



Licence

Environmental Protection Act 1986, Part V

Licensee: **Cristal Pigment Australia Ltd**

Licence: **L6046/1967/15**

Registered office: 4 Old Coast Road
AUSTRALIND WA 6233

ACN: 008 683 627

Premises address: Australind Finishing Plant
4 Old Coast Road
AUSTRALIND WA 6233
Being part of Lot 350 on Plan 72934 as depicted in Schedule 1

Issue date: Thursday, 13 November 2014

Commencement date: Sunday, 16 November 2014

Expiry date: Friday, 15 November 2019

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
31	Chemical manufacturing: premises (other than premises within category 32) on which chemical products are manufactured by a chemical process.	100 tonnes or more per year	125,000 tonnes per annual period
67	Fuel burning: premises on which gaseous, liquid or solid fuel is burnt in a boiler for the supply of steam or in power generation equipment.	In aggregate 2,000 kilograms or more per hour (fuel with a sulphur content of less than 0.25%)	3,830 kg/hr (sulphur content of 0.2%)

Conditions

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

Date signed: 31 March 2016

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Lauren Trott
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 (Australind Pigment Plant Noise Emissions) Approval 2010* – this Approval requires noise emissions from the Premises to comply with the assigned noise levels set out in the Approval.

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

The Australind Finishing Plant is a pigment finishing plant located south of Australind and adjacent to the Leschenault Peninsula. The plant is buffered by natural vegetation; however since operations commenced in 1963 residential density has increased, with the nearest residents located 150 m from the northern plant boundary and 500 m from the southern plant boundary. The plant operates on a 24hours a day, 7 days a week basis.

The plant manufactures finished pigment product from titanium dioxide produced at Cristal's Kemerton facility. Water-based pigment slurry produced at Kemerton is transported to Australind, where it is surface treated with chemicals and neutralised with caustic soda and hydrochloric acid. The treated slurry is then washed, thickened, and dried in gas-fired spray dryers. Dried pigment is separated using bag filters, and conveyed pneumatically to fluid mills where high-pressure steam is used to grind the particles. The ground pigment is then packaged for shipment. A 44 MW gas-fired boiler produces steam required in the process.

The main emissions to water include the intermittent discharge of neutralised process wastewater to the Collie River via an outfall. The outfall is located approximately 5 km upstream of the mouth of the Collie River, which opens to the Leschenault Estuary. The Collie River is estuarine at the point of discharge and experiences diurnal tidal flows. Neutralised solids are transported as a slurry by road tankers for off-site disposal.

This licence amendment is to make administrative changes to the premises address and to the requirements for monitoring of ambient biomonitor health. Changes have also been made in accordance with administrative changes implemented within DER.

The licences and works approvals issued for the Premises since 2008 are:

Instrument log		
Instrument	Issued	Description
L6046/1967/13	13/11/2008	Licence reissue.
L6046/1967/13	09/12/2010	Licence amendment to allow for manual sampling during failure of continuous monitoring on the Collie River outfall.
L6046/1967/14	10/11/2011	Licence reissue.
L6046/1967/14	14/05/2012	Licence amendment regarding biomonitoring programme.
L6046/1967/14	08/02/2013	Licence amendment for change of Licensee
W5334/2012/1	28/02/2013	Works approval for an upgrade of steam generation equipment.
L6046/1967/15	13/11/2014	Licence reissue. Update to new licence template.
L6046/1967/15	31/03/2016	Licence amendment to make administrative changes.

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*;

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

'ANZECC' means the Australian and New Zealand Environment Conservation Council (ANZECC) which was a Ministerial Council operating between 1991 and 2001 and which provided a forum for member governments to develop coordinated policies about national and international environment and conservation issues; ANZECC issued a series of Guidelines such as the ANZECC Guidelines for Fresh and Marine Water Quality 2000;

'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 5667.6' means the Australian Standard AS/NZS 5667.6 *Water Quality – Sampling – Guidance on sampling of rivers and streams*;

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

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

'biomonitoring' means the measurement of the body burden of toxic chemical compounds, elements, or their metabolites, in biological substances;

'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 Administering the *Environmental Protection Act 1986*
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

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



'Licence' means this Licence numbered L6046/1967/15 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;

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

'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;

'triennial' means recurring every 3 years;

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

'USEPA Method 7E' means the USEPA Method 7E *Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrument Analyser Procedure)*;

'USEPA Method 10' means the USEPA Method 10 *Determination of Carbon Monoxide Emissions from Stationary Sources (Instrument Analyser Procedure)*; 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 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.

1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
(a) pollution;
(b) unreasonable emission;



- (c) discharge of waste in circumstances likely to cause pollution; or
- (d) being contrary to any written law.1.1.5

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.
- 1.2.3 The Licensee shall:
 - (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.¹
 Note 1: The *Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

1.3 Premises operation

- 1.3.1 The Licensee shall ensure that waste water is only stored and/or treated within vessels or compounds provided within the infrastructure detailed in Table 1.3.1.

Table 1.3.1: Containment infrastructure		
Vessel or compound	Material	Infrastructure requirements
Clean effluent pond	Process wastewater	Lined to achieve a permeability of at least 10^{-9} m/s or equivalent
Dirty effluent pond		
Effluent overflow sump		

- 1.3.2 The Licensee shall manage the infrastructure listed in Condition 1.3.1 such that:
 - (a) overtopping does not occur; and
 - (b) a freeboard equal to, or greater than, 500 mm is maintained; and
 - (c) the integrity of the containment infrastructure is maintained.

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	Boiler stack	15	44 MW steam boiler

2.3 Point source emissions to surface water

- 2.3.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.3.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.



Table 2.3.1: Emission points to surface water		
Emission point reference	Description	Source including abatement
W1	Discharge from the clean effluent pond to the Collie River, via an outfall pipeline	Process effluent, neutralised

2.3.2 The Licensee shall not cause or allow point source emissions to surface water greater than the limits listed in Table 2.3.2.

Table 2.3.2: Point source emission limits to surface water				
Emission point reference	Monitoring point reference	Parameter	Limit (including units)	Averaging period
W1	W2 ¹	Volumetric flow rate	300 m ³ /hr	Continuous ²
		Temperature	32°C ³	
		pH	6 – 9	
		Total suspended solids	80 mg/L	
		Electrical conductivity	20,000 µS/cm	
		Manganese	3.6 mg/L ³	

Note 1: Collie River outfall pipeline measuring discharge from the clean effluent pond.

Note 2: Availability ≥90% on a monthly basis.

Note 3: For 80% of samples collected in any 12 consecutive calendar months.

2.3.3 The Licensee is exempt from compliance from condition 2.3.2 if in the case of an event in Table 2.3.3 the corresponding management action is taken.

2.3.4 The Licensee shall take the specified management action in the case of an event in Table 2.3.3.

Table 2.3.3: Management actions			
Monitoring point reference	Event/action reference	Event	Management action
W2	EA1	Any time the continuous monitor on the Collie River outfall pipeline measuring discharge from the clean effluent pond is indicating the concentration or flow of any parameter(s) does not meet the relevant limit in Table 2.3.2.	The Licensee shall cease discharge to the Collie River outfall within 10 minutes of the start of any event unless concentration(s) or flow have already returned to levels that meet the relevant limit in Table 2.3.2.
	EA2	Failure of the continuous monitor on the Collie River outfall pipeline measuring discharge from the clean effluent pond.	The Licensee shall immediately commence manual monitoring of the continuous parameters listed in Table 3.3.1 at intervals of 4 hours or less.

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 surface water sampling is conducted in accordance with AS/NZS 5667.6; and
- all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.



- 3.1.2 The Licensee shall ensure that:
- (a) annual monitoring is undertaken at least 9 months apart; and
 - (b) triennial monitoring is undertaken between January and March in the year specified.
- 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.
- 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.
- 3.1.6 The Licensee shall ensure the limit of detection of analysis for all samples is:
- (a) one order of magnitude below the relevant ANZECC guideline; or
 - (b) the lowest limit of detection (where the laboratory cannot routinely achieve a limit of detection one order of magnitude below the relevant ANZECC guideline).

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 ^{1,3}	Averaging period	Frequency ²	Method
A1	Nitrogen oxides	mg/m ³	Stack Test (Minimum 30 minute average)	Annual	USEPA Method 7E
	Carbon monoxide	g/s			USEPA Method 10

Note 1: All units are referenced to STP dry and 3% O₂.

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.

3.3 Monitoring of point source emissions to surface water

- 3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of point source emissions to surface water				
Emission point reference	Monitoring point reference	Parameter	Units	Frequency
W1	W2 ¹	Volumetric flow rate	m ³ /hr	Continuous ²
		pH	pH unit	
		Electrical conductivity	µS/cm	
		Temperature	°C	
		Turbidity	NTU	

Note 1: Collie River outfall pipeline measuring discharge from the clean effluent pond.

Note 2: Availability ≥90% on a monthly basis.



3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Tables 3.4.1 – 3.4.3 according to the specifications in those tables.

Table 3.4.1: Monitoring of ambient surface water quality					
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency	Water column depth
W1 ¹	Aluminium, bicarbonate, cadmium, calcium, chromium, copper, iron, lead, magnesium, mercury, molybdenum, nickel, nitrate, selenium, sodium, sulfate, titanium, total suspended solids, vanadium, zinc	mg/L	Spot sample	Annual	None specified
WQ1 – WQ17 ²	Temperature ⁴	°C		Annual, between January and March ³	0.5 m below water surface and 0.5 m above sediment surface
	pH ⁴	pH unit			
	Salinity ⁴	ppt			0 – 0.5 m above sediment surface
	Dissolved oxygen ⁴	mg/L			

Note 1: Collie River outfall diffuser, approximate location 380817 mE, 6315157 mN.

Note 2: 10, 25, 50, 100 and 250 m North and South of the Collie River outfall diffuser; 10, 25, 50 and 75 m East of diffuser; 10 m West of diffuser; and reference points 1,000 m North and South of diffuser.

Note 3: Samples to be taken over an outgoing and incoming tide.

Note 4: In-field non-NATA accredited analysis permitted.

Table 3.4.2: Monitoring of ambient sediment quality				
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
S1 – S5 ¹	Grain size distribution	µm	Spot sample	Triennial, next period being 2015
	Carbonate content, organic matter content	% loss on ignition		
	Aluminium, cadmium, chromium, copper, lead, magnesium, manganese, mercury, selenium, titanium, vanadium, zinc.	mg/kg		

Note 1: 10, 25, 50, 100 and 250 m North and South of the Collie River outfall diffuser; 10, 25, 50 and 75 m East of diffuser; 10 m West of diffuser; and reference points 1,000 m North and South of diffuser.



Table 3.4.3: Monitoring of ambient biomonitor health (whole effluent toxicity (WET) testing)				
WET test	Dilution series¹	Dilution water	Analytes for wastewater	Frequency
72 hour microalgae (<i>Nitzschia closterium</i>) growth inhibition test	100%	Laboratory supplied dilution water	Aluminium, ammonium, bicarbonate, cadmium, calcium, carbonate, chloride, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, nitrate, radionuclides (Radium-226 and Radium-228), selenium, sodium, sulfate, titanium, total phosphorus, total suspended solids, vanadium, zinc	Triennial, next period being 2018
96 hour copepod (<i>Gladioferens imparipes</i>) survival test	50%			
48 hour bivalve (<i>Mytilus edulis</i>) larval abnormality test	25%			
72 hour macroalgae (<i>Ecklonia radiata</i>) cell germination assay	12.5%			
96 hour fish imbalance test (Yellowtail Kingfish, <i>Seriola lalandi</i> , Black Bream <i>Acanthopagrus butcheri</i> or suitable alternative)	6.25%			
	3% wastewater			

Note 1: Dilutions salt-adjusted to achieve marine salinity.

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 complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous 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 by 31 March in each year. 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 form¹
-	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
-	A copy of the annual report required by Licence to Take Water GWL164348(2)	
2.3.3	Summary of any exemption claimed where specified management action is taken following corresponding event	
Table 3.2.1	Monitoring of point source emissions to air	AR1
Table 3.3.1	Monitoring of point source emissions to surface water	As per condition 5.2.4
Table 3.4.1	Monitoring of ambient surface water quality	None specified
Table 3.4.2	Monitoring of ambient sediment quality	
Table 3.4.3	Monitoring of ambient biomonitor health (whole effluent toxicity (WET) testing)	
4.1.2	Compliance	Annual Audit Compliance Report (AACR)
4.1.3	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:
- (a) any relevant process, production or operational data recorded under condition 3.1.3; and
 - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 4.2.3 The Licensee shall submit the information in Table 4.2.3 to the CEO according to the specifications in that table.

Table 4.2.3: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

- 4.2.4 The Licensee shall ensure that results from CEMS are made available on request as tabulated data and time series graphs including:
- (a) times and dates;
 - (b) unavailability of abatement;
 - (c) target or limit exceedances; and
 - (d) an assessment of the information contained within the report against previous submissions and Licence limits.

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 requirement¹	Format or form²
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable	N1
2.3.2	Limit exceedance where management action taken	As soon as practicable but no later than 5 pm of the next usual working day.	EL1
3.1.5	Calibration report	As soon as practicable.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act.

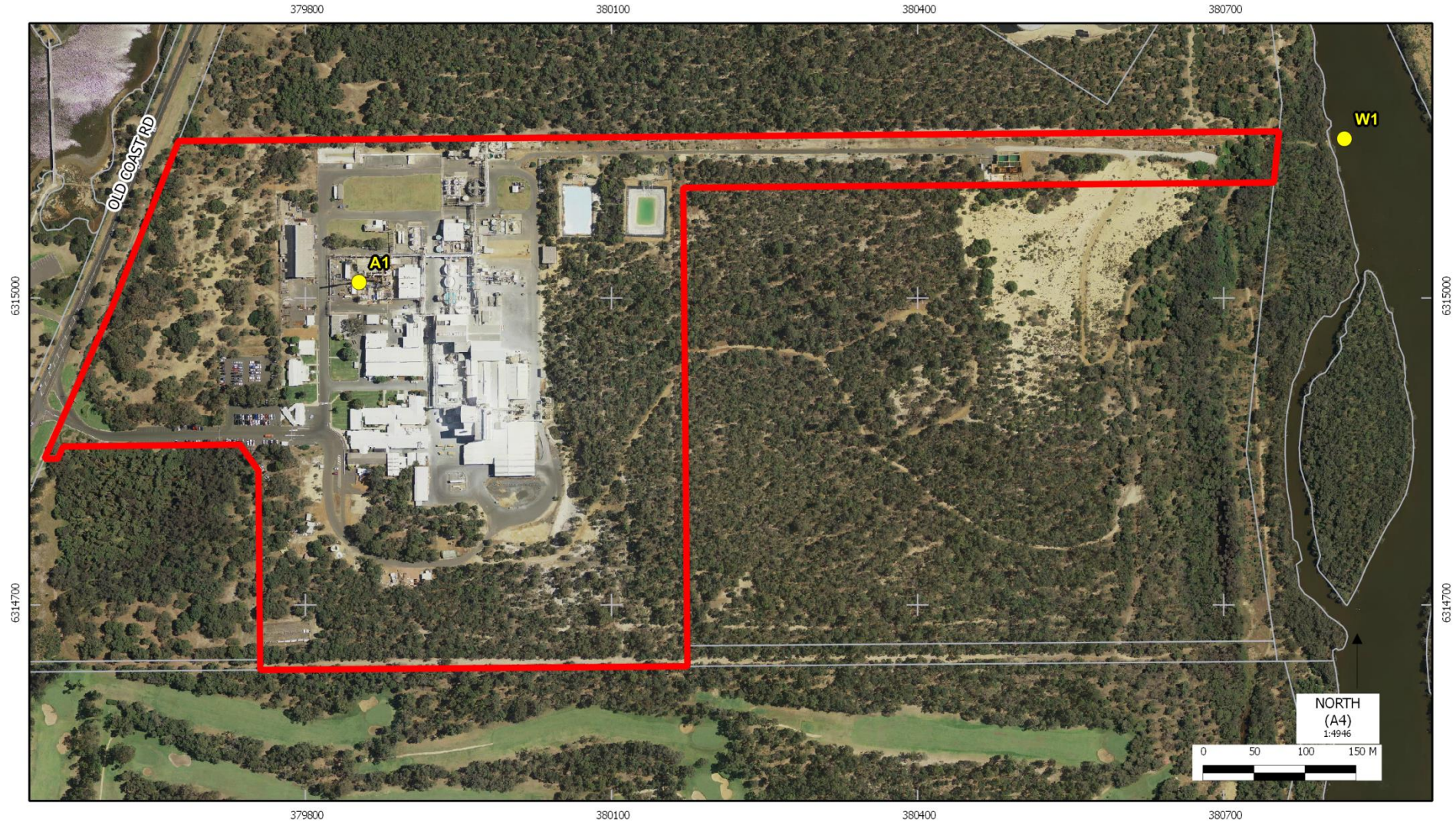
Note 2: Forms are in Schedule 2.



Schedule 1: Maps

Premises map and map of emission points

The Premises and the locations of the emission points defined in Tables 2.2.1 and 2.3.1 are shown in the map below. The red line depicts the Premises boundary.





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.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

- Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes Please proceed to Section C

No Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Licence: L6046/1967/15
Form: AR1
Name: Monitoring of point source emissions to air

Licensee: Cristal Pigment Australia Ltd
Period:

Form AR1: Monitoring of point source emissions to air					
Emission point	Parameter	Result¹	Averaging period	Method	Sample date & times
A1	Nitrogen oxides	mg/m ³		USEPA Method 7E or 7D	
	Carbon monoxide	mg/m ³		USEPA Method 10	

Note 1: All units are referenced to STP dry and relevant Oxygen Correction in Table 2.2.2.

Signed on behalf of Cristal Pigment Australia Ltd: Date:



Licence: L6046/1967/15
Form: EL1
Name: Limit exceedance under exemption where relevant management action taken

Licensee: Cristal Pigment Australia Ltd
Date of exceedance:

Form EL1: Limit exceedance under exemption where relevant management action taken							
Emission point	Exemption event reference	Date & time	Parameter	Peak emission	Average emission	Duration of exceedance	Date & time process restarted (if stopped)
<p>Please provide details of the exceedance, including but not limited to:</p> <ul style="list-style-type: none"> (a) from 1 hour prior to the exceedance to the end of the exceedance, the 1 minute average data of emissions recorded by the continuous monitoring system; (b) the root cause analysis for the exceedance and any contributory factors; (c) a description of remedial measures taken (including relevant management actions) or planned to be taken, including those taken to prevent recurrence of the exceedance; (d) complaints received that may have been caused by this exceedance. 							

Signed on behalf of Cristal Pigment Australia Ltd: Date:



Licence: L6046/1967/15
Form: N1

Licensee: Cristal Pigment Australia Ltd
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 Cristal Pigment Australia Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Licensee: **Cristal Pigment Australia Ltd**

Licence: **L6046/1967/15**

Registered office: 4 Old Coast Road
AUSTRALIND WA 6233

ACN: 008 683 627

Premises address: Australind Finishing Plant
4 Old Coast Road
AUSTRALIND WA 6233
Being part of Lot 350 on Plan 72934

Issue date: Thursday, 13 November 2014

Commencement date: Sunday, 16 November 2014

Expiry date: Friday, 15 November 2019

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.

Decision Document prepared by: Elizabeth Whisson
Licensing Officer

Decision Document authorised by: Lauren Trott
Delegated Officer



Contents

1	Purpose of this Document	2
2	Administrative summary	2
3	Executive summary of proposal and assessment	3
4	Decision table	4
5	Advertisement and consultation table	6
6	Risk Assessment	6

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
	31: Chemical manufacturing	125,000 tpa
	67: Fuel burning	3,830 kg/hr
Application verified	Date: N/A	
Application fee paid	Date: N/A	
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 type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 001 EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>	



of the <i>Environmental Protection Act 1986</i>)?	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

3 Executive summary of proposal and assessment

The Australind Finishing Plant is a pigment finishing plant located south of Australind and adjacent to the Leschenault Peninsula. The plant is buffered by natural vegetation; however since operations commenced in 1963 residential density has increased, with the nearest residents located 150 m from the northern plant boundary and 500 m from the southern plant boundary. The plant operates on a 24hours a day, 7 days a week basis.

The plant manufactures finished pigment product from titanium dioxide produced at Cristal's Kemerton facility. Water-based pigment slurry produced at Kemerton is transported to Australind, where it is surface treated with chemicals and neutralised with caustic soda and hydrochloric acid. The treated slurry is then washed, thickened, and dried in gas-fired spray dryers. Dried pigment is separated using bag filters, and conveyed pneumatically to fluid mills where high-pressure steam is used to grind the particles. The ground pigment is then packaged for shipment. A 44 MW gas-fired boiler produces steam required in the process.

The main emissions to water include the intermittent discharge of neutralised process wastewater to the Collie River via an outfall. The outfall is located approximately 5 km upstream of the mouth of the Collie River, which opens to the Leschenault Estuary. The Collie River is estuarine at the point of discharge and experiences diurnal tidal flows. Neutralised solids are transported as a slurry by road tankers for off-site disposal.

This licence amendment is to make administrative changes to the premises address and to the requirements for monitoring of ambient biomonitor health. Changes have also been made in accordance with administrative changes implemented within DER. DER has considered whether the risk profile of emissions and discharges from the premises has significantly changed since the previous licence was granted. No changes have occurred and, therefore, DER has not amended conditions relating to emissions and discharges.



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	Premises address L1.1.5	<p>The Lot number has been updated to reflect an administrative change of the Lot description made by the Shire.</p> <p>Previous condition L1.2.1 has been moved to condition L1.1.5 in accordance with administrative changes implemented within DER.</p> <p>Previous condition L 1.2.3 has been removed in accordance with administrative changes implemented within DER. It is the occupier's responsibility to ensure that they comply with relevant legislative requirements for secondary activities such as the storage of environmentally hazardous materials. Unauthorised discharges of environmentally hazardous materials are subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Emissions general	L2.1.1	Reference to "target" has been removed in accordance with administrative changes implemented within DER.	N/A
Ambient quality monitoring	Table 3.4.3	The Licensee was required to submit a report to DER on the expected low toxicity of the altered treated wastewater stream being discharged to the Collie River. The report found that the Leschenault Estuary reference dilution water was toxic to the organisms used in the 72-hr marine microalgae growth test. The Licensee has proposed to use laboratory supplied dilution water rather than local estuarine water for future tests to ensure valid results are obtained. DER consulted with the Department of Water (DoW) regarding the findings of the report. The DoW confirmed that the use of laboratory supplied water was acceptable. Therefore, Table 3.4.3 has been amended to allow the	Tiona 288 Whole-of-Effluent Toxicity Testing, Report No. 1207_001/1_Rev 0, BMT Oceanica Pty Ltd, dated August 2015



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>use of laboratory supplied dilution water instead of Leschenault Estuary Water as the dilution water for the whole effluent toxicity (WET) monitoring. Additionally, the frequency has been amended from 'next period being 2015' to 'next period being 2018'.</p> <p>Note: DoW investigated why the estuary water might have been toxic to microalgae. They found that the date the estuary samples were taken was the wettest and windiest day of the month for Bunbury (28.8mm rain, wind speed from the west ranging between 26-33km/hr with gusts up to 56km/hr). It is suspected that the sample taken could have been high in TSS, TDS and other localised pollutants as a result of where and when the sample was taken.</p>	<p>Letter from Department of Water to Department of Environment Regulation, reference no. RF872-22/PA6115, dated 29 February 2016</p>
Information	L4.3.1	Condition L4.3.1 and Form N1 have been updated in accordance with administrative changes implemented within DER. The notification requirement duplicates requirements under section 72 of the EP Act.	N/A
Licence Duration	N/A	The Licence is due to expire on 15 November 2019. There have been no changes made to the duration of the licence as a result of this amendment.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
17/03/2016	Proponent sent a copy of draft instrument	Waiver form received with no changes required.	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