed amendments are not affected by conditions of the statement under Part IV of the EP Act. The EPA determined that regulation of emissions to air can continue to be managed under Part V to meet the EPA's objectives for maintaining air quality.

2.4 Sodium Cyanide Investigation

As part of the request to update monitoring requirements specified in the licence, the Licence Holder commissioned consultant Emissions Assessments to investigate the nature of particulate matter emitted from the two liquid sodium cyanide plants at the premises.

This investigation included high-rate sampling events to characterise the dust components to

determine the total cyanide composition of the emitted dust from the Sodium Cyanide plants.

Two 4 hour and two 3 hour high-rate sampling dust tests were conducted for each regulatory sample point. The filter papers and corresponding probe rinses extracted dust were subsequently gravimetrically determined for total mass and then (post gravimetric determination) solubilised in a solution of sodium hydroxide for cyanide analysis. Particle bound and total cyanide was determined.

An analysis of particulates collected revealed cyanide was below the detection limit in all sampling runs, with the assessment concluding that any particulate captured did not contribute to the CN capture in the NaOH matrix for either plant.

3. Consultation

Table 1 provides a summary of the consultation undertaken by the department.

Table 1: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal 2 October 2024	None received	NA
Licence Holder was provided with draft amendment on 20 November 2024	The licence holder replied 13 December 2024. Refer to Appendix 1	Refer to Appendix 1

4. Decision

The delegated officer has determined that removing monitoring of particulate cyanides will not significantly alter the risk to the environment from the Licence Holder's facility. In coming to this conclusion, the delegated officer took into account the investigation showing that particulates were not contributing to total cyanide released by the plant. The licence has been amended to replace the total cyanide limit with a hydrogen cyanide limit. Hydrogen cyanide will still be monitored.

The delegated officer has removed condition 6 and reworded condition 1(d) to address the contradiction in these conditions. If a furnace shuts down or is tripped emissions from the affected liquid NaCN line will be emitted through the operational incinerator except where this is not possible it will be emitted through the shutdown stack.

The delegated officer accepts the change of reporting date from 10 February to 31 March.

The delegated officer has also removed the Infrastructure construction conditions (conditions 21 to 23) as this construction is complete and associated compliance documents submitted.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 2 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 2: Summary of licence amendments

Condition no.	Proposed amendments
-	Update terminology of licensee to licence holder in line with contemporary referencing.
1(d)	Rewording to make the discharge through the operational incinerator stack the preferred method and allowing discharge through the shutdown stack if it is not possible to discharge through the operational incinerator stack.
3, Table 1	Remove the requirement for cyanide to be monitored in the liquid cyanide incinerator stacks Removed the requirement for NOx quarterly stack testing.
5, Table 2	Remove the total cyanide limit for the liquid cyanide plants and replace it with hydrogen cyanide limit.
6	Delete condition 6 as requirement incorporated into condition 1.
19	Change due date for annual audit compliance report from 10 February to 31 March
20	Change due date for biennial environmental report from 10 February to 31 March Remove the requirement to report total cyanide for the incinerator stacks
21,22,23	Delete redundant conditions.

6. References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. AGR 2024, Sodium Cyanide Manufacturing Facility Expansion Licence amendment supporting information, Perth Western Australia
5. Emissions Assessments 2023, Sodium Cyanide Liquids Plants Sodium Cyanide Investigation III, Perth Western Australia

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
1(d)	Suggested a wording change that did not alter the obligations of the licence holder.	The delegated officer agreed to the change.
3 Table 1	Request to remove quarterly annual stack testing for NOx as this is currently monitored by CEMS	The delegated officer agreed to the change.
Attachment 1	Update the premises boundary to the same as included in Ministerial Statement 1196/	The delegated officer agreed to the change.