



Licence number	L6110/1990/13
Licensee	Australian Gold Reagents Pty Ltd
ACN	009 140 121
Registered business address	Level 14, Tower 2 Brookfield Place 123 St Georges Tce PERTH WA 6000
DWER file number	DEC4869/1
Issue date	20 March 2014
Expiry date	27 March 2022
Date of Last Amendment	20/01/2020
Premises details	Australian Gold Reagents Part Lot 20 on Diagram 78086 Kwinana Beach Road KWINANA BEACH WA 6167 Legal description - Certificate of Title Volume 1918 Folio 244 As defined by the map and coordinates in Attachment 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations</i> 1987)	Assessed production capacity
Category 31: Chemical manufacturing	136,000 tonnes per year

This Amended Licence is granted to the Licensee, subject to the attached conditions, on 20 January 2020, by:

Chris Malley
A/Manager, Process Industries

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

WESTERN AUSTRALIA

DEPARTMENT OF WATER AND ENVIRONMENTAL REGULATION

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CONDITIONS OF LICENCE

DEFINITIONS

In these conditions of licence, unless inconsistent with the text or subject matter:

"annually" means once each calendar year;

"approved form" means the AACR Form template approved by the CEO for use and available via DWER's external website;

"AS" means Australian Standard;

"CEO" means the Chief Executive Officer of the Department of Water and Environmental Regulation;

"CEO" for the purposes of notifications and correspondence means:

Director General
Department Administering the *Environmental Protection Act 1986*
Locked Bag 10
JOONDALUP DC WA 6919
Telephone: (08) 6364 7000
Email: info@dwer.wa.gov.au

"CN-" means cyanide ion;

"CEMS" means continuous emissions monitoring system;

"DWER" means Department of Water and Environmental Regulation;

"Licensee" means Australian Gold Reagents Pty. Ltd. (ACN: 009 140 121);

"g/s" means grams per second;

"mg/L" means milligrams per litre;

"mg/m³" means milligrams per cubic metre expressed dry at zero degrees Celsius and one atmosphere pressure (101.325 kilopascals);

"NATA" means National Association of Testing Authorities;

"NO_x" means oxides of nitrogen including the combination of nitric oxide and nitrogen dioxide, and expressed as nitrogen dioxide;

"SCP1 and SCP2" means the sodium cyanide plants 1 and 2 respectively;

"total cyanide" in terms of atmospheric emissions means the combined measurement of HCN (hydrogen cyanide) and NaCN (sodium cyanide);

"usual working day" means Monday to Friday not including public holidays; and

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"USEPA" means United States (of America) Environmental Protection Agency.

All other terms take their meaning from the *Environmental Protection Act 1986*.

GENERAL CONDITIONS

EXCEEDANCE REPORTS

- 1 The Licensee shall notify the CEO before 5 p.m. on the next usual business day after becoming aware that any monitoring result has exceeded a license discharge limit or target value for a waste discharge specified in any condition of this licence.
- 2 The Licensee shall provide an exceedance report to the CEO where any monitoring result(s) is/are in excess of the limits specified in any condition of this licence within seven usual working days of that exceedance becoming known. The exceedance report shall contain:
 - a. the amount by which the limit was exceeded, supported by relevant monitoring data;
 - b. reasons for the emission levels being in excess of the limit; and
 - c. an outline of corrective action taken by the Licensee to ensure that emission levels are maintained below the limit, where applicable.

REPORTING FORMAT

- 3 Any continuous atmospheric discharge data submitted by the Licensee in accordance with the conditions of this licence shall be in computer readable format and shall be:
 - a. in time-series half-hourly averaged listings;
 - b. the time mark in half-hourly averaged listings shall refer to the data collected in the period prior to the time mark; and
 - c. each submitted data set should be accompanied by a graphic representation of the submitted data and a text file that indicates the compliance status of submitted data.
- 4 The Licensee shall include with submitted data, relevant limits and/or target values associated with each substance that is required to be monitored by a condition of this licence.

THREE-MONTHLY REPORTING

- 5 The Licensee shall provide to the CEO, three-monthly monitoring results as required by condition 8 for continuous NOx monitoring as set out in Table1.

Table 1

Date of submission	Reporting period
April 28 each year	1 January to 31 March
July 28 each year	1 April to 30 June
October 28 each year	1 July to 30 September
January 28 each year	1 October to 31 December

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ANNUAL REPORTING

- 6 The Licensee shall provide to the CEO an annual report by 10 February each year. The report is to cover data collected during the period from 1 January to 31 of December of the previous year in addition to the information required by condition 9, the monitoring results required by:
- a. condition 1 and 2 for a summary of exceedances;
 - b. condition 8 for:
 - i. quarterly manual stack testing of the SCP1 and SCP2 Incinerator Stacks (as depicted in Attachment 2) for ammonia, total cyanide, HCN and NO_x; and
 - ii. quarterly ammonia and total cyanide discharges from the Solids Plant Stack (as depicted in Attachment 2); and
 - c. condition 15.

AIR POLLUTION CONTROL CONDITIONS

ATMOSPHERIC DISCHARGE POINTS

- 7 The Licensee shall only discharge process gaseous wastes from the discharge points detailed below:
- a. under normal operation, through one or more of the following:
 - i. for the No. 1 Liquids Plant, the John Zink incinerator stack as depicted in Attachment 2, No. 6 (SCP1 Incinerator stack);
 - ii. for the No. 2 Liquids Plant, the Maxitherm incinerator stack as depicted in Attachment 2, No. 5 (SCP2 Incinerator stack); and
 - iii. Sodium Cyanide Solids stack as depicted in Attachment 2, No. 7 (Solids Plant Stack);
 - b. during start-up, through the start-up and shut down stacks as depicted in Attachment 2, No. 1, No. 2, No. 3 and No. 4;
 - c. during a shut-down, through the shut down stack as depicted in Attachment 2, No. 2 and No. 4; and
 - d. in the event of one of the incinerators being shut down when the plant is producing sodium cyanide, through the associated shut-down stack as depicted in Attachment 2, No. 2 and No. 4.
- 8 The Licensee shall monitor the atmospheric discharge gases from the stacks specified, for measurement of the parameters listed, at the frequencies stated in accordance with the methods specified in Table 2 to determine all required emissions in mg/m³ and g/sec.
- 9 The Licensee shall only conduct the manual tests required by condition 8 when the plant is operating at steady state balance.

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Table 2: Stack Monitoring Requirements.

Monitoring Method	Discharge Gases to be Tested and Required Testing Method	
	SCP1 & SCP2 Incinerator stacks	Solids Plant stack
CEMS	NOx	No CEMS requirement
Quarterly Manual Stack Test	Ammonia, Cyanide, HCN, NOx (using the relevant USEPA or other NATA accredited method)	Ammonia), Total Cyanide (using the relevant USEPA or other NATA accredited method)

RELIABILITY REQUIREMENT

- 10 The Licensee shall maintain the continuous emissions monitoring systems for the SCP1 and SCP2 incinerator stacks, as required by condition 8, to provide reliable and accurate data for:
- a. greater than 90 percent of the operating time of each sodium cyanide solution plant in every calendar month period; and
 - b. greater than 95 percent of the operating time of each sodium cyanide solution plant in the accumulated twelve calendar month period.

STACK EMISSION LIMITS

- 11 The Licensee shall, while the SCP1 and SCP2 and the Solids Plant are operating in steady state balance, ensure that the emitted wastes do not exceed the parameters specified in Table 3.

Table 3: Atmospheric Emission Limits

Parameter	Licensed Emissions g/s			
	SCP1 & SCP2 Incinerators		Solids Plant	
	Limit	Target	Limit	Target
NOx equal to or more than 95% operating time over the previous 12 months	5.0	n/a	n/a	n/a
NOx equal to or less than 5% of operating time over the previous 12 months	12.0	n/a	n/a	n/a
Ammonia	n/a	0.60	n/a	1.5
Total Cyanide	0.58	0.35	0.58	0.35

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CYANIDE LIQUID PLANTS START-UP RESTRICTIONS

- 12 The Licensee shall ensure that start-ups of SCP1 and SCP2 shall only be initiated subject to the following conditions:
- a. when wind speed is less than one (1) metre per second, the Licensee shall not initiate a start-up of SCP1 or SCP2;
 - b. when wind speed is between one (1) and two (2) metres per second, start-up of SCP1 or SCP2 can only be initiated when the wind direction originates within the true compass arc between 90° and 120°;
 - c. when wind speed is greater than two (2) metres per second, start-up of SCP1 or SCP2 can only be initiated when the wind direction originates within the true compass arc between 70° and 215°; and
 - d. when the wind speed is greater than four and a half (4.5) metres per second, start-up of SCP1 or SCP2 can be initiated for any wind direction.
- 13 The Licensee shall ensure that the decision to commence with any Sodium Cyanide Plant (SCP1 and SCP2) start-up shall be subject to an assessment of meteorological information, available from the Bureau of Meteorology (BOM) or secondary sources that utilise BOM data. The assessment shall provide assurance that meteorological conditions, required by condition 12, are likely to prevail for the duration of the start up.
- 14 The Licensee shall ensure that SCP1 and SCP2 start-ups, subject to conditions 12 and 13, shall be conducted in accordance with the current AGR Start-up Management Plan.
- 15 The Licensee shall record the date, time, duration and the action taken in accordance with the approved management plan for each shut-down and start-up for the reporting period.

SOLID SODIUM CYANIDE DISSOLVING PLANT

WET SCRUBBER DUST COLLECTION SYSTEM

- 16 The Licensee shall maintain and operate a wet-scrubber dust-collection system to collect all fugitive dust particles or fumes from the dissolving tank.

WATER POLLUTION CONTROL CONDITIONS

TESTING AND CONCENTRATION TARGETS FOR THE RELEASE OF WASTEWATER

- 17 The Licensee shall manage wastewater released from the site so that the following target is met:
- a. Cyanide concentration less than 1 mg/L.
- 18 The Licensee shall maintain a log of all cyanide determinations conducted in compliance with condition 17.

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SECONDARY CONTAINMENT OF ENVIRONMENTALLY HAZARDOUS LIQUIDS

- 19 The Licensee shall immediately recover, or remove and dispose of, liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, whether inside or outside a low permeability compound.

REPORTING CONDITIONS

- 20 The Licensee must:
- a. undertake an audit of their compliance with the conditions of this licence during the preceding calendar year; and
 - b. prepare and submit to the CEO by no later than 10 February following preceding calendar year an Annual Audit Compliance Report in the approved form.

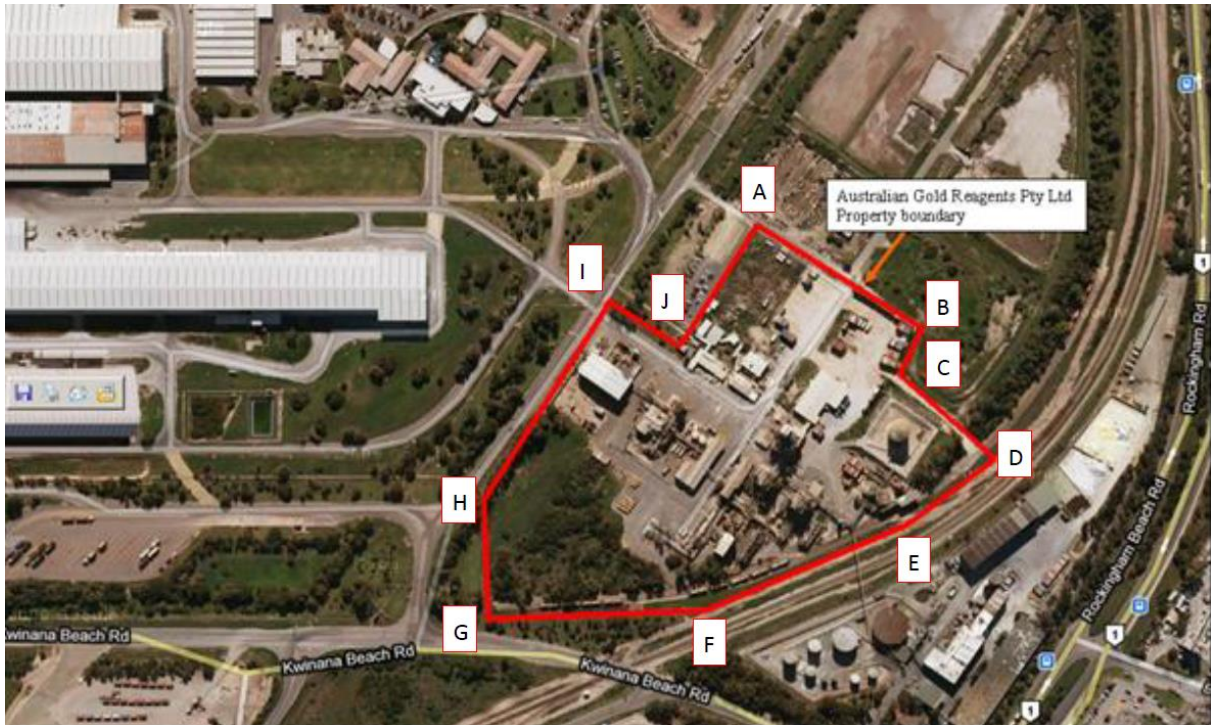
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Environmental Protection Act 1986

LICENCE NUMBER: L6110/1990/12

FILE NUMBER: L138/90

Attachment 1



Coordinates as per GDA94-MGA Zone 50

Point	X	Y
A	384422	6432302
B	384552	6432223
C	384541	6432176
D	384604	6432133
E	384536	6432055
F	384364	6431975
G	384202	6431984
H	384202	6432063
I	384306	6432241
J	384366	6432215

Attachment 2

AGR Stack Locations

