



Licence

Environmental Protection Act 1986, Part V

Licensee: BHP Billiton Iron Ore Pty Ltd

Licence: L5611/1993/11

Registered office: 125 St Georges Terrace
PERTH WA 6000

ACN: 008 700 981

Premises address: Yarrie Project
Tenements M45/1019, ML249SA, M263SA, M45/1018-I, M45/127,
M45/140, M45/573, M45/592, M45/558 and FNA0006363
PARDOO WA 6753
As depicted in Schedule 1

Issue date: Thursday, 17 September 2015

Commencement date: Friday, 18 September 2015

Expiry date: Thursday, 17 September 2020

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	50,000 tonnes or more per year	5,000,000 tonnes per annual period
6	Mine dewatering	50,000 tonnes or more per year	200,000 tonnes per annual period
64	Class II or III putrescible landfill site	20 tonnes or more per year	250 tonnes per annual period
85	Sewage facility	More than 20 but less than 100 cubic metres per day	Less than 100 cubic metres per day

Conditions

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

Date signed: 22 October 2015

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Alana Kidd
Manager Licensing – (Resource Industries)
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

The Yarrie Project is an open-cut mining operation located 209 kilometres (km) east-southeast of Port Hedland in the Pilbara region of Western Australia.

Iron ore from the Yarrie and Cundaline deposits is mined, crushed, screened, processed and railed to Port Hedland. Mine dewatering has been required to access ore below the water table. Abstracted water is used for dust suppression and ore handling, with excess water discharged to Eel Creek via two discharge points; Y2/3 and Y10. Contingency discharge of stormwater is directed to Eel Creek via the discharge point W1, which is only used following above average periods of rainfall.

A putrescible landfill with a design capacity of 250 tonnes per annum is operated at the Yarrie Project.

Wastewater from the Yarrie Camp is treated using the onsite wastewater treatment plant (WWTP) which has a design capacity of less than 100 m³ per day. Treated wastewater from the plant is irrigated to the designated sprayfield near the camp.

This Licence is the successor to licence L5611/1993/10 and has been updated in line with licence template version 2.9.

The Licences and Works Approvals issued for the Premises since 1993 are:

Instrument log		
Instrument	Issued	Description
L5611/1993/4	15/11/2000	Licence renewal
L5611/1993/5	13/11/2001	Licence renewal
L5611/1993/6	15/11/2002	Licence renewal
L5611/1993/7	17/11/2003	Licence renewal
L5611/1993/8	15/11/2004	Licence renewal
L5611/1993/8	11/11/2005	Licence amendment
L5611/1993/9	13/09/2007	Licence renewal
W4639/2010/1	10/03/2010	Works Approval for a Category 89 putrescible landfill facility
L5611/1993/10	16/09/2010	Licence renewal
W5032/2011/1	15/09/2011	Works Approval for the Cundaline mining area
L5611/1993/10	22/12/2011	Licence amendment to include the Cungaline mining area into the prescribed premises
W5241/2012/1	06/09/2012	Works Approval for the Cundaline mining area
L5611/1993/11	17/09/2015	Licence renewal
L5611/1993/11	22/10/2015	Administrative amendment to correct licence expiry date

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 July until 30 June in the following year;

'ANZECC' means the Australian and New Zealand Environment and Conservation Council;

'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 is measured or a monitoring result is obtained;

'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;

'Clean Fill' has the meaning defined in Landfill Definitions;

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

'HDPE' means high density polyethylene;

'Inert Waste Type 1' has the meaning defined in Landfill Definitions;

'Inert Waste Type 2' has the meaning defined in Landfill Definitions;



'Landfill Definitions' means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment as amended from time to time;

'Licence' means this Licence numbered L5611/1993/11 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;

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

'Putrescible' has the meaning defined in Landfill Definitions;

'quarterly' means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March;

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

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

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

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia; and

'WWTP' means wastewater treatment plant.

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.

1.1.5 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 General conditions

1.2.1 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.

1.2.2 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

Note1: *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 only accept waste on to the Premises if:

- (a) it is of a type listed in Table 1.3.1;
(b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
(c) it meets any specification listed in Table 1.3.1.

Table 1.3.1: Waste acceptance		
Waste type	Quantity limit	Specification ¹
Inert Waste Type 1	250 tonnes per annual period	None specified
Inert Waste Type 2		None specified
Putrescible Waste		None specified
Clean Fill		None specified
Sewage	Less than 100 m ³ /day	Accepted through sewer inflow(s) only

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.2 The Licensee shall ensure that where waste does not comply with condition 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a segregated storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing		
Waste type	Process(es)	Process limits ¹
Inert Waste Type 1	Receipt, handling and disposal of waste by landfilling	<u>All waste types</u> Disposal of waste by landfilling shall only take place within the landfill areas shown on the Premises Map in Schedule 1
Putrescible Waste		No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises
Clean Fill		The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m
Inert Waste Type 2 – Rubber (Tyres ² and conveyor belts)		Tyres shall only be landfilled: i) in the Tyre Dump located within the prescribed premises boundary shown in Schedule 1; ii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m ³ of tyres reduced to pieces; or iii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1 000 whole tyres
Sewage	Biological, physical and chemical treatment	Less than 100m ³ /day
Hydrocarbon contaminated soil	Bioremediation	Contaminated soil is only to be remediated within the bioremediation facilities shown in Schedule 1



Note 1: 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*.

Note 2: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

- 1.3.4 The Licensee shall manage the landfilling activities to ensure:
- (a) waste is levelled and compacted as soon as practicable after it is discharged;
 - (b) waste is placed and compacted to ensure all faces are stable and capable of retaining restoration material; and
 - (c) restoration of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.

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

Table 1.3.3: Cover requirements ¹			
Waste Type	Material	Depth	Timescales
Inert Waste Type 1	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Monthly or as soon as practicable after deposit and prior to compaction
Putrescible Waste			
Inert Waste Type 2 (Tyres only)	Soil	500 mm	As soon as practical following the achievement of final waste levels in the area(s) in which tyres are deposited.

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

- 1.3.6 The Licensee shall prevent unauthorised access to the landfill.
- 1.3.7 The Licensee shall ensure that wind-blown waste is contained within the boundary of the Premises and that wind-blown waste is returned to the tipping area on at least a monthly basis.
- 1.3.8 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds listed in Table 1.3.4 and identified in Schedule 1 in accordance with the requirements specified within Table 1.3.4.

Table 1.3.4: Containment Infrastructure		
Storage vessel or compound	Material	Requirements
Oily waste evaporation pond	Hydrocarbon contaminated water from wash down water, workshop areas and stormwater from hydrocarbon storage areas	<ul style="list-style-type: none"> • 1.5 mm HDPE lined cells to achieve a permeability of $<10^{-9}$ m/s • Maintain an operating freeboard of 200mm



2 Emissions

2.1 Point source emissions to surface water

2.1.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.1.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

Emission point reference and location on Map of emission points	Description	Source including abatement
Y2/3	Discharge to Eel Creek	Groundwater from mine dewatering
Y10	Discharge to Eel Creek	Groundwater from mine dewatering
W1 contingency discharge point	Contingency discharge to Eel Creek	Contingency discharge of stormwater following above average periods of rainfall

2.2 Emissions to land

2.2.1 The Licensee shall ensure that where waste is emitted to land 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.

Emission point reference and location on Map of emission points	Description	Source including abatement
L1	Discharge from the Accommodation Village WWTP to the designated irrigation area	Treated wastewater pipeline from the Accommodation Village WWTP

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (c) all surface water sampling is conducted in accordance with AS/NZS 5667.6; and
- (d) 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) monthly monitoring is undertaken at least 15 days apart; and
- (b) 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 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.

3.2 Monitoring of point source emissions to surface water

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 surface water					
Emission point reference	Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Y2/3 discharge point Y10 discharge point	Flow meter to discharge point	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous when discharging
	Discharge point	pH ¹	pH units	Spot sample	Quarterly when discharging
Salinity, Total Suspended Solids, Arsenic, Chromium, Cadmium, Cobalt, Copper, Mercury, Manganese, Nickel, Silver, Selenium, Zinc, Lead, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Chlorine, Carbonate, Sulphate, Nitrate, Bicarbonate, Total Recoverable Hydrocarbons		mg/L			
W1 contingency discharge point	Flow meter to discharge point	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous when discharging
	Discharge point	pH ¹	pH units	Spot sample	Monthly when discharging
Salinity, Total Suspended Solids, Arsenic, Chromium, Cadmium, Cobalt, Copper, Mercury, Manganese, Nickel, Silver, Selenium, Zinc, Lead, Iron, Aluminium, Calcium, Magnesium, Sodium, Potassium, Chlorine, Carbonate, Sulphate, Nitrate, Bicarbonate, Total Recoverable Hydrocarbons		mg/L			

Note 1: In-field non-NATA accredited analysis permitted.



3.3 Monitoring of emissions to land

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 emissions to land			
Emission point reference	Parameter	Units	Frequency
L1 – discharge point to irrigation arear	Cumulative volumetric flow rate	m ³ /day	Monthly
	pH ¹	pH units	Quarterly
	Biochemical Oxygen Demand	mg/L	
	Total Suspended Solids		
	Total Nitrogen		
	Total Phosphorus		
	E.Coli	org/100mL	

Note 1: In-field non-NATA accredited analysis permitted.

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 1 October 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
Table 1.3.1	Waste acceptance	None specified
Table 3.2.1	Monitoring results and an analysis and comparison of dewatering discharge monitoring against the following: <ul style="list-style-type: none"> Flow rate, total suspended solids, total recoverable hydrocarbons; pH – ANZECC (2000) Slightly disturbed aquatic ecosystems/lowland rivers; Salinity and major ions (Na, K, Ca, Mg, Cl, CO₃, CHO₃, SO₄ and NO₃) – ANZECC (2000) Livestock drinking water quality; and Metals (Al, Bo, Fe, Cu, Nz, Ag, As, Cr, Pb, Cd, Hg, Ni, Sn, Mn) – ANZECC (2000) Trigger values for freshwater (95% level of ecosystem protection) 	None specified
Table 3.3.1	Monitoring results and interpretation of results, including a comparison against plant design specifications	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 the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: 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

4.3 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
Table 1.3.1	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	N1
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

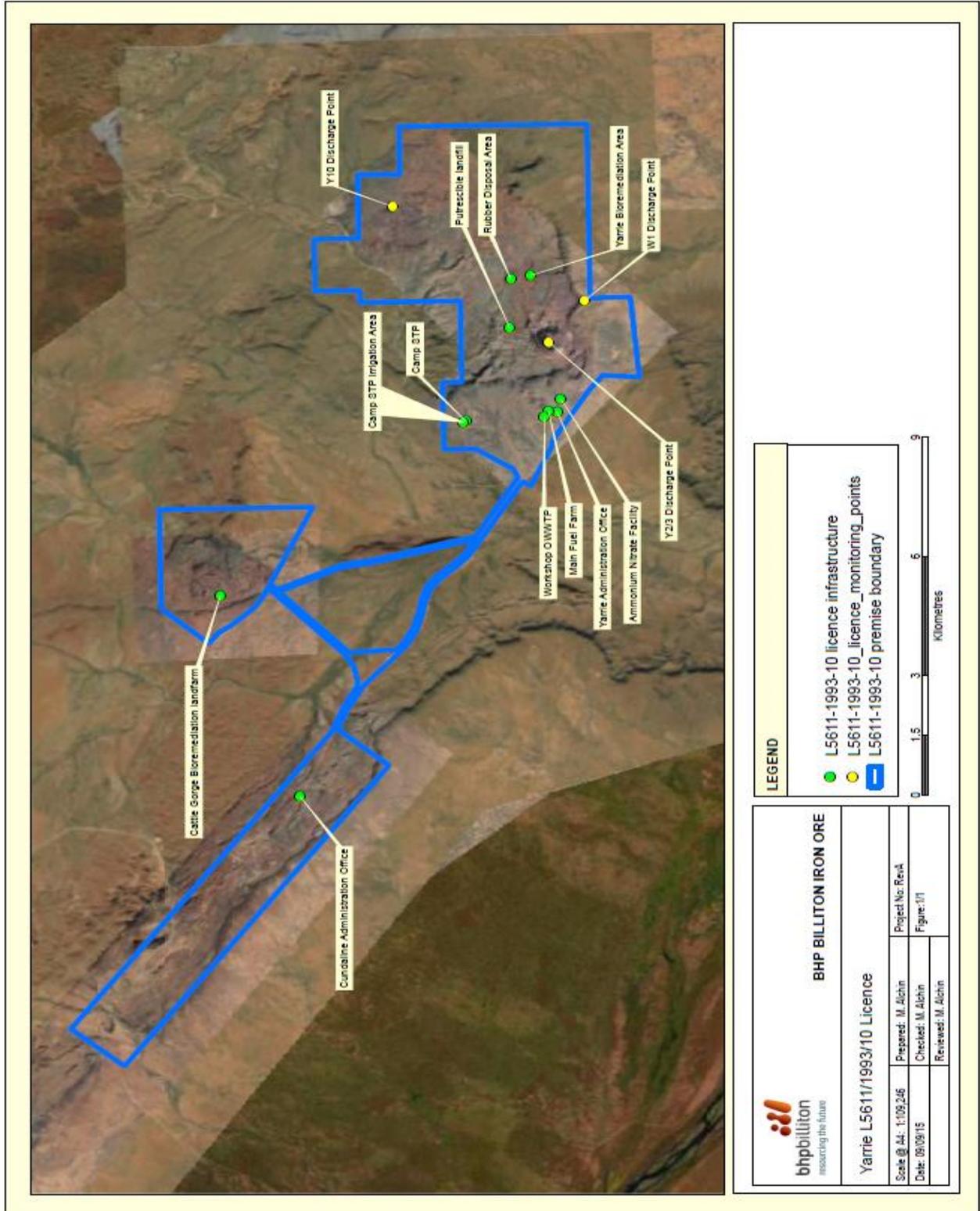
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

The Premises, emissions points and monitoring locations are shown in the map below. The blue 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

1. 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 C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) must 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: L5611/1993/11
 Form: N1

Licensee: BHP Billiton Iron Ore Pty 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 BHP Billiton Iron Ore Pty Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **BHP Billiton Iron Ore Pty Ltd**

Licence: **L5611/1993/11**

Registered office: 125 St Georges Terrace
PERTH WA 6000

ACN: 008 700 981

Premises address: Yarrie Project
Tenements M45/1019, ML249SA, M263SA, M45/1018-I, M45/127,
M45/140, M45/573, M45/592, M45/558 and FNA0006363
PARDOO WA 6753

Issue date: Thursday, 17 September 2015

Commencement date: Friday, 18 September 2015

Expiry date: Thursday, 17 September 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a 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: Haley Brunel
Licensing Officer

Decision Document authorised by: Alana Kidd
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 checked="" type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	5,000,000 tonnes per annual period
	6	200,000 tonnes per annual period
	64	250 tonnes per annual period
	85	Less than 100 cubic metres per day
Application verified	Date: 27 July 2015	
Application fee paid	Date: 28 July 2015	
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	N/A	
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: 1812
		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: 814 EPA Report No: 1338
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

The Yarrie Project is an open-cut mining operation located 209 kilometres (km) east-southeast of Port Hedland in the Pilbara region of Western Australia.

Iron ore from the Yarrie and Cundaline deposits is mined, crushed, screened, processed and railed to Port Hedland. Mine dewatering has been required to access ore below the water table. Abstracted water is used for dust suppression and ore handling, with excess water discharged to Eel Creek via two discharge points; Y2/3 and Y10. Contingency discharge of stormwater is directed to Eel Creek via the discharge point W1, which is only used following above average periods of rainfall.

A putrescible landfill with a design capacity of 250 tonnes per annum is operated at the Yarrie Project.

Wastewater from the Yarrie Camp is treated using the onsite wastewater treatment plant (WWTP) which has a design capacity of less than 100 m³ per day. Treated wastewater from the plant is irrigated to the designated sprayfield near the camp.

A minor administrative amendment was undertaken on the 22 October 2015 to correct the licence expiry date, as it was noted that the licence expiry date was incorrect on the licence reissue.



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	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.2 and L1.2.3	Licence conditions 1.2.2 and 1.2.3 have been included in the Licence to ensure that environmentally hazardous materials spilled outside of engineered containment structures are appropriately managed and to ensure contaminated or potentially contaminated stormwater is treated prior to being discharged from the premises.	General provisions of the <i>Environmental Protection Act 1986</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Premises operation	L 1.3.1 to L1.3.8	Conditions 1.3.1 to 1.3.7 have been included in the Licence to manage the site's landfill and covers previous licence conditions 32 to 35.	General provisions of the <i>Environmental Protection Act 1986</i>
Point source emissions to air including monitoring	N/A	There are no significant point source emissions to air associated with the operation of the Yarrie Project. No specified conditions relating to point source air emissions or the monitoring of such emissions have been applied to the Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
Point source emissions to surface water including monitoring	L2.1.1 and L3.2.1	Normal Operation <u>Emission Description</u> <i>Emission:</i> Discharge of excess mine dewatering water potentially contaminated with hydrocarbons and/or heavy metals to Eel Creek via two discharge points. <i>Impact:</i> Contamination of surface water, deterioration of ecosystem health, erosion of creek lines.	General provisions of the <i>Environmental Protection Act 1986</i> <i>Environmental Protection</i>



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Controls:</u> The Yarrie Project has been in care and maintenance since May 2014 and there was no dewatering water discharged during the 2013/2014 reporting period. During operations, up to 200,000 tonnes of excess mine dewatering water may be discharged to Eel Creek via the two discharge points. Groundwater quality in the vicinity of the Yarrie Project is of fresh quality and 80m below ground level, with a total dissolved solids concentration of 700 mg/L or less. Significant erosion of the creek is unlikely due to the relatively minor volume of dewatering water being discharged .</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 2.1.1 has been included in the Licence and identifies the two dewatering water discharge points, while condition 3.2.1 details the monitoring requirements including monitoring frequency and parameters to be sampled. This condition covers condition 11 on the previous Licence.</p> <p>The previous Licence included targets for discharge water quality, requiring the Licensee to compare monitoring results against the Australian New Zealand Environment and Conservation Council (ANZECC) guidelines. Whilst these targets have been removed from the Licence given the site is in care and maintenance and risk is moderate, condition 4.2.1 of the new Licence requires the Licensee to report and interpret the monitoring results in the Annual Environmental Report (AER), comparing the water quality against the relevant ANZECC guidelines.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	<p><i>(Unauthorised Discharges) Regulations 2004</i></p> <p>ANZECC guidelines (2000) – Slightly disturbed aquatic ecosystems/lowland rivers</p> <p>ANZECC guidelines (2000) – Livestock drinking water quality</p> <p>ANZECC guidelines (2000) Trigger values for freshwater (95% level of ecosystem protection)</p>



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>Abnormal Operation <u>Emission Description</u> <i>Emission:</i> Contingency discharge of stormwater potentially contaminated with hydrocarbons and/or heavy metals to Eel Creek. <i>Impact:</i> Contamination of surface water, deterioration of ecosystem health, erosion of creek lines. <i>Controls:</i> The contingency discharge of stormwater is only undertaken following high rainfall events.</p> <p>Hydrocarbons on site are stored in purpose built facilities in accordance with applicable legislation. Water from wash down facilities and workshop areas as well as rainwater from hydrocarbon storage facilities is directed to lined collection ponds where water either evaporates or is taken to a bioremediation facility. Stormwater contamination is unlikely given these measures.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 2.1.1 has been included in the Licence and identifies the contingency discharge point, while condition 3.2.1 details the monitoring requirements including monitoring frequency and parameters to be sampled.</p> <p>The previous Licence included targets for discharge water quality. Whilst these targets have been removed from the Licence, condition 4.2.1 of the new Licence requires the Licensee to report and interpret the monitoring results in the Annual Environmental Report, comparing the water quality against the ANZECC guidelines.</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low	
Point source emissions to groundwater including monitoring	N/A	There are no point source emissions to groundwater associated with the operation of the Yarrie Project. No specified conditions relating to point source emissions to groundwater or the monitoring of such emissions have been applied to the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Emissions to land including monitoring	L2.2.1	<u>Emission Description</u> <i>Emission:</i> Treated wastewater from the WWTP discharged to the irrigation area <i>Impact:</i> Contamination of surrounding soil and groundwater, waterlogging of soils, surface runoff, contamination of surface water from excess nutrients. <i>Controls:</i> Treated wastewater is disposed of to a dedicated irrigation area. The monitoring results presented in the 2013/2014 reporting period AER demonstrate that the WWTP is generally treating wastewater to within the quality targets specified on the previous Licence. There were three exceedances recorded, one for biochemical oxygen demand, one for total suspended solids and one for <i>E.coli</i> . An investigation found that the irrigation system was faulty which resulted in stagnant water and the elevated concentrations and the problem was subsequently rectified. Groundwater in the vicinity of the Yarrie Project is approximately 80 metres below ground level. <u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low	General provisions of the <i>Environmental Protection Act 1986</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u> Condition 2.2.1 has been included in the Licence and identifies the discharge point to land. Condition 3.3.1 has been applied to the Licence, requiring quarterly monitoring of pH, biochemical oxygen demand, total suspended solids, total nitrogen, total phosphorus and <i>E.coli</i>.</p> <p>The previous Licence included targets for discharge water quality. Whilst these targets have been removed from the Licence given the risk has been deemed low, condition 4.2.1 of the new Licence requires the Licensee to report and interpret the monitoring results in the AER, which will be subject to DER review.</p> <p>Monitoring results have demonstrated that the WWTP is generally treating wastewater to within an acceptable quality, thereby minimising the risk to soil, groundwater and surface water.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Fugitive emissions	N/A	<p><u>Emission Description</u> <i>Emission:</i> Dust generated from the processing and transport of ore. Dust is also produced from vehicle movement on roads and open areas. <i>Impact:</i> Dust emissions can be harmful to human health and the environment, deposition on vegetation can reduce photosynthesis, thus reducing growth. <i>Controls:</i> The Licensee has implemented the following measures to manage dust:</p> <ul style="list-style-type: none"> • Water sprays at strategic points in the crushing plant (feed hopper, conveyor transfers and at the stackers); • Use of approved chemical suppressants on internal roads and on the train load-out pads; 	General provisions of the <i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul style="list-style-type: none"> • Use of water sprays at stockpile reclamation and at train load-out operations; • Stabilisation of bare soil; • Dust suppression equipment will be maintained in efficient operating conditions; • Routine maintenance and housekeeping of site to minimise build up of waste material leading to airborne dust; and • Employees and contractors will be trained in the importance of minimising dust levels wherever possible. <p>The nearest sensitive receptor is Yarrie Homestead located approximately 11 km south of the site.</p> <p>During the 2013/2014 reporting period PM₁₀ dust monitoring was completed using a Tapered Element Oscillating Microbalance (TEOM) unit located in the vicinity of the Yarrie accommodation village. The results from the TEOM indicate no events in which PM₁₀ dust concentrations were detected above the 70ppm criteria.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> No conditions relating to dust emission have been included in the Licence due to the low risk associated with the dust emissions and distance to the nearest sensitive receptor. The Licensee has implemented appropriate and effective dust control measures on site to minimise dust emissions and subsequent impacts to human health and the environment.</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
		<u>Residual Risk</u> <i>Consequence: Minor</i> <i>Likelihood: Rare</i> <i>Risk Rating: Low</i>	
Odour	N/A	There are no significant odour emissions associated with the operation of the Yarrie Project. No specified conditions relating to odour emissions have been applied to the Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
Noise	N/A	There are no significant noise emissions associated with the operation of the Yarrie Project. No specified conditions relating to noise emissions have been applied to the Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
Monitoring general	L3.1.1 to L3.1.5	General conditions relating to monitoring have been included in the Licence. These requirements relate to the collection and analysing of samples, monitoring frequency, recording of data and the calibration of monitoring equipment.	Australian Standard AS/NZS 5667.1 – Water Quality – Sampling – Guidance on the Design of sampling programs, sampling techniques and the preservation and handling of samples Australian Standard AS/NZS 5667.11 – Water Quality – Sampling – Guidance on the sampling of groundwaters



DECISION TABLE			
Works Approval / Licence section	Condition number	Justification (including risk description & decision methodology where relevant)	Reference documents
			Standard Methods for Examination of Water and Wastewater, American Public Health Association – American Water Works Association – Water Environment Federation
Monitoring of inputs and outputs	N/A	No conditions relating to the monitoring of inputs and outputs at the premises have been applied to the Licence.	N/A
Process monitoring	N/A	No conditions relating to process monitoring at the premises have been applied to the Licence.	N/A
Ambient quality monitoring	N/A	DER assessment of the emissions and discharges associated with the Yarrie Project has demonstrated that the prescribed activities are unlikely to result in significant environmental impacts. Therefore, no ambient quality monitoring requirements have been applied to the Licence. DER will continue to review the monitoring data provided in the AER to determine if any further regulatory controls are required.	General provisions of the <i>Environmental Protection Act 1986</i>
Meteorological monitoring	N/A	There is no requirement to conduct any meteorological monitoring at the premises. No specified conditions relating to meteorological monitoring have been applied to the Licence.	N/A
Improvements	N/A	No improvement conditions have been applied to the Licence at the time of the renewal.	N/A
Information	L4.1.1 – L4.3.1	General conditions relating to the maintenance of records, completion of an Annual Audit Compliance Report, complaints management, AER submission and notification requirements have been included in the Licence.	N/A
Licence Duration	N/A	The Licence has been issued for a period of five years.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
10/08/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
10/09/2015	Proponent sent a copy of draft instrument	<p>Condition 1.3.8 The Licensee has requested that the specifications for the bioremediation treatment cells be removed, as the biopiling method of bioremediation will be implemented.</p> <p>Condition 4.2.3 Delete this condition and associated Table 4.2.2 and include the reportingments specified under this condition in Table 4.3.1.</p>	<p>DER has removed the bioremediation treatment cells from condition 1.3.8. Condition 1.3.3 requires that the bioremediation of soil is only undertaken at the facilities depicted in Schedule 1.</p> <p>The site will also be subject to inspections by DER officers and the general provisions of the <i>Environmental Protection Act 1986</i> and the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> will also apply to these activities.</p> <p>DER has not changed this condition as the change proposed is not in line with the licence template version 2.9.</p>



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