



Licence

Environmental Protection Act 1986, Part V

Licensee: AngloGold Ashanti Australia Limited

Licence: L8676/2012/1

Registered office: Level 13 St Martins Tower
44 St Georges Terrace
PERTH WA 6000

ACN: 008 737 424

Premises address: Tropicana Gold Mine
Part of mining tenement M39/1096 with coordinates:

- 646000 easting, 6770900 northing;
- 646000 easting, 6758500 northing;
- 654900 easting, 6758500 northing;
- 654900 easting, 6770900 northing.

PLUMRIDGE LAKES WA 6431 as depicted in Schedule 1.

Issue date: Friday, 8 February 2013

Commencement date: Monday, 11 February 2013

Expiry date: Sunday, 7 February 2026

Prescribed premises category

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	50 000 tonnes or more per year	8 000 000 tonnes per annual period
12	Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	50 000 tonnes or more per year	Not more than 5 000 000 tonnes per annual period



52	Electric power generation: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel.	20 MW or more in aggregate (using natural gas) 10 MW or more in aggregate (using a fuel other than natural gas)	44 MW
54	Sewage facility: premises – a) on which sewage is treated (excluding septic tanks); or b) from which treated sewage is discharged onto land or into waters.	100 m ³ or more per day	300 m ³ per day
57	Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored.	100 tyres or more	500 tyres
64	Class II putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	20 tonnes or more per year	Not more than 10 000 tonnes per year
73	Bulk storage of chemicals, etc: premises on which acids, alkalis or chemicals that – (a) contain at least one carbon to carbon bond; and (b) are liquid at STP (standard temperature and pressure), are stored.	1000 m ³ in aggregate	5200 m ³

Conditions

This Licence is subject to the conditions set out in the attached pages.

Date signed: 20 October 2016

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Tim Gentle

Officer delegated under section 20
of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.



Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

Tropicana Gold Mine (Tropicana) is a conventional drill and blast open pit gold mine operated by AngloGold Ashanti Australia Limited (AGAA). The mine is supported by a 8,000,000 tonne per annum processing plant and secondary infrastructure. Tropicana is located approximately 330 kilometres (km) east-north-east of Kalgoorlie, Western Australia. The process plant commissioning phase began in September 2013, with full operation beginning in December 2013.

Tropicana is supported by numerous ancillary prescribed activities. These include:

- crushing and screening;
- electric power generation;
- class II putrescible landfill;
- used tyre storage;
- sewage facility; and
- bulk chemical storage.

Tropicana is remotely located. The nearest community centres of Laverton and Cosmo Newberry are 220km northwest of the site.

Ore from the open pits is processed through a series of crushers and ball mills prior to entering a carbon in leach circuit. Gold particles leached from the ore are adsorbed onto grains of activated carbon. The carbon is stripped of the gold particles through an acid wash process before electrowinning and smelting into gold bars.

The treated ore waste (tailings) is thickened before being discharged to a paddock style tailings storage facility (TSF).

The primary emissions from the Tropicana operation are:

- tailings;
- dust;
- diesel exhaust;
- off gas emissions from gold elution, carbon regeneration and smelting circuits; and
- putrescible wastes.

February 2016 Amendment

The February 2016 amendment includes authorisation of works to replace diesel generation with gas for the power station. With the installation of the Eastern Goldfields gas pipeline between Sunrise Dam and Tropicana, Tropicana Gold Mine will replace 16 of the diesel generators with natural gas fuelled generators for a total installed capacity of up to 44MW.

The amendment also removes redundant emission and monitoring conditions related to the effluent from the Wastewater Treatment Plant. Effluent is now directed to the Process Plant and



is not discharged to land. The capacity of the Waste Water Treatment Plant has also been increased to 300m³ per day.

The amendment also updates the Premises' boundary in line with the Mining Tenement changes and includes concrete batching as an approved activity. The list of containment infrastructure has also been updated to reflect current operations.

The condition requiring monitoring of ambient groundwater quality has been removed from the licence as this requirement is already included in conditions under the Premises' Part IV approval (Ministerial Statement 839).

Improvement conditions have been added requiring a commissioning plan for the new gas generators and provision of information about air emissions from the carbon regeneration kiln and the gold furnace.

The licences and works approvals issued for the premises since 27 March 2008 are:

Instrument log		
Instrument	Issued	Description
W4414/2008/1	27 March 2008	Putrescible landfill works approval (category 89)
R2065/2009/1	14 April 2009	Putrescible landfill registration (exploration camp)
W4902/2011/1	12 May 2011	Putrescible landfill works approval (Tropicana operational area) (category 64)
W5021/2011/1	6 October 2011	Concrete batching works approval (category 77)
W5050/2011/1	27 October 2011	Sewage facility works approval (category 54)
R2288/2011/1	3 November 2011	Putrescible landfill registration (Tropicana operational area category 89)
W5144/2012/1	3 May 2012	Process plant works approval (categories 5, 57, 73)
W5254/2012/1	29 November 2012	TSF works approval (category 5)
W5332/2013/1	25 January 2013	Crushing and screening works approval (category 12)
L8676/2012/1	8 February 2013	Operating licence for crushing and screening, sewage facility and putrescible landfill (categories 12, 54 and 64)
W5400/2012/1	2 May 2013	Electricity generation works approval (category 52)
L8676/2012/1	9 May 2013	Licence amendment for inclusion of used tyre storage and bulk chemical storage (categories 57 and 73)
L8676/2012/1	12 December 2013	Licence amendment and conversion to the REFIRE format for the inclusion of electric power generation (category 52) and processing and beneficiation of metallic or non-metallic ore (category 5)
L8676/2012/1	4 February 2016	Licence amendment to update Premises boundary in line with new Mining Tenement grant, WWTP discharge, change to power supply, concrete batching plant, removal of ambient groundwater monitoring condition as already required by Ministerial Statement 839, addition of improvement conditions.
L8676/2012/1	20 October 2016	Licence amendment to increase capacity of the landfill to not more than 10 000 tonnes of waste per year and consequent increase in category 64. DER administrative changes to remove conditions 1.1.5, 1.2.3 and AACR template. Expiry date changed as per the DER amendment notice of 29 April 2016.



Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'AHD' means the Australian height datum;

'Anniversary Date' means 31 December of each year;

'Annual Audit Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website;

'annual period' means the inclusive period from 1 January until 31 December in that year;

'AS 4323.1' means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions*;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEMS' means continuous emissions monitoring system;

'CEMS Code' means the current version of the Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions, Department of Environment & Conservation, Government of Western Australia;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;



'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Div.3 Pt.V EP Act
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au

'combustible material' means material capable of catching fire and burning; flammable and includes; wood, PVC, plastic, paper and dry grass;

'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm;

'Department' means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the *Environmental Protection Act 1986*;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'Licence' means this Licence numbered L8676/2012/1 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'normal operating conditions' means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

'NOx' means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;

'PM' means total particulate matter including both solid fragments of material and miniscule droplets of liquid;

'PM₁₀' means particles with an aerodynamic diameter of less or equal to 10 μm ;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'quarterly' means the four inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, and 1 October to 31 December;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;



'shut-down' means the period when plant or equipment is brought from normal operating conditions to inactivity;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'stack test' means a discrete set of samples taken over a representative period at normal operating conditions;

'start-up' means the period when plant or equipment is brought from inactivity to normal operating conditions;

'STP dry' means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry;

'TSF' means tailings storage facility;

'USEPA' means United States (of America) Environmental Protection Agency;

'USEPA Method 5' means United States (of America) Environmental Protection Agency Method 5 – *Determination of particulate matter emissions from stationary sources*;

'USEPA Method 6C' means United States (of America) Environmental Protection Agency Method 6C – *Determination of sulphur dioxide emissions from stationary sources*;

'USEPA Method 7D' means United States (of America) Environmental Protection Agency Method 7D – *Determination of nitrogen oxides emissions from stationary sources*;

'USEPA Method 7E' means United States (of America) Environmental Protection Agency Method 7E – *Determination of nitrogen oxides emissions from stationary sources*;

'USEPA Method 10' means United States (of America) Environmental Protection Agency Method 10 – *Determination of carbon monoxide emissions from stationary sources*;

'USEPA Method 17' means United States (of America) Environmental Protection Agency Method 17 – *Determination of particulate matter emissions from stationary sources*;

'USEPA Method 18' means United States (of America) Environmental Protection Agency Method 18 – *Measurement of gaseous organic compound emissions by gas chromatography*;

'USEPA Method 25A' means United States (of America) Environmental Protection Agency Method 25A – *Determination of total gaseous organic concentration using a flame ionization analyzer*;

'VOC' means Volatile Organic Compounds;

'waste' has the meaning defined in the *Environmental Protection Act 1986*; and

'µS/cm' means microsiemens per centimetre.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.



1.2 General conditions

- 1.2.1 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.
- 1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.3 Premises Operation

- 1.3.1 The Licensee shall only accept waste generated from the Premises and from AngloGold Ashanti related activities within the region surrounding the Premises.
- 1.3.2 The Licensee shall ensure that wastes produced on the premises are only subjected to the processes set out in Table 1.3.1 and in accordance with any process limits described in that table.

Table 1.3.1: Management of waste

Waste type	Process	Process limits ^{1,2}
All waste except sewage and sludge	Storage, handling and disposal of waste by landfilling	<p><u>All wastes types</u></p> <p>No more than 10 000 tonnes per year of all waste types cumulatively shall be disposed of by landfilling;</p> <p>Disposal of waste by landfilling shall only take place within the landfill area shown on the map of emission points in Schedule 1.</p> <p>Waste shall be placed in a defined trench. The active tipping area shall be restricted to a maximum linear length of 30 metres.</p> <p>The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3m.</p> <p>Scrap metal, plastics, rubber, aluminium cans, pallets, mobile plant batteries, tyres and other recyclables must be stored in areas delineated by earthen windrows.</p> <p><u>Asbestos waste</u></p> <ul style="list-style-type: none"> Only to be disposed of into a designated asbestos disposal area within the landfill; Not to be deposited within 2m of the final tipping surface of the landfill; and No works shall be carried out on the landfill that could lead to a release of asbestos fibres. <p><u>Biomedical waste</u></p> <ul style="list-style-type: none"> Disposal to take place under the supervision of the licensee or their nominated representative; Shall not to be deposited within 2m of the final tipping surface of the landfill(s); and No works shall be carried out on the landfill(s) that could lead to biomedical and clinical wastes being excavated or uncovered.
Clean Fill		
Inert Waste Type 1		
Inert Waste Type 2		
Contaminated Solid Waste		
Special Waste Type 1 (asbestos waste)		
Special Waste Type 2 (biomedical waste)		
Putrescibles		



Hazardous waste	Storage	Waste hydrocarbons shall be stored in HDPE lined and bunded compounds (or similar) in order to prevent release to the environment.
Sewage	Biological, physical and chemical treatment	300 m ³ /day
Sewage sludge	Drying and storage	Buried in a restricted access trench with appropriate signage.
Used tyres	Storage and burial	<ul style="list-style-type: none"> No more than 500 tyres shall be stored at the premises at any one time; Used tyre stacks shall not exceed 100 m² in area and 4 metres in height; Used tyres must be stacked on their side walls or if stored on their treads, are baled with a securing device made from a non-combustible material; Used tyre stacks are to be stored no less than 6 metres from any other used tyre stacks; and Used tyres shall only be buried in the waste rock dump.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

Note 2: Additional requirements for the acceptance and landfilling of Controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

1.3.3 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.2 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.2: Cover requirements ¹			
Waste Type	Material	Depth	Timescales
Putrescible and other Class II waste	Inert and incombustible material	300mm	As soon as practicable, but at least weekly, after deposit
Special Waste Type 1		300mm	As soon as practicable after deposit, but at least by the end of the working shift and prior to compaction
Special Waste Type 2			
All waste		1000mm	Within three months of closure

Note 1: Additional requirements for final cover of tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

1.3.4 The Licensee shall take all reasonable and practical measures to ensure that no windblown waste escapes from the landfill area and that windblown waste is collected periodically and returned to the active tipping area.

1.3.5 The Licensee shall ensure that no waste is burnt on the premises.



- 1.3.6 The Licensee shall ensure that tailings, decant water, process plant stormwater and waste water treatment plant (WWTP) effluent are only discharged into containment cells with the relevant infrastructure requirements and at the locations specified in Table 1.3.3 and identified in Schedule 1.

Table 1.3.3: Containment infrastructure		
Containment cell or dam number(s)	Material	Infrastructure requirements
TSF	Tailings	Lined with 200mm of compacted clay, or 150mm of compacted clay and 1.5mm HDPE liner to achieve a permeability of at least $<10^{-8}$ m/s or equivalent and $<10^{-9}$ m/s respectively.
Process water pond	Decant Water	Lined with 1.5mm HDPE liner with a permeability of $<10^{-9}$ m/s or equivalent.
Mine services pond	Treated effluent and bore water	Clay lined or similar.
Event pond	Contaminated stormwater and/or process solution	Lined with 1.5mm HDPE liner with a permeability of $<10^{-9}$ m/s or equivalent.
WWTP inlet works	Grit and screenings	Stored in a sealed bin
Treated waste water storage pond	Sewage effluent	Lined with 1.5mm HDPE liner with a permeability of $<10^{-9}$ m/s or equivalent.
WWTP tanks	Waste water undergoing treatment	None specified
Sewage sludge drying beds	Sewage sludge	A bunded hardstand area capable of preventing surface run-off of leachate and sludge and which returns sludge leachate to the start of the treatment process.
WWTP storage pond(s)	Untreated waste water	Lined with 1.5mm HDPE liner with a permeability of $<10^{-9}$ m/s or equivalent.
Bioremediation pad	Hydrocarbon contaminated soil	Any contaminated runoff from the treatment cells is contained.

- 1.3.7 The Licensee shall ensure that water and other liquid waste that may result from fire fighting at the used tyre storage facilities is captured by bunding and prevented from entering the environment.
- 1.3.8 The Licensee shall ensure that all pipelines containing environmentally hazardous substances are either:
- (a) equipped with automatic cut-outs in the event of a pipe failure; or
 - (b) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
- 1.3.9 The Licensee shall maintain a minimum operational freeboard of 300 millimetres within all holding facilities containing saline water, sewage waste water, and alkaline



or cyanide constituents. This includes, but is not limited to tailings storage facilities, return water dams, raw water dams, and waste water plant effluent holding ponds.

1.3.10 The Licensee shall:

- (a) undertake inspections as detailed in Table 1.3.4;
- (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
- (c) maintain a record of all inspections undertaken and make these records available to an inspector if requested.

Table 1.3.4: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Tailings delivery pipelines	Visual integrity	Every 12 hours
Tailings return water pipelines	Visual integrity	Every 12 hours
Embankment freeboard	Visual to confirm required 300mm operational freeboard	Daily
Tailings deposition	Visual assessment of beaching	Daily
Decant pond	Visual assessment of pond size and position	Daily

1.3.11 The Licensee shall construct the works to install the 16 new 2 MW gas generators and associated infrastructure in accordance with the documentation detailed in Table 1.3.5:

1.3.5: Construction Requirements ¹		
Document	Parts	Date of Document
Email from Emma Bamforth titled 'Tropicana Gold Mine - Power station modification - works approval advice enquiry'	All	12:38 15 May 2015
Generator set data sheet for Cummins gas generator QSV91G, model: C2000 N6C	All	April 2009

Note 1: Where the details and commitments of the documents listed in condition 1.3.11 are inconsistent with any other condition of this Licence, the conditions of this Licence shall prevail.

1.3.12 The Licensee shall ensure that, where treated effluent or saline water is used for dust suppression, it is applied so as to avoid damage to surrounding vegetation.

1.3.13 The Licensee shall ensure that any water draining from the concrete batch plant is contained within a lined slurry pit, settling pond, or silt trap.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.



Table 2.2.1: Emission points to air

Emission point reference	Emission Point	Emission point height (m)	Source, including any abatement
A1 – A16	Tropicana power station diesel exhaust stacks 1 – 16	9.1	Cummins QSK78 G9 diesel generator (x 20)
A17 – A32	Tropicana power station gas exhaust stacks 17 – 32	9	Cummins QSV91 C2000 N6C gas generator (x 16)
Carbon Regen	Carbon regeneration kiln stack	28.8	Carbon regeneration kiln
Gold room	Gold furnace stack	16.6	Gold furnace

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:

- all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

3.1.2 The Licensee shall ensure that quarterly monitoring is undertaken at least 45 days apart.

3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.

3.1.4 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications and the requirements of the Licence.

3.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to air

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to air

Emission point reference	Parameter	Units ¹	Frequency ²	Method
A1 – A16 Tropicana power station (Diesel)	Volumetric flow rate	m ³ /s	n/a	USEPA Method 2
	Carbon monoxide	mg/m ³	On an annual basis eight stacks from different engines are to be sampled.	USEPA Method 10
	Nitrogen oxides	g/s		USEPA Method 7E or 7D
	Sulphur dioxide			USEPA Method 6C
	Particulates (PM ₁₀)			USEPA Method 5 or USEPA Method 17
	Volatile organic compounds			USEPA Method 18/25A



Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1 or relevant part of the CEMS Code.

3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:

- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.

4.1.2 The Licensee shall ensure that:

- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
- (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

4.1.3 The Licensee shall submit to the CEO within 90 days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the Conditions in this Licence for the Annual Period.

4.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	Operating hours for diesel generators	As a percentage of the total operating time for all



		generators
Table 3.2.1	Emissions to air monitoring data	None specified
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- any relevant process, production or operational data recorded under Condition 3.1.3; and
 - an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 4.2.3 The Licensee shall submit a compliance document to the CEO, following construction of the power station upgrade works and prior to commissioning of the same.
- 4.2.4 The compliance document shall:
- certify that the works were constructed in accordance with the conditions of the Licence;
 - be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.
- 4.2.5 The Licensee shall submit a commissioning report for the new gas generators and associated infrastructure, to the CEO within 3 months of the completion of commissioning.
- 4.2.6 The Licensee shall ensure the report includes:
- a summary of the monitoring results recorded in accord with the approved commissioning plan;
 - a list of any original monitoring reports submitted to the Licensee from third parties for the commissioning period;
 - a summary of the environmental performance of the gas generators as installed, against the design specification set out in the works approval application;
 - a review of performance against the Licence conditions; and
 - where they have not been met, measures proposed to meet the design specification and/or Licence conditions, together with timescales for implementing the proposed measures.

4.3 Notification

- 4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1 : Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	D
3.1.5	Calibration report	As soon as practicable.	None specified
1.3.11	Commencement of commissioning	7 days prior to start	None specified



	Completion of commissioning	7 days after completion	
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Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2

Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary. The boundary is located within Mining Tenement M39/1096 and has the following coordinates: 646000E, 6770900N; 646000E, 6758500N; 654900E, 6758500N; and 654900E, 6770900N.





Map of emission points

The locations of the emission points defined in Table 2.2.1 is shown below.





Map of storage locations

The locations of the storage areas defined in Table 1.3.3 are shown in the maps below.







Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

Licence: L8676/2012/2 Licensee: AngloGold Ashanti Australia Limited
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	



The dates of any previous N1 notifications for the Premises in the preceding 24 months.	
---	--

Name	
Post	
Signature on behalf of AngloGold Ashanti Australia Limited	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Licensee: AngloGold Ashanti Australia Limited

Licence: L8676/2012/1

Registered office: Level 13 St Martins Tower
44 St Georges Terrace
PERTH WA 6000

ACN: 008 737 424

Premises address: Tropicana Gold Mine
Part of mining tenement M39/1096 with coordinates:

- 646000 easting, 6770900 northing;
- 646000 easting, 6758500 northing;
- 654900 easting; 6758500 northing;
- 654900 easting, 6770900 northing.

PLUMRIDGE LAKES WA 6431 as depicted in Schedule 1.

Issue date: Friday, 8 February 2013

Commencement date: Monday, 11 February 2013

Expiry date: Sunday, 7 February 2026

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended Licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Louise Lavery
Licensing Officer

Decision Document authorised by: Tim Gentle
Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	8 000 000 tonnes per annual period
	12	Not more than 5 000 000 tonnes per annual period
	52	44 MW
	54	300 m ³ per day
	57	500 tyres
	64	Not more than 10 000 tonnes per year
73	5 200 m ³	
Application verified	Date: 29 August 2016	
Application fee paid	Date: 23 September 2016	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		



Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 839 EPA Report No: 1361
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		

3 Executive summary of proposal and assessment

Tropicana Gold Mine (Tropicana) is a conventional drill and blast open pit gold mine operated by AngloGold Ashanti Australia Limited (AGAA). The mine is supported by a 8,000,000 tonne per annum processing plant and secondary infrastructure. Tropicana is located approximately 330 kilometres (km) east-north-east of Kalgoorlie, Western Australia. The process plant commissioning phase began in September 2013, with full operation beginning in December 2013.

Tropicana is supported by numerous ancillary prescribed activities. These include:

- crushing and screening;
- electric power generation;
- class II putrescible landfill;
- used tyre storage;
- sewage facility; and
- bulk chemical storage.

Tropicana is remotely located. The nearest community centres of Laverton and Cosmo Newberry are 220km northwest of the site.

Ore from the open pits is processed through a series of crushers and ball mills prior to entering a carbon in leach circuit. Gold particles leached from the ore are adsorbed onto grains of activated carbon. The carbon is stripped of the gold particles through an acid wash process before electrowinning and smelting into gold bars.

The treated ore waste (tailings) is thickened before being discharged to a paddock style, above ground, Tailings Storage Facility (TSF).



The primary emissions from the Tropicana operation are:

- tailings;
- dust;
- diesel exhaust;
- off gas emissions from gold elution, carbon regeneration and smelting circuits; and
- putrescible wastes.

February 2016 Amendment

The February 2016 amendment includes authorisation of works to replace diesel generation with gas for the power station. With the installation of the Eastern Goldfields gas pipeline between Sunrise Dam and Tropicana, Tropicana Gold Mine will replace 16 of the diesel generators with natural gas fuelled generators for a total installed capacity of up to 44MW.

The authorised Category 5 throughput has been increased to 8 Mtpa (from 7 Mtpa). The amount to be deposited as tailings is authorised under the Ministerial Statement 839 and is unchanged at 7 Mtpa. Application supporting documentation has stated that the increase in production will not result in an increase to the amount of tailings to be deposited.

The amendment also removes redundant emission and monitoring conditions related to the effluent (treated wastewater) from the Wastewater Treatment Plant. Effluent is now directed to the Process Plant and is not discharged to land. The capacity of the Waste Water Treatment Plant has also been increased to 300m³ per day.

The amendment also updates the Premises' boundary in line with the Mining Tenement changes and includes concrete batching as an approved activity. Concrete manufactured at the concrete batching plant will be used on site and as a result Category 77 is not applicable and not required to be included on the licence as an authorised Premises category.

The list of containment infrastructure has also been updated to reflect current operations.

The condition requiring monitoring of ambient groundwater quality has been removed from the licence as this requirement is already included in conditions under the Premises' Part IV approval (Ministerial Statement 839).

Improvement conditions have been added requiring a commissioning plan for the new gas generators and provision of information about air emissions from the carbon regeneration kiln and the gold furnace.

October 2016 Amendment

The October 2016 amendment authorises an increase in the capacity of the landfill and therefore category 64 from 5 000 tonnes per annum to 10 000 tonnes per annum.

DER has also made some administrative changes in removing two standard conditions and removing the template of the Annual Audit Compliance Report (AACR) in Schedule 2. The Licensee is now referred to DER's website to access the current template for an AACR.

Improvement condition 4.1.1 has been removed from the Licence following submission of information for improvement requirements IR1 and IR 2.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	Former condition L1.1.5	October 2016 Amendment DER has reviewed this standard condition and determined it is an explanatory statement designed to provide clarification on the operation of the Licence, and as such is not enforceable. DER has now removed this condition from the Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
	L1.2.1 – 1.2.3	February 2016 Amendment Generic changes have been made to the General Conditions of this Licence as part of Departmental reform and updates to licence templates. These changes include removing conditions referencing the Code of Practice for the Storage and handling of dangerous goods. Previous condition 1.2.5 relating to stormwater management is now renumbered as condition 1.2.3. October 2016 Amendment	Application supporting documentation General provisions of the <i>Environmental Protection Act 1986</i>
	Former condition 1.2.3	Condition 1.2.3 has been removed from the Licence as the condition does not specify clearly which stormwater infrastructure is to be utilised or maintained and does not clearly specify which management actions are required to determine compliance with this condition. Existing provisions under the <i>Environmental Protection Act 1986</i> are considered to adequately regulate discharges to the environment potentially arising	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		from contaminated stormwater.	
Premises operation	L1.3.1	February 2016 Amendment Condition L1.3.1 has been amended to authorise the use of the landfill for deposition of waste generated by AGAA operations conducted within the region surrounding the Premises. Previously waste generated outside of the Premises boundary was not allowed to be disposed in the landfill.	Application supporting documentation
	L1.3.2 L1.3.3 – 1.3.5	The maximum wastewater amount allowed to be treated through the wastewater treatment plant has also been increased from 230 m ³ per day to 300 m ³ per day. These conditions relate to management of the landfill and restriction of burning of waste and are unchanged from the previous Licence.	
	L1.3.2	October 2016 Amendment Operation – Normal Operations <u>Emission Description</u> <i>Emission:</i> Inert, putrescible, biohazardous and if necessary, asbestos waste disposed to landfill via a series of defined trenches. <i>Impact:</i> Alteration of groundwater quality due to leachate from the landfill. Increased rate of leachate from expansion of landfill. <i>Controls:</i> The depth to groundwater in the vicinity of the landfill is greater than 20 m (approximately 20 – 60 m below ground level) (DEC 2013). Within the Premises boundary the landfill is located away from the immediate operational area. Standard landfill management measures are implemented by the Licensee to cover landfill waste in accord with the Rural Landfill Regulations and Code of Practice. The design and location of the landfill were originally assessed by DEC and granted approval by W4902/2011/1, commencement date 16/05/2011. The original assessment judged that	DEC (2013) Environmental Assessment Report, L8676/2012/1, Works Approval W4902/2011/1 Letter from B.Bastow, AGAA to C.McLernon, DEC dated 20 October 2011, <u>Notification of</u>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>due to the depth to groundwater being in excess of 20m, the risk to groundwater from landfill leachate was low. A compliance certificate was submitted for the works approval (B Bastow 2011) prior to changing category 89 to 64 on the Licence demonstrating compliance with the conditions of the works approval.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor, the doubling of size of the waste to landfill to 10 000 tonnes per annum does not constitute a significant increase. <i>Likelihood:</i> Rare, the groundwater depth is greater than 20m below ground level. <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Condition 1.3.1 specifies the waste that is able to be disposed of to the landfill, the method of disposal in trenches, with separate requirements to manage any asbestos and biomedical waste. Condition 1.3.3 specified the cover requirements for the landfill trenches including frequency and depth of cover required.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Residual Risk Rating:</i> Low</p> <p>Given the low risk, the increase in size is authorised. Refer also to section Odour of this Decision Document for the risk assessment for waste disposal impact on public amenity through odour.</p>	<u>Compliance – Works Approval W4902/2011/1.</u>
	L1.3.6	<p>February 2016 Amendment</p> <p>Table 1.3.3 has been updated to reflect the current containment infrastructure present within the Premises.</p>	Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	L1.3.7 – L1.3.10	<p>February 2016 Amendment</p> <p>These conditions are as per the previous Licence (except with renumbering) and have not been reassessed as a part of this amendment.</p> <p>Previous condition L1.3.7 has been removed from the Licence given that all treated wastewater is now recirculated to the Processing Plant and is not discharged.</p>	Application supporting documentation
	L1.3.11	<p>February 2016 Amendment</p> <p>This condition is specified to require construction of the new gas generators in accord with the submitted application.</p>	Application supporting documentation
	L1.3.12	<p>February 2016 Amendment</p> <p>This condition has been moved from section 2.6 Fugitive emissions. As it relates to management of saline water for dust suppression it is more appropriate to be listed under section 1.3 Premises Operation. Wording amended for clarity.</p>	N/A
	L1.3.13	<p>February 2016 Amendment</p> <p>Condition L1.3.13 has been added to the Licence to ensure any wastewater generated at the concrete batching plant is contained.</p>	Application supporting documentation
Emissions general	L2.1.1	<p>February 2016 Amendment</p> <p>A general condition requiring compliance with any limit set through section 2 of the licence.</p>	N/A
Point source emissions to air including monitoring	L2.2.1 and L3.2.1, L3.2.2, L3.2.3 L 4.1.1	<p>February 2016 Amendment</p> <p>Power generation – gas generators</p> <p><u>Emission description</u></p>	Ambient Air Assessment Criteria, National Environmental Protection



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Emission:</i> The new gas generators are an efficient design. Expected NO_x emissions are approximately less than 10% of the NO_x emissions from the existing diesel generators (approximately 240 mg/m³ for new as compared to a range of 2800 – 3400 mg/m³ for existing) (Cummins Power Generation 2009; AngloGold Ashanti Australia Limited 2015).</p> <p><i>Impact:</i> There are no adjacent receptors. The nearest population is at the accommodation camp for the mine which is located 5 km away from the power station. Tropicana is located in a remote region far away from any population centres.</p> <p><i>Controls:</i> No additional emissions abatement is proposed. Regular maintenance will be conducted to ensure the generators are operating as per design.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Residual Risk Rating:</i> Low</p> <p><u>Regulatory Controls:</u> As the use of gas generators is expected to bring about a substantial reduction in air emissions, and the mine is in a remote location far from any population centres, no air emissions monitoring condition has been imposed. However IR1 of Table 4.1.1 has been added to the Licence to require submission of a commissioning plan for the gas generators. This will include monitoring to verify the operational performance of the generators.</p> <p><u>Residual risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Residual Risk Rating:</i> Low</p> <p><u>References</u></p>	<p>Measure (Ambient Air Quality)</p> <p>Application supporting documentation</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>Application supporting documentation: letter from Emma Bamforth, AGAA to Louise Lavery, DER, dated 13 May 2015.</p> <p>Application supporting documentation part 2: Email from Emma Bamforth AGAA to Louise Lavery entitled '<i>TGM Batch Plant works approval – AIN application + amendment</i>', dated 18 September 2015.</p> <p>Cummins Power Generation (2009) <i>Specification Sheet - Natural Gas Generator QSV91 series engine</i>, April 2009.</p> <p>AngloGold Ashanti Australia Limited (2015) <i>Tropicana Gold Mine Annual Environmental Report (AER) 2014</i>.</p> <p>Gold Processing This February 2016 amendment has identified that there are two existing point source emissions to air that were previously not on the Licence: emissions through a stack from the carbon regeneration kiln and emissions through a stack from the gold furnace. IR 2 of Table 4.1.1 in improvement condition L4.1.1 has been added to the Licence to require the Licensee to provide information to aid in assessment of the significance of these emission points.</p>	
		<p>October 2016 Amendment</p> <p>Refer to the 'Improvements' section of this decision document for changes to this section.</p>	
Point source emissions to surface water including monitoring	L – no conditions	No point source emissions to surface water are located within the Premises and hence no conditions are specified in this section.	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to groundwater including monitoring	L – no conditions	No point source emissions to groundwater are located within the Premises and hence no conditions are specified in this section.	N/A
Emissions to land including monitoring	L – no conditions	February 2016 Amendment Tropicana operate a wastewater treatment plant from which treated wastewater is now recirculated into the Process Plant. No discharges to land occur (previous emission points L1 and L2 are redundant.) As a consequence, previous licence conditions L2.5.1 and associated monitoring condition L3.5.1 have been removed from the Licence.	Application supporting documentation
Fugitive emissions	L – no conditions	February 2016 Amendment DER has made an administrative change to the conditions in relation to fugitive dust emissions. Generic conditions have been removed from the Licence (previous conditions L2.6.1 and L2.6.2). The previous condition L2.6.3 associated with using saline water in dust suppression has been moved to condition L1.3.12 under Premises Operation.	N/A
Odour	L – no conditions	February 2016 Amendment Operation – Normal Operations <u>Emission Description</u> <i>Emission:</i> Odour from the landfill and/or wastewater treatment plant. <i>Impact:</i> Odour impacting on public amenity. <i>Controls:</i> Tropicana is located in a very remote location, at least 200km away from the nearest small townships. Within the Premises boundary the landfill is located away from immediate operational area and the waste water treatment plant is also located away from operational areas. Standard landfill management measures are implemented	Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>by the Licensee to cover landfill waste. Sewage sludge is buried within a restricted access trench.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p>Given the risk ranking, and DER's position on regulating fugitive emissions, previous condition 2.7.1 has been removed from the Licence.</p>	
Noise	L – no conditions	<p>Given the extremely isolated nature of the premises with no nearby sensitive premises there are no noise conditions required for this licence.</p> <p>Compliance with the <i>Environmental Protection (Noise) Regulations 1997</i> is required.</p>	<i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L3.1.1 – L3.1.5	<p>February 2016 Amendment</p> <p>Standard monitoring conditions for the collection, handling and analysis of samples and calibration of monitoring equipment are detailed in the licence.</p> <p>A new general monitoring condition (condition L3.1.3) in relation to recording production data has been added to the Licence.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
Monitoring of inputs and outputs	L – no conditions	There is no requirement for monitoring of inputs and outputs as part of this Licence.	N/A
Process monitoring	L – no conditions	There is no requirement for process monitoring as part of this Licence.	N/A
Ambient quality	L – no conditions	February 2016 Amendment	DER (2015) <i>Guidance</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring		<p>Operation - Normal Operation</p> <p>Potential impacts to groundwater from seepage from the Tropicana Gold Mine Tailings Storage Facility are currently monitored via Part IV Ministerial Conditions issued under the Ministerial Statement MS 839.</p> <p>This amendment to the Licence L8676/2012/1 will remove the ambient groundwater monitoring program for the TSF specified under previous Licence condition L3.8.1, as this requirement is already met under the Part IV approval.</p>	<p><i>Statement: Setting Conditions, October 2015</i></p> <p>Ministerial Statement 839, conditions 8-1 to 8-7.</p>
Meteorological monitoring	L – no conditions	There is no requirement for meteorological monitoring as part of this licence.	N/A
Improvements	L 4.1.1	<p>February 2016 Amendment</p> <p>IR1 of Table 4.1.1 has been imposed on the Licence to require submission of a commissioning plan for the new gas generators prior to commissioning.</p> <p>IR 2 of Table 4.1.1 has been imposed on the Licence to require the Licensee to provide process information to the CEO such that an evaluation of the significance of the emission points to air from the gold processing circuit can be made.</p>	General provisions of the <i>Environmental Protection Act 1986</i>
	Previous L 4.1.1	<p>October 2016 Amendment</p> <p>These improvement conditions have been removed from the licence as information for IR1 was received by DER on 25 November 2015 and for IR2 on 5 May 2016.</p>	<p>Letter from E.Bamforth, AGAA to DER dated 25 November 2015 (DER reference: A1068359)</p> <p>Letter from R.Lane, AGAA to DER dated 5 May</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			2016 (DER reference: A1093123)
Information	L5.1.1 – 5.1.4	February 2016 Amendment These conditions are as for the previous licence.	General provisions of the <i>Environmental Protection Act 1986</i>
	L5.2.1 – L5.2.2	February 2016 Amendment Changes have been made to the requirements for the Annual Environmental Report as listed in Table 5.2.1 consistent with the changes made as a result of this amendment. Other administrative changes have been made to condition 5.2.2 consistent with current DER licence templates.	General provisions of the <i>Environmental Protection Act 1986</i>
	L5.2.3 – L5.2.6	February 2016 Amendment These new conditions are associated with submission of compliance certificate for works authorised by condition 1.3.11 and reporting requirements associated with these works.	General provisions of the <i>Environmental Protection Act 1986</i>
	L5.3.1	February 2016 Amendment DER has made minor administrative changes to the notification requirements in this section.	General provisions of the <i>Environmental Protection Act 1986</i>
	All conditions in this section: now L4.1.1 – L4.3.1	October 2016 Amendment Due to the removal of conditions in the 'Improvement' section all conditions in 'Information' have been renumbered.	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information & Schedule 2	L4.1.3	October 2016 Amendment	
	Removal of AACR template	Following DER review of the Annual Audit Compliance Report (AACR) procedure, the template for an AACR have been updated and is now available via DER's public website: der.wa.gov.au. Consequently the template is not included in the Licence and has been removed.	
Licence Duration		February 2016 Amendment	
		No changes are proposed to the existing Licence duration, which is due to expire 7 February 2018.	
		29 April 2016 Amendment Notice	Sections 59(1)(k) and s59B(9) of the <i>Environmental Protection Act 1986</i>
		The Licence duration was extended by amendment notice on 29 April 2016 to now expire on 7 February 2026.	



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
06/01/2016	Proponent sent a copy of draft instrument	No comments received.	N/A DER has corrected the numbering of conditions 1.3.11 – 1.3.13 which were numbered incorrectly in the draft instrument. Corresponding changes to numbering made in the Decision Document. One typo corrected in the Decision Document.
06/10/2016	Proponent sent a copy of draft instrument	No comments received.	N/A



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High