



## AMENDED LICENCE FOR PRESCRIBED PREMISES

### *Environmental Protection Act 1986, Part V*

**LICENCE NUMBER:** L5275/1972/12

**FILE NUMBER:** DER2014/000429

#### LICENSEE AND OCCUPIER

Pilbara Iron Company (Services) Pty Ltd  
Level 22, Central Park  
152-158 St Georges Terrace  
PERTH WA 6000  
ACN: 107 210 248

#### PREMISES

Paraburdoo Iron Ore Mine and Eastern Range Project located within  
Located within AML70/246, L47/326, AG70/4, AG70/14 and AML70/4  
ROCKLEA WA 6751  
(as depicted in Attachment 1)

#### PRESCRIBED PREMISES CATEGORY

Schedule 1 of the *Environmental Protection Regulations 1987*

CATEGORY NUMBER	CATEGORY DESCRIPTION	CATEGORY PRODUCTION OR DESIGN CAPACITY	PREMISES PRODUCTION OR DESIGN CAPACITY
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes or more per year	30, 000,000 tonnes per annual period
6	Mine dewatering	50,000 tonnes or more per year	800,000 tonnes per annual period
12	Screening, etc. of material	50,000 tonnes or more per year	10,000,000 tonnes or more per annual period
52	Electrical power generation	10 MW or more in aggregate	127.5 MW
64	Class II putrescible landfill site	20 tonnes or more per year	5,000 tonnes per annual period
73	Bulk storage of chemicals, etc	1,000 cubic metres in aggregate	5,903 cubic metres in aggregate

#### CONDITIONS

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

Date signed: 19 May 2016

#### Alana Kidd

Manager Licensing – Resource Industries  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*

**ISSUE DATE:** Thursday, 15 May 2014  
**COMMENCEMENT DATE:** Wednesday, 28 May 2014  
**EXPIRY DATE:** Friday, 27 May 2033  
**AMENDMENT DATE:** Thursday, 19 May 2016



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### *Environmental Protection Act 1986, Part V*

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#### DEFINITIONS

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

‘**Act**’ means the *Environmental Protection Act 1986*;

‘**annual period**’ means the inclusive period from 1 January until 31 December in the same year;

‘**ANZECC 2000**’ means the most recent version and relevant parts of the Australian and New Zealand Environment Conservation Council guidelines for fresh and marine water quality;

‘**Australian Standard 5667**’ means the most recent version and the relevant parts of the Australian and New Zealand series of guidance standards on Water Quality Sampling;

‘**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](mailto:info@der.wa.gov.au)

‘**cfu/100mL**’ means colony forming units per 100 millilitres;

‘**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 and Conservation as amended from time to time;

‘**Licence**’ means this Licence numbered L5275/1972/12 and issued under the Act;

‘**Licensee**’ means the person or organisation named as Licensee on page 1 of the Licence;

‘**m**’ means metres;

‘**mg/L**’ means milligrams per litre;

‘**mm**’ means millimetres;

‘**NATA**’ means National Association of Testing Authorities;

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**ISSUE DATE:** Thursday, 15 May 2014

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**'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;

**'Putrescible'** has the meaning defined in Landfill Definitions;

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

**'Special Waste Type 2'** has the meaning defined in Landfill Definitions; and

**'Standard Methods for Examination of Water and Wastewater-APHA-AWWA-WEF'** means the best current practice of American water analysts developed by the American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF).

#### GENERAL CONDITIONS

1 The Licensee shall only operate the Mobile Crushing and Screening Plant(s) in accordance with the Iron Ore (WA) Mobile Crushing and Screening Management Plan (RTIO-HSE-0235877).

#### STORMWATER MANAGEMENT

2 The Licensee shall install and maintain mechanisms to ensure that stormwater from the following areas, is diverted to facilities for treatment prior to disposal, reuse or discharge:

- (i) Process plants;
- (ii) Washdown bays;
- (iii) Refuelling areas; and
- (iv) Mechanical workshops.

#### SURFACE WATER - DISCHARGE OUTFALL

3 The licensee shall ensure that the concentration of total recoverable hydrocarbons in waters discharged from the premises does not exceed 30 mg/L.

#### WATER - MONITORING

4 The Licensee shall, on a monthly basis, measure and record in cubic meters, the cumulative volumes of waters discharged from the following discharge points:

- Site sewage treatment plant outlet pipe;
- Joe's Crossing;
- Primary plant; and
- Heavy vehicle washdown bay.

These results shall be provided in the Annual Environmental Report.

5 The Licensee shall take representative water samples from the monitoring sites shown in column 1 of Table 1, at the frequencies stated in column 2 of Table 1, and have analysed for the parameters listed in column 3 of Table 1 and present this information in the Annual Environmental Report, including a comparison against previous years' data.

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**ISSUE DATE:** Thursday, 15 May 2014

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### *Environmental Protection Act 1986, Part V*

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**Table 1: Water monitoring schedule**

Column 1	Column 2	Column 3
Monitoring sites	Sampling frequency	Parameters to be measured
<b>Surface Water Discharge Sites</b> (Attachment 2)		
<ul style="list-style-type: none"> <li>Primary plant discharge; and</li> <li>Heavy vehicle washdown bay</li> </ul>	Quarterly when discharging	pH (pH units) <sup>1</sup> Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Surfactants (mg/L) Metals (mg/L) - Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd; Cr
<ul style="list-style-type: none"> <li>Site sewage treatment plant outlet pipe</li> </ul>	Quarterly	pH (pH units) <sup>1</sup> Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Biochemical Oxygen Demand (mg/L) Total Nitrogen (mg/L) Total Phosphorus (mg/L) Free Chlorine (mg/L)
	Six-monthly	<i>E. coli</i> (cfu/100mL) Metals (mg/L) – Cu, Zn, As, Pb, Hg
<b>Groundwater Sites</b> (Attachment 3)		
<u>Bioremediation area</u> MB10, MB12, MB13, MB14, MB15, MB18	Annually	pH (pH units) <sup>1</sup> Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Surfactants (mg/L) Metals (mg/L) – Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd, Cr
<u>Tailings Area</u> PTD01, PTD02D, PTD03, PTD04D, PTD05D, PTD06D, PTD07D, PTD08D, PTD09D, PTD10, PTD11, PTD12		
<u>New Landfill Area</u> MB1, MB2, MB3, MB4, MB5, MB6, MB6A, MB15PAFL001, MB15PAFL002, MB15PAFL003, MB15PAFL004. MB16PAFL001, (once installed), MB16PAFL002 (once installed), and MB16PAFL003 (once installed)		
<u>Old Landfill Area</u> MB7, MB8, MB9		



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### *Environmental Protection Act 1986, Part V*

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<b>4 East Pit Dewatering (Attachment 2)</b>		
<u>Discharge Point</u> Joe's Crossing (Seven Mile Creek)	Monthly when discharging	pH (pH units) <sup>1</sup>
	Quarterly when discharging	Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Major ions (mg/L) – Na, K, Ca, Mg, Cl, CO <sub>3</sub> , HCO <sub>3</sub> , SO <sub>4</sub> , NO <sub>3</sub> Metals (mg/L) – Al, B, Fe, Cu, Zn, Ag, As, Cr, Pb, Cd, Hg, Ni, Sn, Mn, Mo

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

6 The Licensee shall compare the results from the monitoring of discharge water required by condition 5 for Joe's Crossing (Seven Mile Creek) against the appropriate ANZECC 2000 water quality trigger values and present this information, in the Annual Environmental Report.

#### WASTE MANAGEMENT FROM ANCILLARY OPERATIONS

7 The Licensee shall utilise and maintain, protective bunding, skimmers, silt traps, neutralisation pits, fuel and oil traps, drains and sealed collection sumps around the process plant, maintenance workshops, laboratory and power generation areas to enable recovery of spillages and protection of surrounding soils and groundwater.

8 The Licensee shall utilise measures or agents such as quick break detergents, to prevent oil-water emulsions from passing through the separator systems.

9 The Licensee shall as soon as practicable recover, or remove and dispose of, any liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, from inside or outside the low permeability compound(s).

#### TAILINGS STORAGE FACILITY

10 The Licensee shall maintain the interception drain immediately downstream of the main storage dam embankment, which shall be used to collect and recover any liquid matter resulting from seepage of the main embankments.

11 The Licensee shall ensure that at least 300 mm of freeboard (embankment crest to tailings level) is maintained at the main embankment at all times.



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**MANAGEMENT OF PUTRESCIBLE LANDFILL (ATTACHMENT 4)**

- 12 The Licensee shall accept and bury only the following types of waste at the putrescible landfill facility:
- (i) Clean Fill;
  - (ii) Inert Waste Type 1;
  - (iii) Putrescible Waste; and
  - (iv) Special Waste Type 1;
- as defined in the Landfill Definitions.
- 13 The Licensee shall ensure that the tipping area of the putrescible landfill is not greater than:
- (i) 30 m in length; and
  - (ii) 2 m above ground level in height.
- 14 The Licensee shall ensure that waste in the tipping area of the putrescible landfill is covered:
- (i) at least weekly;
  - (ii) with a dense (at least 200 mm), inert and incombustible material; and
  - (iii) totally, so that no waste is left exposed.
- 15 The Licensee shall ensure that there is no waste within:
- (i) 100 m of any surface water body at the site; and
  - (ii) 3 m of the highest level of the water table aquifer at the putrescible landfill site.
- 16 The Licensee shall manage stormwater on the putrescible landfill site so that:
- (i) it is diverted from areas of the site where there is waste; and
  - (ii) water that has come into contact with waste is to be diverted into a sump on the site, or otherwise retained on the site.
- 17 The Licensee shall construct the Paraburdoo putrescible landfill extension in accordance with the documentation listed in Table 2 (Attachment 4).

**Table 2: Construction requirements<sup>1</sup>**

Column 1	Column 2	Column 3
Document	Parts	Date of Document
Paraburdoo Iron Ore Mine, Putrescible landfill works approval application, Pilbara Iron (Company) Services Pty Ltd.	All	20 August 2015
Email correspondence Re: licence amendment for Rio Tinto's Paraburdoo Mine L5275/1972/12, Sean Savage, 20/11/2015 2:14PM	All, including attachments	20 November 2015

Note 1: Where the details and commitments of the documents listed in condition 16 are inconsistent with any other condition of this licence, the conditions of this licence shall prevail.

- 18 The Licensee shall submit a compliance document to the CEO, following the construction of the Paraburdoo putrescible landfill extension and prior to operation of the same.



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- 19 The compliance document shall:
- (i) Certify that the works were constructed in accordance with the conditions of the licence; and
  - (ii) Be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

- 20 The Licensee shall not dispose of waste within the Paraburdoo putrescible landfill extension until groundwater monitoring bores, MB16PAFL001 and MB16PAFL002 and MB16PAFL003 are installed in accordance with condition 17.

#### MANAGEMENT OF WASTE DUMP LANDFILL (ATTACHMENT 4)

- 21 The Licensee shall bury only the following types of waste within the waste dump landfill facility:
- (i) Inert Waste Type 1;
  - (ii) Inert Waste Type 2; and
  - (iii) Putrescible Waste (wooden pallets and wooden packaging only);
- as defined in the Landfill Definitions

- 22 The Licensee shall ensure that waste in the tipping area of the waste dump landfill is covered with a dense (at least 200 millimetres), inert and incombustible material at final landform design.

- 23 The Licensee shall ensure that there is no waste within:
- (i) 100 metres of any surface water body at the site; and
  - (ii) 3 metres of the highest level of the water table aquifer at the waste dump landfill site.

- 24 The Licensee shall manage stormwater on the waste dump landfill site so that water that has come into contact with waste is to be retained on the site.

#### AIR EMISSIONS

- 25 The Licensee shall ensure that where waste from power stations is emitted to air it is only done so from the following emission points:
- (i) GTG-1;
  - (ii) GTG-2; and
  - (iii) GTG-3,
- as depicted in Attachment 5.

#### RERORTING CONDITIONS

- 26 The Licensee shall collect all water samples required by condition 5 in accordance with the relevant parts of Australian Standard 5667.
- 27 The Licensee shall ensure that all parameters requiring laboratory analyses pursuant to condition 5 are conducted by an organisation with NATA accreditation for the specified parameters in accordance with the current Standard Methods for Examination of Water and Wastewater – APHA-AWWA-WEF.



## **AMENDED LICENCE FOR PRESCRIBED PREMISES**

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- 28 The Licensee shall provide to the CEO, by **30 April** each year, a copy of an Annual Environmental Report containing the monitoring results and data collected as a requirement of any condition of this licence during the period **1 January** and ending on **31 December** in that year.
- 29 The Licensee shall by **30 April** in each year, provide to the CEO an Annual Audit Compliance Report in the form of Attachment 6 to this Licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the Licensee has complied with the conditions of this Licence, and any previous Licence issued under Part V of the Act for the premises, during the period beginning **1 January** and ending on **31 December** in that year.





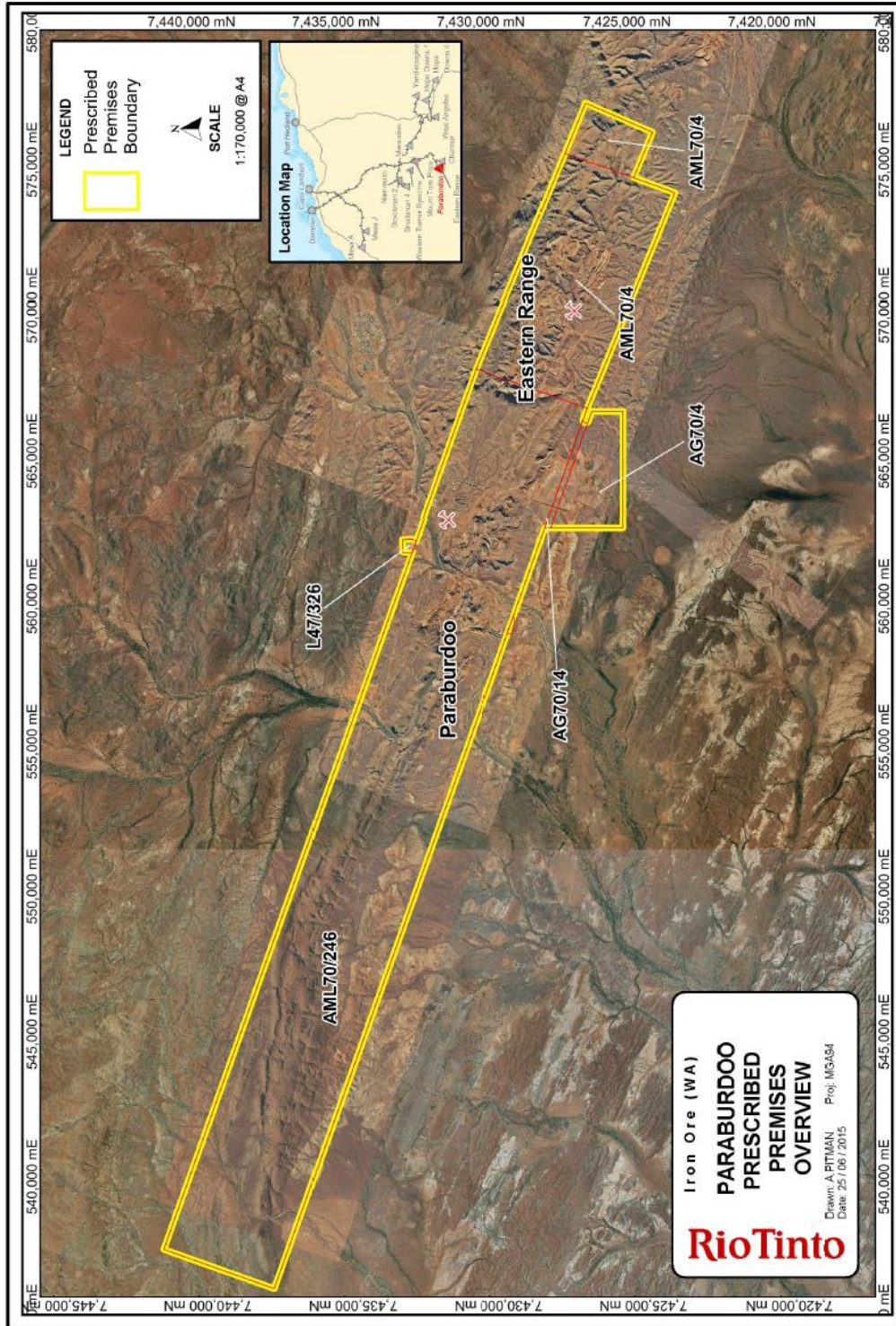
# AMENDED LICENCE FOR PRESCRIBED PREMISES

## Environmental Protection Act 1986, Part V

LICENCE NUMBER: L5275/1972/12

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### ATTACHMENT 1 - PLAN OF PREMISES





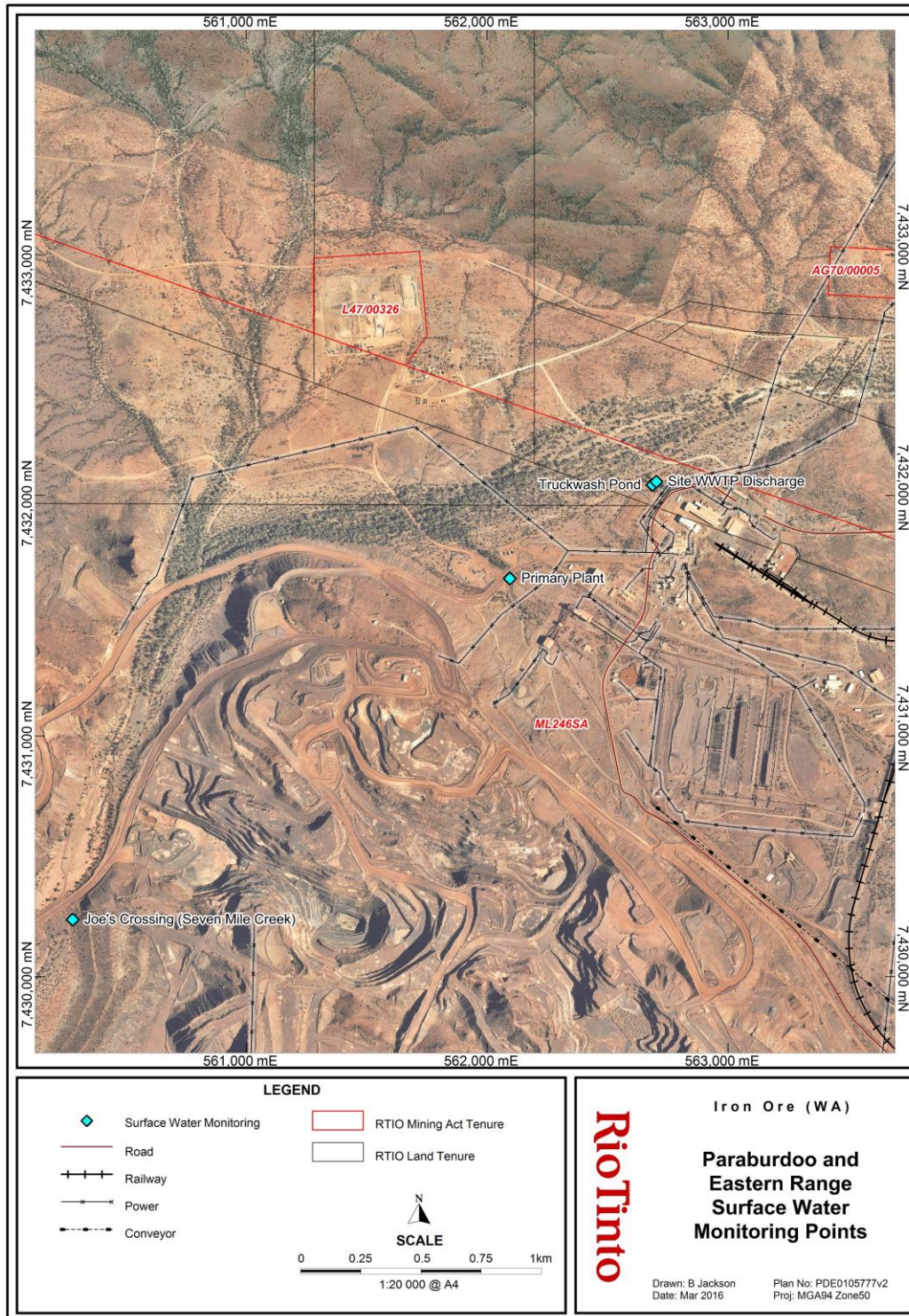
# AMENDED LICENCE FOR PRESCRIBED PREMISES

## *Environmental Protection Act 1986, Part V*

LICENCE NUMBER: L5275/1972/12

FILE NUMBER: DER2014/000429

### ATTACHMENT 2 - PARABURDOO SURFACE WATER MONITORING POINTS



ISSUE DATE:

Thursday, 15 May 2014

AMENDMENT DATE:

Thursday, 19 May 2016



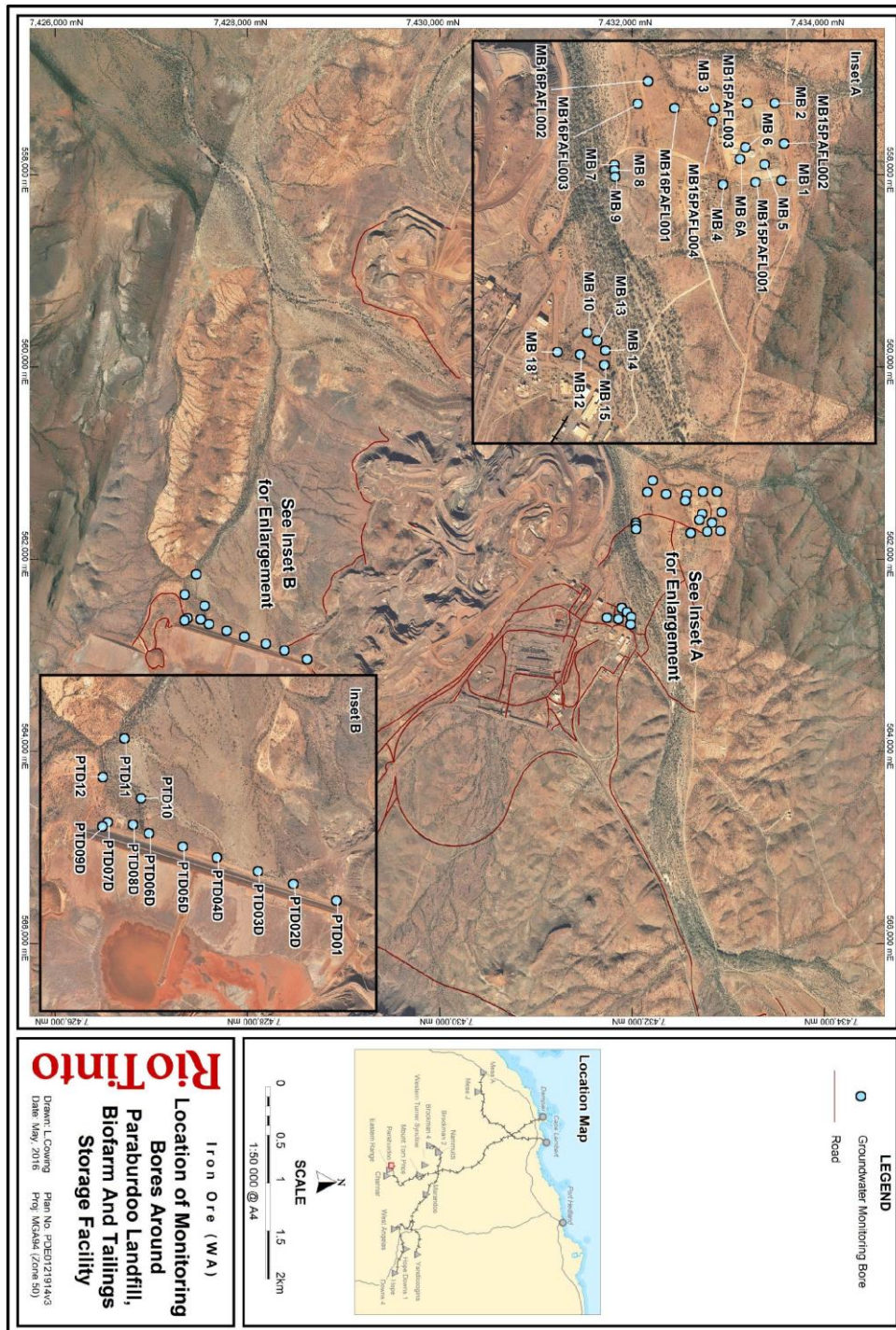
# AMENDED LICENCE FOR PRESCRIBED PREMISES

## Environmental Protection Act 1986, Part V

LICENCE NUMBER: L5275/1972/12

FILE NUMBER: DER2014/000429

### ATTACHMENT 3 - LOCATION OF MONITORING BORES AROUND PARABURDOO LANDFILL, BIOREMEDIATION FACILITY AND TAILINGS STORAGE FACILITY



ISSUE DATE:

Thursday, 15 May 2014

AMENDMENT DATE:

Thursday, 19 May 2016



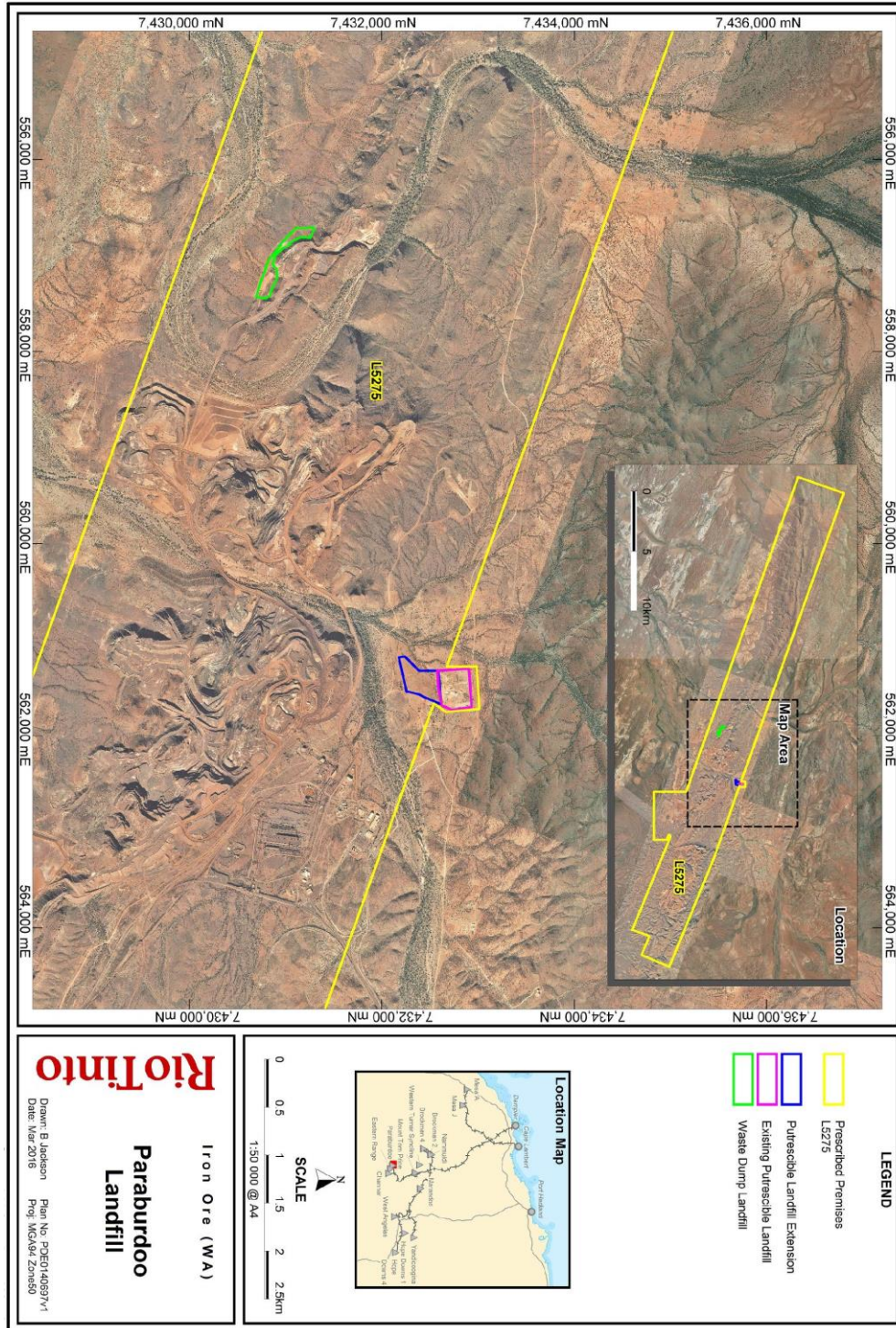
# AMENDED LICENCE FOR PRESCRIBED PREMISES

## *Environmental Protection Act 1986, Part V*

LICENCE NUMBER: L5275/1972/12

FILE NUMBER: DER2014/000429

### ATTACHMENT 4 – PARABURDOO LANDFILL AREAS



ISSUE DATE:

Thursday, 15 May 2014

AMENDMENT DATE:

Thursday, 19 May 2016



# AMENDED LICENCE FOR PRESCRIBED PREMISES

## *Environmental Protection Act 1986, Part V*

LICENCE NUMBER: L5275/1972/12

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### ATTACHMENT 5 – PARABURDOO POWER STATIONS AND AIR EMISSION POINTS





## AMENDED LICENCE FOR PRESCRIBED PREMISES

### *Environmental Protection Act 1986, Part V*

**LICENCE NUMBER:** L5275/1972/12

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#### ATTACHMENT 6 – ANNUAL AUDIT COMPLIANCE REPORT

### **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 initialed by the person(s) who signs Section C of this Annual Audit Compliance Report

INITIAL: \_\_\_\_\_



## AMENDED LICENCE FOR PRESCRIBED PREMISES

### *Environmental Protection Act 1986, Part V*

LICENCE NUMBER: L5275/1972/12

FILE NUMBER: DER2014/000429

#### **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 initialed by the person(s) who signs Section C of this annual audit compliance report

**INITIAL:** \_\_\_\_\_



## AMENDED LICENCE FOR PRESCRIBED PREMISES

### *Environmental Protection Act 1986, Part V*

**LICENCE NUMBER:** L5275/1972/12

**FILE NUMBER:** DER2014/000429

#### **SECTION C - SIGNATURE AND CERTIFICATION**

This Annual Audit Compliance Report must only be signed by a person(s) with legal authority to sign it. The ways in which the Annual Audit Compliance Report 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 Annual Audit Compliance Report 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.

<b>If the licence holder is</b>		<b>The Annual Audit Compliance Report must be signed and certified:</b>
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"/>	by affixing the common seal of the Licensee in accordance with the Corporations Act 2001; 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)





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** **Pilbara Iron Company (Services) Pty Ltd**

**Licence:** **L5275/1972/12**

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**Registered office:** Level 22, Central Park  
152-158 St Georges Terrace  
PERTH WA 6000

**ACN:** 107 210 248

**Premises address:** Paraburdoo Iron Ore Mine  
AML70/246, L47/326, AG70/4, AG70/14 and AML70/4  
ROCKLEA WA 6751

**Issue date:** Thursday, 15 May 2014

**Commencement date:** Wednesday, 28 May 2014

**Expiry date:** Friday, 27 May 2033

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements.

Decision Document prepared by: Christine Pustkuchen  
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 type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	5	30,000,000 tonnes per annual period
	6	800,000 tonnes per annual period
	12	10,000,000 tonnes or more per annual period
	52	127.5 MW
	64	5,000 tonnes per annual period
	73	5,903 cubic metres in aggregate
Application verified	Date: 26/6/2015	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Compliance Certificate received	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
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 <sub>2</sub> requirements of Kwinana EPP.		

### 3 Executive summary of proposal and assessment

Pilbara Iron (Company) Service Pty Ltd (the Licensee) operate the Paraburdoo Iron Ore Mine which is located in the Pilbara region of Western Australia, approximately 80 kilometres (km) south of Tom Price.

This Decision Document assesses an amendment request made by the Licensee. The following forms the basis of this assessment:

- The emissions and discharges associated with the construction and operation of a new putrescible landfill adjacent to the existing site, including an increase in throughput for Category 64;
- The emissions and discharges associated with the operation of a new waste dump landfill constructed under W5568/2013/1;
- Change in tenement number (removal of L3116/4589) with the correct tenement number L47/326 and the replacement of premise map in Attachment 1 with new updated map;
- Removal of Category 61 (Liquid Waste facility);
- Addition of Category 12 (Screening etc. of material);
- Addition of Category 73 (Chemical Storage);
- Addition of design/production capacities for Category 5, 6, 12, 52, 64 and 73 activities;
- Air emission for the Paraburdoo power stations; and
- Other changes have been made to reflect 'Departmental reform' as published on DER's website under "*Administrative changes implemented within the Department of Environment Regulation*" [www.der.wa.gov.au](http://www.der.wa.gov.au).

#### Putrescible landfill expansion

The Licensee proposes to expand the onsite putrescible landfill facility as the existing putrescible landfill is nearing capacity. The "new putrescible landfill" includes the construction of new trenches and a 1.8 metre (m) high mesh fence in an area directly south of the existing putrescible landfill. All trenches will be 'drive-in' trenches to reduce the amount of wind-blown rubbish, with a tipping area of less than 30 m. The depth of each trench is expected to be on average 3 m deep. The width of the trenches will be 30 m and the length up to 50 m. An earthen bund will also be constructed around the perimeter to prevent storm water from coming into contact with waste. The expected types of waste to be disposed of at the new putrescible landfill include:

- Clean fill;
- Inert waste type 1;
- Inert waste type 2;
- Putrescible waste;
- Type 1 special waste; and



- Type 2 special waste.

A specific trench within the landfill will be designated to accept only Type 1 (e.g. protective equipment from personnel working in areas with potentially fibrous material such as personal ventilation collection systems, used air filters and clothing) and Type 2 special waste. Type 2 special waste will include small amounts of expired over-the-counter medicines (all expired prescription medicines are sent offsite), medical gloves, bandages, saline solution, needles, syringes, alcohol and other drug testing equipment and general packaging waste. It is expected that the landfill will have an annual throughput of 3,000 tonnes per annum (tpa) and have an operating life of 10+ years.

Construction of the new putrescible landfill will commence in Q1 2016 (pending approval).

#### Waste dump landfill

The Licensee has constructed a waste dump landfill within the previously mined out and backfilled 4W Pit. The waste dump landfill will accept predominantly inert wastes (rubber tyres, conveyor belt, low grade steel spools, concrete, unrecoverable steel and inert plastics), but also broken wooden pallets, which are classified as putrescible under the Landfill Definitions.

The design capacity of the waste dump landfill is approximately 2,000 tpa and will have an expected lifespan of 5+ years.

#### Chemical storage

A reconciliation of diesel storage tanks was conducted across the premises and it was determined that approximately 5,903 kilolitres (kL) of fuel is stored onsite. This triggers Category 73 "Bulk storage of chemicals" as it exceeds the threshold of 1,000 cubic meters (m<sup>3</sup>) in aggregate. The Licensee currently holds a registration (R1891 issued in 2006) for Category 73 and has requested to have Category 73 added to the Licence.

#### Power stations

As a part of this amendment, consideration was given to air emissions from Paraburdoo's Category 52 power stations. A condition and map was added to the Licence to depict these stations and their respective stack air emission points.

Where conditions have been added or removed from the existing Licence these have been justified in Section 4.



## 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			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Preamble / Introduction	N/A.	The Licence template was amended to a format consistent with other Premises occupied by the Licensee. Premises production / design capacities were included for Category 5, 6, 52, 64 and 73 activities.	NA.
Definitions	N/A.	Various definitions have been removed where no longer relevant to the current Licence, or added where necessary to account for current operations and Licence conditions.	NA.
General conditions	N/A.	General conditions pertaining to the Annual Environmental Report have been moved to the end of the Licence to form a consolidated reporting section. This format is consistent with other instruments for Premises occupied by the Licensee.	N/A.
Premises operation	L1	<p><b>Amendments to Prescribed Premise Categories</b></p> <p>Category 12 with a design capacity of 10,000,000 tpa has been included onto the Licence to allow for multiple plants to operate onsite simultaneously in the future. The Licensee must ensure that the combined design capacity of all Category 12 mobile plants onsite at the same time is restricted to 10,000,000 tpa.</p> <p>Condition L1 has been added to the Licence. The mobile plants are to be managed in accordance with the <i>Iron Ore (WA) Mobile Crushing and Screening Management Plan</i>, Rio Tinto, 2015 (RTIO-HSE-0235877) and Licence conditions.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Dangerous Goods Safety Act 2004</i>.</p> <p>DER public website at: <a href="http://www.der.wa.gov.au">www.der.wa.gov.au</a></p>
	N/A.	<p>Category 61 "Liquid waste facility" has been removed from the Licence. The category is not consistent with the activities that occur on the premises. Oily water that is generated on site (from the mine site workshop and surrounding facilities) is captured and treated by an oily water separator. This treated water is then disposed of through the onsite bioremediation facility. The Licensee has confirmed that no offsite generated waste is treated through the Paraburdoo bioremediation facility. Therefore Category 61 does not apply and has been removed from the Licence.</p>	<p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>DER guidance</p>



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>The design capacity for Category 64 has been increased from 3,000 to 5,000 tpa. This is to include the addition of the Category 64 waste dump landfill (2,000 tpa) which was constructed under W5568/2013/1 (Compliance document received Friday, 29 May 2015). The design capacity for the sites putrescible landfill is 3,000 tpa – this will not change as a result of this amendment – rather the new putrescible landfill will not be utilised until the existing putrescible landfill area is exhausted but there is approval to use it when needed.</p> <p>Category 73 with a design capacity of 5,903 m<sup>3</sup> has been included onto the Licence following a review by the Licensee of the fuel storage onsite, which is over 1,000 m<sup>3</sup>, and hence triggers the Category 73 threshold. The Licensee previously held a registration for Category 73 but wishes to have it included on the licence. Bulk fuel storage is managed on site by two Dangerous Goods licences (DG5008720 and DGS003726) and all storage tanks are either double skinned or located within a bunded area.</p>	statement <i>Licencing and works approvals process, September 2015</i> .
	L2	<p><b>Stormwater</b> Previous conditions L4(a) and L4(b) were removed in accordance with Departmental reform. New condition L2 was included on the Licence to ensure appropriate management of infrastructure which has the potential to contaminate stormwaters on the Premises.</p>	
	L9	<p><b>Chemical storage</b> Previous condition L7(a) and L7(b) have been removed from the Licence as storage of these substances can be sufficiently regulated by the <i>Dangerous Goods Safety Act 2004</i>, the <i>Environmental Protection Act 1986</i> (the Act) and the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>Previous condition L7(c) relating to recovery, removal and disposal of contaminated materials resulting from spills or leaks is now condition L9.</p>	
	L12 – L20	<p><b>Putrescible landfill expansion</b> The current Licence has conditions relating to operation of the site putrescible landfill (tipping area length and height above ground). No additional landfill management conditions for the putrescible landfill are required to be added to the Licence as a result of this amendment.</p> <p>Conditions L17 – L20 have been added to the Licence to ensure that the new putrescible landfill is constructed in accordance with the documentation provided to DER and that a compliance document is submitted when the works have been completed. Condition L20 was</p>	



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	N/A.	<p>also added to ensure that deposition of waste does not occur prior to groundwater monitoring bores being installed (see 'Emissions to land' section).</p> <p><b>Soil bioremediation</b> Previous conditions L9 for oily and solvent wastewater treatment systems and 12 (a) – 12(d) for the soil bioremediation facility have been removed as these are secondary activities, which do not contribute to the nature and type of emissions from the primary activity. This is in accordance with the DER guidance statement <i>Licensing and works approvals process, September 2015</i>.</p>	
Point source emissions to air including monitoring	N/A.	<p><b>Construction and Operation - Putrescible landfill</b> No point source air emissions are expected during construction or operation of the expanded putrescible landfill. No specified conditions relating to point source emissions to air or the monitoring of such emissions are required to be added to the Licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Application supporting documentation</p> <p>Works approval and Supporting Documentation for W4400/2007/1</p>
	N/A.	<p><b>Operation - Waste Dump landfill</b> No point source air emissions are expected during the operation of the site's waste dump landfill. No specified conditions relating to point source emissions to air or the monitoring of such emissions are required to be added to the Licence.</p>	
	L25	<p><b>Operation – Paraburdoo Power Stations</b> Power production at Paraburdoo includes three gas operated generators:</p> <ul style="list-style-type: none"> <li>• GTG-1 (LM6000 SPRINT unit) which is a gas operated generator with an output of approximately 38 megawatt (MW) (using SPRINT capacity - can produce 42.5 MW);</li> <li>• GTG-2 (LM6000 SPRINT unit) which is a gas operated generator with an output of approximately 38 MW (using SPRINT capacity - can produce 42.5 MW); and</li> <li>• GTG-3 (LM6000 SPRINT unit) which is a gas operated generator with an output of approximately 38 MW (using SPRINT capacity - can produce 42.5MW).</li> </ul> <p>Maximum design capacity for Category 52 is 127.5 MW.</p> <p>There is also a backup 21 MW gas fired diesel generator (GTG-0). This station has not been included on the Licence as per the definition of Category 52, which does not include emergency or standby power generation plants.</p> <p>Works Approval W4400/2007/1 was issued for the construction, commissioning and operation</p>	



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>of GTG-3 in January 2008. All other stations were constructed and operational prior to this date.</p> <p>Sinclair Knight Merz (SKM), on behalf of the Licensee, conducted an air quality impact assessment of the proposed construction of GTG-3. Information was collected from two nearby sensitive receptors, Paraburdoo town site (5.2 km away) and the construction camp (approximately 1.2 km away). Nitrogen dioxide (NO<sub>2</sub>) concentrations at Paraburdoo and the camp were estimated to be 25 ppb (parts per billion) and 40 ppb, respectively. These figures fell below the <i>National Environment Protection (Ambient Air Quality) Measure</i> (NEPM) standard of 120 ppb (max. hourly average).</p> <p>The Licensee monitored NOx emissions during the commissioning phase for GTG-3. Measure concentrations of NOx were below NEPM standards.</p> <p>The Licence was reviewed January 2008 giving consideration to GTG-3 and other operating power stations at Paraburdoo. In this review, DER considered the above information, power plant design (i.e. NEPM and World Health Organisation standards), and NPI reporting data submitted by the Licensee for Paraburdoo. It was concluded that the operation of these plants can be sufficiently regulated under the current operating Licence conditions and provisions of the Act and the <i>Environmental Protection Regulations 1987</i> (the EP Regulations). Hence no further conditions were added.</p> <p>As a part of this amendment, condition L25 was included on the Licence to provide reference to these power stations and their respective stack air emissions points. The Licensee will continue to report air emissions to NPI and DER (as a part of the annual fee calculation).</p> <p>A Licence review will take place in the near future in the process of converting L5375/1972/12 to DER's most current Licence template. This review will consider whether air monitoring conditions are required on the Licence for Paraburdoo.</p>	
<b>Point source emissions to surface water including monitoring</b>	L4 – L6	<p>The Licence has conditions relating to the monitoring of dewatering discharge points to surface water. A minor change has been made the frequency of the monitoring of dewatering discharge at Joe's Crossing. The requirement to undertake monthly monitoring for Total Dissolved Solids and Total Suspended Solids has been changed to quarterly. This is because of the low discharge volumes with long periods where no water is discharged. The Annual Environmental Report has shown that the results are well within previous set limits. Monthly</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Application supporting documentation</p>





DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	N/A.	<p>monitoring of pH is still a requirement of the amended licence. Previous conditions L6(b) and L6(f) have been collated to form Condition L5 which details water monitoring and reporting requirements for Paraburdoo.</p> <p>Condition L6 (previously L6(e)) has been amended to remove the targets from the Licence. The removal of reference to targets is in accordance with Departmental reform. The Licensee will be required to still compare the surface water monitoring results to the appropriate ANZECC 2000 water quality values in the Annual Environmental Report.</p>	<p>DER public website at: <a href="http://www.der.wa.gov.au">www.der.wa.gov.au</a></p> <p>ANZECC 2000</p>
	N/A.	<p><b>Construction and Operation - Putrescible landfill</b> No point source emissions to surface water are expected during construction or operation of the new putrescible landfill. There are no permanent bodies of water in close proximity to the sites putrescible landfill. The nearest waterbody is Turee Creek, which is approximately 12 km away.</p> <p><b>Operation - Waste Dump landfill</b> No point source emissions to surface water are expected during the operation of the sites waste dump landfill. There are no permanent bodies of water in close proximity to the sites waste dump landfill. The nearest waterbody is Turee Creek, which is approximately 17 km away.</p> <p>No specified conditions relating to point source emissions to surface water or the monitoring of such emissions are required to be added to the Licence as part of this amendment.</p>	
<b>Point source emissions to groundwater including monitoring</b>	L5	<p><b>Construction and Operation - Putrescible landfill</b> No point source emissions to groundwater are expected during construction or operation of the expanded putrescible landfill. The Licensee has stated that the depth to groundwater in the area is greater than 15 metres below ground level (mbgl). The licence has conditions relating to groundwater monitoring for the new putrescible landfill area.</p> <p><b>Operation - Waste Dump landfill</b> No point source emissions to groundwater are expected during the operation of the sites waste dump landfill. The Licensee has stated that the depth to groundwater in the area is greater than 15 mbgl.</p> <p>The Licence has conditions relating to groundwater monitoring from bores within the premises.</p>	N/A.



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>There will be no changes to these conditions as a result of this amendment. No specified conditions relating to point source emissions to groundwater or the monitoring of such emissions are required to be added to the Licence.</p> <p>Assessment of the impact of landfill seepage on groundwater is discussed in the 'Emissions to land' section.</p>	
<b>Emissions to land including monitoring</b>	L12 – L24	<p><b>Construction and Operation</b> Details of DER's assessment and decision making are included in Appendix A.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Application supportant documentation.</p>
<b>Fugitive emissions</b>	N/A	<p><b>Construction and Operation</b> Details of DER's assessment and decision making are included in Appendix B.</p>	<p>Application supportant documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>DER public website at: <a href="http://www.der.wa.gov.au">www.der.wa.gov.au</a></p>
<b>Odour</b>	N/A	<p><b>Construction and Operation</b> Details of DER's assessment and decision making are included in Appendix C.</p>	Application supportant documentation.
<b>Noise</b>	N/A	<p><b>Construction and Operation - Putrescible landfill and Waste dump landfill</b></p> <p><u>Emission Description</u> <i>Emission:</i> Noise emissions from vehicle movement and earthmoving equipment. <i>Impact:</i> Nuisance noise emissions impacting nearby sensitive receptors (Kurri Kulli mine camp - 2.6km away). <i>Controls:</i> The Licensee has stated that noise levels will comply with the <i>Environmental Protection (Noise) Regulations 1997</i> at all times. Noise levels are not expected to be significant.</p> <p><u>Risk Assessment</u></p>	<p>Application supportant documentation.</p> <p><i>Environmental Protection (Noise) Regulations 1997</i>.</p>



<b>DECISION TABLE</b>			
<b>Licence section</b>	<b>Condition number L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		<p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Due to the large distance to the nearest sensitive receptor (2.6km away) it is unlikely that noise emissions will have a significant impact on the offsite environment. No specified conditions are required to be added to the Licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	
<b>Monitoring general</b>	L5	The existing Licence has conditions relating to monitoring of surface water and land at discharge points located at the sewage treatment plant, primary plant and heavy vehicle wash-down bay. No additional conditions relating to monitoring general are required to be added to the Licence as a result of this amendment.	N/A.
<b>Ambient quality monitoring</b>	L5	The existing Licence has conditions relating to the monitoring of groundwater quality around the existing putrescible landfill on an annual basis. Currently there are seven monitoring bores surrounding the existing putrescible landfill. To monitor the potential impacts of the new putrescible landfill an additional three groundwater monitoring bores will be installed downstream of the new landfill area. Last year bores MB15PAFL001, MB15PAFL002, MB15PAFL003, MB15PAFL004 were installed at the landfill and have now been added into condition L5. Three new bores will be installed later this year in accordance with condition 17. Condition L5 has been updated to include the new bores (MB16PAFL001 and MB16PAFL002 and MB16PAFL003) "once installed" and a map has been added to the Licence outlining their location (Attachment 4).	Application supporting documents.
<b>Information</b>	L26 – L29	Previous conditions 1, 2, 4(c) and 4(d) have been moved to the end of the Licence to form a consolidated reporting section. These are now conditions L26 – L29, respectively. L25 and L26 were amended to reference 'condition 5' which requires sampling and analysis of water.	N/A.



<b>DECISION TABLE</b>			
<b>Licence section</b>	<b>Condition number L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Licence duration</b>	N/A	The Licence duration has been extended to Friday, 27 May 2033 in regard to the DER Guidance Statement on Licence Duration.	DER Guidance Statement on Licence Duration.



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
3/03/2016	Proponent sent a copy of draft instrument	<p>Comments received 30/03/16 requesting the following changes:</p> <ol style="list-style-type: none"> <li>1. The addition of category 12 and associated condition.</li> <li>2. Minor correction to the premises production category for category 73.</li> <li>3. Addition of "offsite" to stormwater management condition 2.</li> <li>4. Removal of the requirement to undertake an assessment of monitoring data.</li> <li>5. Removal of bores MB12, MB14 and MB18 from the bioremediation area.</li> <li>6. Removal of bore PTD01 from tailings area.</li> <li>7. Request to remove bores MB2, MB4, MB5, MB6 and MB6A from the new landfill area due to being dry for several years. Last year MB15PAFL001, MB15PAFL002, MB15PAFL003 and MB15PAFL004 were installed at the landfill.</li> <li>8. Request to no longer undertake monthly monitoring of pH, Total Dissolved Solids (TDS), Total Suspended Solids (TSS) of the dewatering discharge to Joe's crossing due to low volumes.</li> <li>9. The requirement to compare results against livestock drinking water trigger values and not slightly disturbed aquatic ecosystems for the discharge for Joe's Crossing.</li> <li>10. Requested an update maps in schedule</li> </ol>	<ol style="list-style-type: none"> <li>1. Category 12 has been included in the Licence with the addition of new condition 1 to operate in accordance with Iron Ore (WA) Mobile Crushing and Screening Management Plan (RTIO-HSE-0235877).</li> <li>2. The category 73 production capacity has been changed from 5683 cubic meters to 5903 cubic meters.</li> <li>3. Discharge onsite is still a discharge to the environment and therefore the inclusion of this reference has not been included in the Licence.</li> <li>4. The requirement to undertake an assessment has been removed, however a comparison with previous years' data remains a requirement of the Licence.</li> <li>5. The removal of bores MB12, MB14 and MB18 has not been authorised, the Licensee concurred that this is the correct outcome in an email received 22/4/16.</li> <li>6. PTD01 has not been removed. The assessment of this requirement is not the subject of the current amendment.</li> <li>7. Removal of bores has not been completed and will be assessed upon submission of a further amendment request. Bores MB15PAFL001, MB15PAFL002, MB15PAFL003 and MB15PAFL004 have been added to the Licence.</li> <li>8. Monthly monitoring of pH remains a requirement of the licence. The requirement to undertake monthly monitoring when discharging for TDS and TSS has been changed to quarterly due to monitoring results being well within former limits.</li> <li>9. The requirement to compare monitoring results to appropriate guidelines is a requirement of the</li> </ol>



Date	Event	Comments received/Notes	How comments were taken into consideration
		<p>1. 11. An email request received 21/04/16 to remove bores MB7, MB8, and MB9 from the old landfill area due to waste last being disposed in the 1990s.</p> <p>Updated map of groundwater monitoring bores received 11 May 2016.</p>	<p>amended licence. pH values have on occasion exceeded ANZECC guidelines for slightly disturbed ecosystems.</p> <p>10. Schedule 1 maps have been updated as requested.</p> <p>11. The requirement to monitor MB7, MB8 and MB9 remains a requirement of the current amended licence. The assessment of this requirement is not the subject of the current amendment.</p> <p>Map of monitoring bores updated in Schedule 1.</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



## Appendix A

### Emissions to land including monitoring

#### (a) Putrescible landfill

##### Emission Description

*Emission:* Discharge of leachate from waste onto land, generation of wind-blown waste and the release of contaminated stormwater (that has been in contact with waste) on to land.

*Impact:* Contamination of the surrounding environment including soil, surface water and groundwater causing potential death of vegetation and fauna.

*Controls:* No emissions to land are expected during the construction of the site's new putrescible landfill. The Licensee will implement the following controls to manage leachate during operations:

- The new putrescible landfill is located in an area separated from surface water bodies (>12km away) and groundwater (>15mbgl);
- Three new groundwater monitoring bores will be installed downstream of the new putrescible landfill to expand the monitoring bore network so impacts to groundwater from landfill leachate can be monitored;
- No hydrocarbon contaminated waste will be disposed of at the new putrescible landfill. Any contaminated material generated onsite will be transported off site to an appropriate licensed facility;
- Type 1 and Type 2 special waste (will includes used protective equipment, used air filters and clothing, small amounts of expired medicines, medical gloves, bandages, needles and other drug testing equipment) is not expected to generate significant amounts of contaminated leachate; and
- Waste will be compacted and covered by a loader at least weekly.

The Licensee will implement the following controls to manage windblown waste during operations:

- The new putrescible landfill will be fenced with a 1.8m mesh fence to contain windblown litter; and
- Windblown rubbish will be collected on a regular basis and returned to the tipping face.

The Licensee will implement the following controls to manage stormwater during operations:

- Stormwater run-off will be diverted around the new putrescible landfill through the use of earthen bunds surrounding the perimeter of the facility to prevent stormwater coming into contact with waste.

##### Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

##### Regulatory Controls

The three new monitoring bore locations have been added to the Licence as part of this amendment. The bores are not expected to be installed until Q2 2016. A condition has been added to the Licence to ensure deposition of waste does not occur at the new putrescible landfill until the bores have been installed. Bores MB16PAFL001, MB16PAFL002 and MB16PAFL003 have been included in condition L5 to be monitored "once installed".

The current Licence has conditions relating to waste management (trench location and cover requirements) and stormwater management for the site's existing putrescible landfill. These conditions will remain on the Licence and will apply to the sites new putrescible landfill. No addition conditions are required to be added to the Licence.





Residual Risk

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

**(b) Waste dump landfill**

Emission Description

*Emission:* Discharge of leachate from waste onto land, generation of wind-blown waste and the release of contaminate stormwater (that has been in contact with waste) on to land.

*Impact:* Contamination of the surrounding environment including soil, surface water and groundwater causing potential death of vegetation and fauna.

*Controls:* The Licensee will implement the following controls to manage leachate from the waste dump landfill during operations:

- The waste dump landfill is located in an area separated from surface water bodies (>17km away) and groundwater (>70mbgl);
- The waste dump landfill will only receive inert waste in accordance with the Landfill waste classification and Waste Definitions (1996) and wooden pallets. There will be no hazardous waste placed in the landfill. Therefore contaminated leachate is unlikely to be generated;
- Waste will be covered on a regular basis;
- There is little risk of wind-blown waste being generated at the landfill site due to the type of waste being deposited (i.e. Rubber tyres, conveyor belts, concrete, wood(broken pallets) and inert plastics); and
- Stormwater run-off will be diverted around the landfill through the use of earthen bunds where practical.

Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

Regulatory Controls

To ensure only inert waste and wooden pallets are disposed of at the waste dump landfill a condition L20 has been added to the Licence outlining this restriction. This will ensure all other putrescible waste is disposed of at the sites putrescible landfill. Conditions L21 - 23 have been added to the Licence to ensure appropriate management of waste at the waste dump landfill.

Residual Risk

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low



## Appendix B

### Fugitive emissions

#### Emission Description

*Emission:* Fugitive dust from the construction of the new putrescible landfill and daily operation of the Paraburdoo Mine where sources of dust can be attributed to stockpiles, materials handling and crushing, and vehicle movements on dirt roads.

*Impact:* Dust emissions can be harmful to human health and the environment. Elevated total suspended particulates can impact ambient environmental quality resulting in amenity impacts and can smother vegetation.

*Controls:* The construction or operation of the new putrescible landfill expansion is not expected to generate significant dust. Existing dust controls which will continue to be implemented include:

- Spraying working surfaces with water using water carts;
- Stockpile water sprays;
- Water sprays on crushing plants;
- Dust collection systems such as baghouses, coverings on conveyors / transfer points and dust filters;
- Sealing of working surfaces where practicable; and
- Rehabilitation of disturbed areas where possible.

The nearest residential town is Tom Price, which is approximately 80 km south.

#### Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

#### Regulatory Controls

Given the Licensee's management controls and the location of the Premises, fugitive emissions of dust are considered a low risk. Fugitive dust emissions can be sufficiently regulated under Section 49 of the Act. The Licensee has a statutory responsibility to comply with the Act during the operation of the Premises. The *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply. Consequently, previous Licence conditions L3(a) and L3(b) have been deleted and no specific conditions for dust emissions have been included in this Licence.

#### Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low



## Appendix C

### Odour

#### (a) Putrescible landfill

##### Emission Description

*Emission:* Fugitive odour emissions. No odour emissions are expected during construction.

*Impact:* Nuisance odour emissions impacting sensitive receptors (Kurri Killi mine camp – 2.6 km away).

*Controls:* Weekly covering of wastes with inert fill to prevent odour.

##### Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Rare

*Risk Rating:* Low

##### Regulatory Controls

Significant levels of odour are not expected to be generated during the operation of the putrescible landfill. There are no nearby sensitive receptors that could be impacted by odour and the regular covering of wastes with inert fill will ensure odour emissions do not impact the offsite environment. No conditions relating to odour management are required to be added to the Licence.

##### Residual Risk

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

#### (b) Waste dump landfill

##### Emission Description

*Emission:* Fugitive odour emissions

*Impact:* Nuisance odour emissions impacting nearby sensitive receptors

*Controls:* Due to the inert nature of the waste material, no odours will be emitted from the waste dump landfill. No other putrescible waste other than wooden pallets will be disposed of.

##### Risk Assessment

*Consequence:* Insignificant

*Likelihood:* Rare

*Risk Rating:* Low

##### Regulatory Controls

Due to the large distance to the nearest sensitive receptor (Kurri Kulli mine camp - 2.6 km away) and the nature of the waste disposed of it is unlikely that odour emissions will have a significant impact on the offsite environment. No conditions relating to odour are required to be added to the Licence.

##### Residual Risk

*Consequence:* Insignificant

*Likelihood:* Rare

*Risk Rating:* Low