Government of **Western Australia**
Department of **Environment Regulation**

Your ref L8364/2009/2
Our ref DER2014/001419
Enquiries Damian Thomas
Phone 9168 4218
Fax 9168 2179
Email damian.thomas@der.wa.gov.au

Mr Chris Higham
Superintendent Environment - Projects
BHP Billiton Iron Ore Pty Ltd
PO Box 7122 Cloisters Square
PERTH WA 6850

Dear Chris

***ENVIRONMENTAL PROTECTION ACT 1986*: LICENCE GRANTED**

**Premises**
Cowra Camp
Special Lease 3116/6300
**Licence Number:** L8364/2009/2

A licence under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licence includes attached conditions. Under section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to $125,000 and a daily penalty of up to $25,000.

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Damian Thomas on 9168 4218.

Yours sincerely

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

Thursday, 19 February 2015

TL0602 v2.0

Government of Western Australia
Department of Environment Regulation

# Licence

## *Environmental Protection Act 1986*, Part V

## Licensee: BHP Billiton Iron Ore Pty Ltd

## Licence: L8364/2009/2

**Registered office:** Level 1, City Square Brookfield Place
125 -137 St Georges Terrace
PERTH WA 6000

**ACN:** 008 700 981

**Premises address:** Cowra Camp
Special Lease 3116/6300
MULGA DOWNS WA 6751
As depicted in Schedule 1.

**Issue date:** Thursday, 19 February 2015

**Commencement date:** Sunday, 1 March 2015

**Expiry date:** Saturday, 29 February 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 |
|---|---|---|---|
| 54 | Sewage facility premises –<br>(a) on which sewage is treated (excluding septic tanks); or<br>(b) from which treated sewage is discharged onto land or into waters. | 100 cubic metres or more per day | 148 cubic metres per day |

**Conditions**
This licence is subject to the conditions set out in the attached pages.

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

# Contents



# 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 works with the business owners, community, consultants, industry and other representatives 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.

Other Guidelines which you should be aware of include:

- *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).

**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 Cowra camp is situated in the Pilbara region of Western Australia, approximately 230 km south of the town of Port Hedland. The camp can provide accommodation for approximately 400 mining personnel associated with the mining and rail operations administered by BHP Billiton Iron Ore Pty Ltd. A packaged wastewater treatment plant (WWTP) has been constructed at the Cowra camp to treat wastewater generated at the camp to a secondary standard.

The Cowra camp WWTP has a maximum design capacity of 148m$^3$/day and comprises the following:

- A WWTP constructed within 50m x 50m bunded area;
- A fenced evaporation pond lined with a high density polyethylene (HDPE) liner with approximate dimensions of 190m x 60m x 1.5m deep (1.1 hectare);
- Approximately 650m of polypipe to transport treated wastewater; and
- Approximately 1 km of access tracks (5m wide).

The nearest sensitive receptor is the Auski Roadhouse which is approximately 10km away.

The Cowra camp is currently under care and maintenance with no processing of wastewater occurring during the 2014 period. In order to allow for potential future use BHP Billiton Iron Ore intend to continue licence L8364/2009/2.

This Licence is the successor to licence L8364/2009/1 and includes changes to conditions in accordance with REFIRE format.

The licences and works approvals issued for the Premises since 6/11/2008 are:

| **Instrument log** | | |
|---|---|---|
| **Instrument** | **Issued** | **Description** |
| W4470/2008/1 | 6/11/2008 | Works Approval issued |
| L8364/2009/1 | 25/02/2010 | Licence issued |
| L8364/2009/2 | 19/02/2015 | Licence re-issue and conversion to REFIRE format |

**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;

**'AS/NZS 2031'** means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis;*

**'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 5667.4'** means the Australian Standard AS/NZS 5667.4 *Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made;*

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

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

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

**'CEO'** for the purpose of correspondence means:

Manager Licensing (Waste North)
Department of Environment Regulation
Locked Bag 33 Cloisters Square
PERTH WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: industry.regulation@der.wa.gov.au;

**'cfu/100mL'** means coliform forming units per 100 millilitres;

**'code of practice for the storage and handling of dangerous goods'** means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

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

**'dangerous goods'** has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

**'environmentally hazardous material'** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are

stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

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

**'fugitive emissions'** means all emissions not arising from point sources identified in Sections 2.2, 2.3, 2.4 and 2.5;

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

**'leachate'** means liquid released by or water that has percolated through waste and which contains some of its constituents;

**'Licence'** means this Licence numbered L8364/2009/2 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;

**'mass balance'** means the calculation resource flows and losses based on the mass and/or volume of inputs to a process which balances the mass and/or volume of outputs as products, emissions and wastes, plus any change in stocks;

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

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

'**process equipment**' means any wastewater or sludge containment infrastructure or wastewater treatment vessel;

**'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;

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

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

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

**'wastewater treatment vessels'** means any vessel or tank containment infrastructure associated with the treatment of wastewater.

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

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

## 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 operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.

1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous substances are stored in accordance with the code of practice for the storage and handling of dangerous goods.

1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.2.5 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 record and investigate the exceedance of any descriptive or numerical limit, and/or target in this section.

1.3.2 The Licensee shall only allow waste to be accepted on to the Premises if:
(a) it is of a type listed in Table 1.3.1; and
(b) the quantity accepted is below any 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 | Quantity Limit | Specification[1] |
|---|---|---|
| Sewage | 148 $m^3$/day | Accepted through sewer inflow(s) only |

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

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

**Table 1.3.2: Waste processing**

| Waste type | Process | Process requirements |
|---|---|---|
| Sewage | Physical, biological and chemical treatment | Treatment of sewage waste shall be targeted at or below the treatment capacity of 148 $m^3$/day. |

1.3.4 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3.

**Table 1.3.3: Containment infrastructure**

| Vessel or compound | Material | Requirements |
|---|---|---|
| Evaporation ponds | Treated wastewater | Lined with High Density Polyethylene liner |

1.3.5 The Licensee shall manage all wastewater treatment evaporation ponds such that:
(a) overtopping of the ponds does not occur; and
(b) a freeboard equal to, or greater than, 500mm is maintained
(c) the integrity of the containment infrastructure is maintained; and
(d) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter; and
(e) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.

1.3.6 The Licensee shall manage the wastewater treatment vessels such that:
(a) overtopping of the vessels does not occur; and
(b) stormwater runoff is prevented from entering the vessels; and
(c) there is no discernible seepage loss from the vessels; and
(d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the vessels.

1.3.7 The Licensee shall:
(a) implement security measures at the site to prevent as far as is practical unauthorised access to the site; and
(b) undertake regular inspections of all security measures and repair damage as soon as practicable.

# 2 Emissions

There are no specified conditions relating to emissions in this section.

## 2.1 General

There are no specified conditions relating to general emissions in this section.

## 2.2 Point source emissions to air

There are no specified conditions relating to point source emissions to air in this section.

## 2.3 Point source emissions to surface water

There are no specified conditions relating to point source emissions to surface water in this section.

## 2.4 Point source emissions to groundwater

There are no specified conditions relating to point source emissions to groundwater in this section.

## 2.5 Emissions to land

There are no specified conditions relating to emissions to land in this section.

## 2.6 Fugitive emissions

There are no specified conditions relating to fugitive emissions in this section.

## 2.7 Odour

There are no specified conditions relating to odour in this section.

## 2.8 Noise

There are no specified conditions relating to noise in this section.

# 2 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 microbiological samples are collected and preserved in accordance with AS/NZS 2031; 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 quarterly monitoring is undertaken at least 45 days apart.

3.1.3 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.

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

## 3.2 Monitoring of point source emissions to air

There are no specified conditions relating to monitoring of point source emissions to air in this section.

## 3.3 Monitoring of point source emissions to surface water

There are no specified conditions relating to monitoring of point source emissions to surface water in this section.

## 3.4 Monitoring of point source emissions to groundwater

There are no specified conditions relating to monitoring of point source emissions to groundwater in this section.

## 3.5 Monitoring of emissions to land

There are no specified conditions relating to monitoring of emissions to land in this section.

## 3.6 Monitoring of inputs and outputs

There are no specified conditions relating to monitoring of inputs and outputs in this section.

### 3.7 Process monitoring

3.7.1 The Licensee shall undertake the monitoring in Table 3.7.1 according to the specifications in that table.

**Table 3.7.1: Process monitoring[3]**

| Monitoring point reference and location | Process description | Parameter | Units | Averaging period | Frequency | Method |
|---|---|---|---|---|---|---|
| P1 | Discharge from wastewater treatment plant to evaporation pond | Volumetric flow rate (cumulative) | L/s or $m^3$/day | Monthly | Continuous | None specified |
| | | Biochemical Oxygen Demand | mg/L | Spot sample | Quarterly | None specified |
| | | Total Suspended Solids | | | | |
| | | Total Nitrogen | | | | |
| | | Total Phosphorus | | | | |
| | | Residual Chlorine | | | | |
| | | pH[1] | pH Units | | | |
| | | E.coli[2] | cfu/100 mL | | | |

Note 1: In field non- NATA accredited analysis permitted.
Note 2: Actual units are to be reported except where the result is greater than the highest detectable level of 24,000 cfu/100mL. In this case the reporting of the highest detectable level is permitted.
Note 3: Only required when discharge from the wastewater treatment plant is occurring.

### 3.8 Ambient environmental quality monitoring

There are no specified conditions relating to ambient environmental quality monitoring in this section.

### 3.9 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.

# 3 Improvements

There are no specified improvement conditions in this section.

# 5 Information

## 5.1 Records

5.1.1 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 5.1.1(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.

5.1.2 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.

5.1.3 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.

5.1.4 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.

## 5.2 Reporting

5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 30 September each year. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

**Table 5.2.1: Annual Environmental Report**

| Condition or table (if relevant) | Parameter | Format or form[1] |
|---|---|---|
| - | Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken | None specified |
| 1.3.5 | Summary of any freeboard target exceedances and any action taken. | None specified |
| Table 3.7.1 | Process monitoring | None specified |
| 5.1.3 | Compliance | Annual Audit Compliance Report (AACR) |
| 5.1.4 | Complaints summary | None specified |

Note 1: Forms are in Schedule 2

5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.

5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO at the Contact Address according to the specifications in that table.

**Table 5.2.2: Non-annual reporting requirements**

| Condition or table (if relevant) | Parameter | Reporting period | Reporting date (after end of the reporting period) | Format or form[1] |
|---|---|---|---|---|
| - | 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 |

Note 1: Forms are in Schedule 2

### 5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO at the Contact Address and in accordance with the notification requirements of the table.

**Table 5.3.1: Notification requirements**

| Condition or table (if relevant) | Parameter | Notification requirement[1] | Format or form[2] |
|---|---|---|---|
| 1.3.1 and 2.1.1 | Breach of any limit specified in the Licence | Part A: As soon as practicable but no later than 5pm of the next working day<br><br>Part B: As soon as practicable | N1 |
| - | Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution | | |
| 3.1.4 | Calibration report | As soon as practicable. | None specified |
| - | Operations recommencing | At least 28 days prior to operations recommencing | None specified |

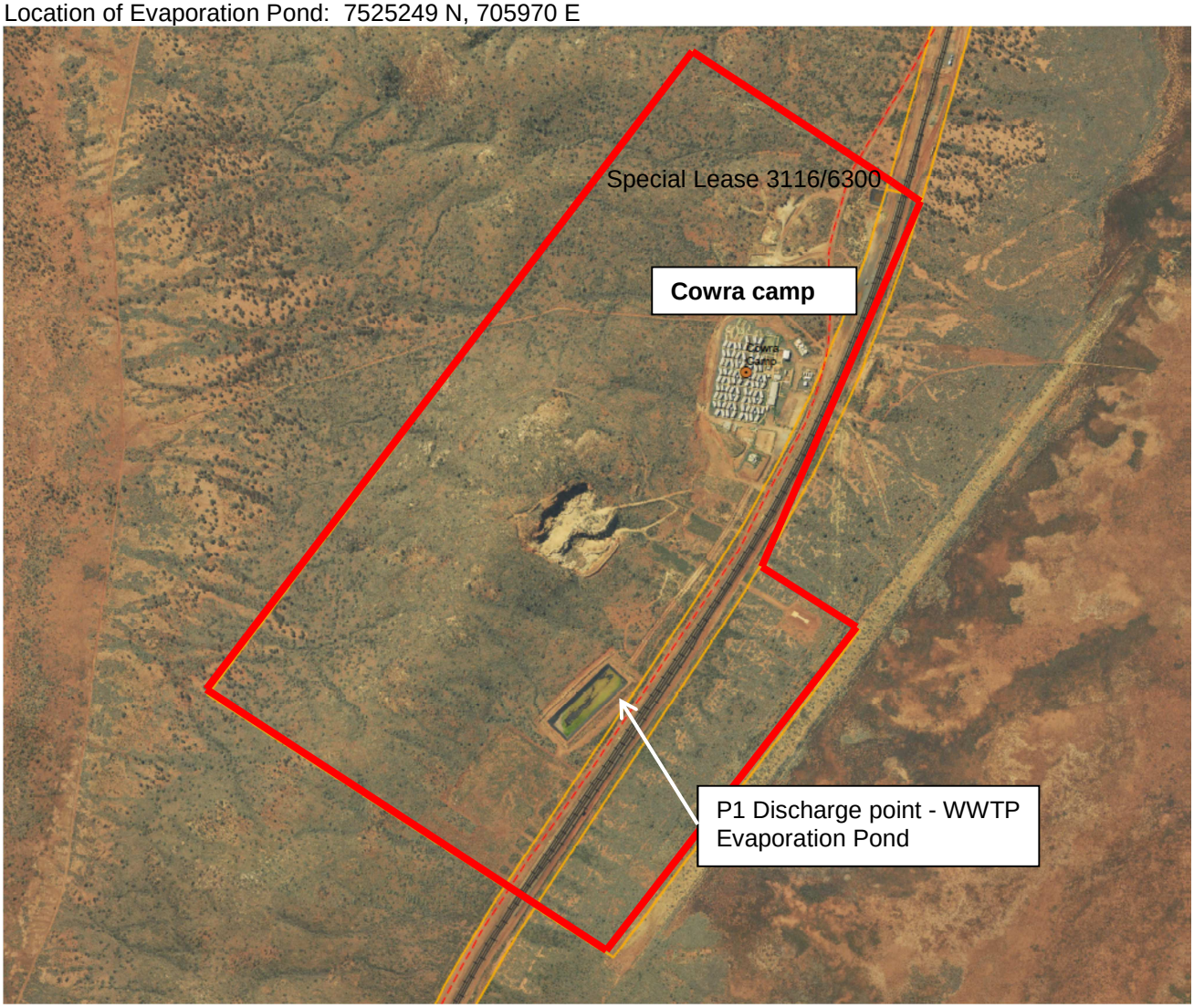
Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the Act.
Note 2: Forms are in Schedule 2

# Schedule 1: Maps

**Premises map**

The Premises is shown in the map below. The red line depicts the Premises boundary.

Location of Wastewater Treatment Plant: 7525734 N, 706300 E
Location of Evaporation Pond: 7525249 N, 705970 E



# 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:<br><br>Trading as: | ABN: |
| Reporting period:<br><br>_____ 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 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?: | |
| ☐ Yes ☐ Reported to DER verbally<br>Date _____<br>☐ Reported to DER in writing<br>Date _____ | ☐ No |
| d) Has DER taken, or finalised any action in relation to the non compliance?: | |
| | |
| e) Summary of particulars of the non compliance, and what was the environmental impact: | |
| | |
| f) If relevant, the precise location where the non compliance occurred (attach map or diagram): | |
| | |
| g) Cause of non compliance: | |
| | |
| h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance: | |
| | |
| i) Action taken or that will be taken to prevent recurrence of the non compliance: | |
| | |

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

Initial:

# SECTION C

## SIGNATURE AND CERTIFICATION

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

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

| If the licence holder is | | The Annual Audit Compliance Report must be signed and certified: |
|---|---|---|
| An individual | □ | 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 | □ | 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 | □ | 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) | □ | 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 | □ | 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: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SEAL (if signing under seal)

Licence: L8364/2009/2 Licensee: BHP Billiton Iron Ore Pty Ltd
Form: N1 Date of breach:

**Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.**

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 | |

| **Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution** | |
|---|---|
| Date and time of event | |
| Reference or description of the location of the event | |
| Description of where any release into the environment took place | |
| Substances potentially released | |
| Best estimate of the quantity or rate of release of substances | |
| Measures taken , or intended to be taken, to stop any emission | |
| Description of the failure or accident | |

## 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<br>BHP Billiton Iron Ore Pty Ltd | |
| Date | |

Government of **Western Australia**
Department of **Environment Regulation**

# Decision Document

## *Environmental Protection Act 1986,* Part V

## Proponent: BHP Billiton Iron Ore Pty Ltd

## Licence: L8364/2009/2

| | |
|---|---|
| **Registered office:** | Level 1, City Square Brookfield Place<br>125 -137 St Georges Terrace<br>PERTH WA 6000 |
| **ACN:** | 008 700 981 |
| **Premises address:** | Cowra Camp<br>Special lease 3116/6300<br>MULGA DOWNS WA 6751 |
| **Issue date:** | Thursday, 19 February 2015 |
| **Commencement date:** | Sunday, 1 March 2015 |
| **Expiry date:** | Saturday, 29 February 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: | Michael Christensen<br>Licensing Officer |
| Decision Document authorised by: | Stephen Checker<br>Manager Licensing |

# Contents



# 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, 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.

**Works approval and licence conditions**
DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

**Standard conditions (SC)**

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

**Optional standard conditions (OSC)**

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

**Non standard conditions (NSC)**

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.

# 2 Administrative summary

| Administrative details | | |
|---|---|---|
| Application type | Works Approval ☐<br>New Licence ☒<br>Licence amendment ☐<br>Works Approval amendment ☐ | |
| Activities that cause the premises to become prescribed premises | **Category number(s)**<br>54 | **Assessed design capacity**<br>148m$^3$/day |
| Application verified<br>Application fee paid | Date: 21/11/2014<br>Date: 23/12/2014 | |
| Works Approval has been complied with<br>Compliance Certificate received | Yes☐ No☐ N/A☒<br>Yes☐ No☐ N/A☒ | |
| Commercial-in-confidence claim | Yes☐ No☒ | |
| Commercial-in-confidence claim outcome | | |
| Is the proposal a Major Resource Project? | Yes☐ No☒ | |
| Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*? | Yes☐ No☒ | Referral decision No:<br>Managed under Part V ☐<br>Assessed under Part IV ☐ |
| Is the proposal subject to Ministerial Conditions? | Yes☐ No☒ | Ministerial statement No:<br>EPA Report No: |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)? | Yes☐ No☒<br>Department of Water consulted Yes ☐ No ☒ | |
| Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒<br>If Yes include details of which EPP(s) here. | | |
| Is the Premises subject to any EPP requirements? Yes☐ No☒<br>If Yes, include details here, eg Site is subject to $SO_2$ requirements of Kwinana EPP. | | |

# 3 Executive summary of proposal

BHP Billiton Iron Ore (BHPBIO) operates a wastewater treatment plant (WWTP) at Cowra camp which is located approximately 230 km south of Port Hedland. The nearest sensitive receptor to Cowra camp is the Auski Roadhouse located approximately 10 km away. The camp accommodates up to 400 personnel and was initially built for the construction workforce during the rail duplication project. The camp is currently not in use and the WWTP is in care and maintenance in the event that BHPBIO requires the camp at a future date for personnel working in the area.

The WWTP has the capacity to treat a maximum of 148 $m^3$/day and has been constructed within a 50 m by 50 m bunded area. The treated effluent is discharged to a high density polyethylene (HDPE) lined evaporation pond which is 190 m by 60 m by 1.5 m deep and allows for a freeboard of 500 mm. Treated effluent is transported to the evaporation pond through poly pipes located in a bunded corridor from the WWTP.

The WWTP system is based on moving bed bio-film reactor technology, which is a biological treatment process and is designed to reduce biochemical oxygen demand (BOD), total suspended solids (TSS), total nitrogen (TN) and total phosphorus (TP) to acceptable levels (see Table 1).

The WWTP incorporates the following components and process functions (as shown in Figure 1):

- Wet well - receives grey and black water, which is gravity fed from the camp facilities;
- Balance tank – wastewater is pumped from the wet well to a 60,000L balance tank. The tank retains wastewater, for a minimum of 2 hours, to balance out the peak flow loads and provide a constant flow in to the WWTP;
- Inlet screen – removes coarse suspended solids in the influent;
- Moving Bed Bio-film Reactor unit – wastewater is fed from the balance tanks to the different stages of the bioreactors for organic matter removal and N reduction. N reduction is achieved through the conversion of ammonia ($NH_3$), nitrites and nitrates by bacteria to N gas. Wastewater initially enters an anoxic zone for conversion of nitrate to N gas and then passes through to an aerobic zone for the conversion of $NH_3$ to nitrite and nitrate. A percentage of water leaving the aerobic zone is then recycled back into the anoxic zone for further conversion of nitrate to nitrogen gas;
- Clarifier – treated wastewater from the bioreactor flows into a clarifier (settling tank) for biomass removal. In addition, aluminium or ferric chloride will be added to the clarifier for P removal;
- Sludge storage tanks – receives settled biomass or solids. Tanks will be emptied by a licensed contractor and trucked to an appropriate disposal facility, as required. Supernatant from the clarifier and any overflow from the sludge storage tanks will be directed back to the wet well and cycled back through the system;
- Disinfection – filtered effluent is treated with liquid chlorine (Cl) to achieve a residual free Cl level of > 0.5 mg/L. Cl is injected by an electronic chemical dosing pump with a metering arrangement prior to discharge to the evaporation pond;
- Effluent storage tank – effluent is pumped to two storage tanks for pumping to the evaporation pond; and
- Alarm system – the WWTP is equipped with alarms and automatic shut downs in the event of chemical failure. The balance tank and effluent storage tanks provide storage capacity for wastewater during repair of the system.

The evaporation pond is located approximately 1 km south of the accommodation camp and is fenced to restrict access to the pond. The pond has been designed to accommodate the wastewater from the

WWTP and maintains a freeboard of 500 mm to minimise the potential for overtopping of the ponds. Surface water diversion structures and embankment armouring have been constructed to prevent ingress of uncontaminated surface water to the pond and to prevent erosion of the pond embankment.

Anticipated effluent quality is detailed in Table 1.

**Table 1: Treated Effluent Standards**

| Parameter | BHPBIO Value | Australian Guidelines* |
|---|---|---|
| Effluent volume | Maximum 148 kL/day | N/A |
| Temperature | Ambient | N/A |
| pH | 6.5-8.5 | Approx. 6 - 9 |
| Total Suspended Solids | <30 mg/L | 25-40 mg/L |
| Biochemical Oxygen Demand | <20 mg/L | 20-30 mg/L |
| Total Nitrogen | 40 mg/L | 20-50 mg/L |
| Residual free chlorine | >0.5 mg/L | N/A |
| Total phosphorus | 15 mg/L | 6 - 12 mg/L |
| *E.coli* | <1000 cfu/100 mL | $10^5$ - $10^6$ org/100 mL |

*Australian Guidelines for Sewerage Systems – Effluent Management.

BHPBIO monitoring regimes includes the following:

- A flow meter which records monthly cumulative volumes of treated wastewater discharged to the evaporation pond.
- Monthly water quality testing of pH, electrical conductivity, total dissolved solids, total suspended solids, biochemical oxygen demand, total nitrogen and total phosphorus.
- Quarterly water quality testing *E.coli*, major ions, heavy metals, ammonium nitrogen, nitrate plus nitrite, nitrogen and synthetic hydrocarbons.
- Laboratory analysis which is undertaken at a NATA accredited laboratory.
- Weekly visual inspections of the WWTP, pipeline and evaporation pond, to inspect:
    - equipment, pumps and pipes for leaks;
    - system levels and capacity, including blockages;
    - water quality, including algal blooms and odours;
    - integrity of the WWTP, evaporation pond liner and embankment, pipeline bunding, fencing and fauna egress ramps; and
    - flora and fauna.
- An Operations and Maintenance Manual for the WWTP and evaporation pond, which incorporates the supplier's recommendations, health, safety and environmental procedures, emergency response plans and monitoring programs.

The Cowra camp WWTP has been assessed as presenting a low risk to the environment during operations. The Decision Table below outlines potential emissions and discharges identified from the operation of this facility.

# 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DER's Corporate Policy Statement No. 7 – Operational Risk Management and the Matrix attached to this Decision Document. Where other references have been used in making the decision they are detailed in the decision document.

**DECISION TABLE**

| Works Approval / Licence section | Condition number W = Works Approval L= Licence | OSC or NSC | Justification (including risk description & decision methodology where relevant) | Reference documents |
|---|---|---|---|---|
| **General conditions** | L1.2.3 - L1.2.5<br>L1.3.1 – 1.3.7 | OSC | Emission Description<br>*Emission:* Stormwater contaminated with hydrocarbons, chemicals or treated effluent.<br>*Impact:* Contamination of surrounding land and surface water drainage systems, eutrophication of waterways, algal blooms.<br>*Controls:* All hydrocarbons and chemicals are stored in accordance with Australian Standards. The WWTP has been constructed within a bunded area and stormwater is directed away from the plant. The lined evaporation pond will be maintained to ensure sufficient freeboard of 500 mm to prevent overflow during extreme weather events. The pond embankment includes armouring to prevent ingress of uncontaminated surface water to the pond and to prevent erosion of the embankment.<br><br>Risk Assessment<br>*Consequence*: Minor<br>*Likelihood:* Unlikely<br>*Risk Rating:* Moderate<br><br>Regulatory Controls<br>OSC 1.2.3 - 1.2.5 have been added to the licence to require the management of environmentally hazardous substances and stormwater run-off at the premises.<br><br>Premises operation conditions 1.3.1 -1.3.7 have been added to the licence requiring the proponent to record and investigate any exceedances in this | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation<br><br>*Environmental Protection (Unauthorised Discharges) Regulations 2004* |

| DECISION TABLE | | | | |
|---|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **OSC or NSC** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | | section and to ensure the Licensee maintains the evaporation pond and the WWTP infrastructure, including sufficient freeboard on the evaporation pond to prevent overflows during extreme weather conditions.<br><br>Residual Risk<br>*Consequence:* Minor<br>*Likelihood:* Rare<br>*Risk Rating:* Low | |
| **Emissions general** | L2.1.1 | N/A | **Operation**<br><br>There will be no emissions association with the operation of the WWTP as the effluent is discharged to a lined pond. As such no conditions have been added to the licence. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Point source emissions to air including monitoring** | L2.2 and L3.2 | N/A | **Operation**<br><br>There will be no point source emissions to air associated with the operation of the WWTP. No specified conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the licence. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Point source emissions to surface water including monitoring** | L2.3 and L3.3 | N/A | **Operation**<br><br>There will be no point source emissions to surface water associated with the operation of the WWTP. A number of small ephemeral drainage lines are located on the premises. No specified conditions relating to point source emissions to surface water or the monitoring of these emissions are required to be added to the licence. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |

| DECISION TABLE | | | | |
|---|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **OSC or NSC** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| **Point source emissions to groundwater including monitoring** | L2.4 and L3.4 | | **Operation**<br><br>There will be no point source emissions to groundwater associated with the operation of the WWTP. The groundwater level at the site is 6 to 15m below ground level. No specified conditions relating to point source emissions to groundwater or the monitoring of these emissions are required to be added to the licence. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Emissions to land including monitoring** | L.2.5 and L3.5 | N/A | **Operation**<br><br>There will be no point source emissions to land associated with the operation of the WWTP. The treated effluent is discharged to a HDPE lined evaporation pond, with a minimum thickness of 1.5 mm and permeability of less than $2 \times 10^{-10}$ m per second. The pond has the capacity to retain a freeboard of 500 mm to allow for rain event. No specified conditions relating to point source emissions to groundwater or the monitoring of these emissions are required to be added to the licence. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Fugitive emissions** | L2.6 | N/A | **Operation**<br><br>There will be no fugitive dust emissions associated with the operation of the WWTP. As such no specified conditions relating to dust emission are required to be added to the licence. | General provision of the *Environmental Protection Act 1986* |
| **Odour** | L2.7 | N/A | **Operation**<br><br><u>Emission description</u><br>*Emission:* There is potential for odour emissions to be generated during operation of the WWTP.<br>*Impact:* Reduced air quality, potential amenity impacts. Impacts are expected to be negligible as the nearest sensitive receptor is the Auski Roadhouse, approximately 10 km from the camp. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |

| DECISION TABLE | | | | |
|---|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **OSC or NSC** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | | *Controls:* The inlet screen and pump chamber of the WWTP are fully enclosed to reduce the potential of odour emissions. The expected quality of the treated effluent discharged to the evaporation pond is below Australian Standards and therefore should not create any odour emission. The sludge from the WWTP will be removed by an approved contractor for disposal at a licenced facility.<br><br>Risk Assessment<br>*Consequence*: Insignificant<br>*Likelihood:* Unlikely<br>*Risk Rating:* Low<br><br>No specified conditions relating to odour emission have been added to the licence. | |
| **Noise** | L2.8 | N/A | **Operation**<br><br>Emission description<br>*Emission:* There is potential for noise emissions to be generated during operation of the WWTP.<br>*Impact:* Potential nuisance and effects on health, may affect fauna.<br>*Controls:* The WWTP pumps and equipment will be maintained in good working order. Negligible impacts expected as the nearest sensitive receptor is the Auski Roadhouse, approximately 10 km from the camp.<br><br>Risk Assessment<br>*Consequence*: Insignificant<br>*Likelihood:* Unlikely<br>*Risk Rating:* Low<br><br>No specified conditions relating to noise emissions have been added to the licence. The *Environmental Protection (Noise) Regulations 1997* applies. | General provision of the *Environmental Protection Act 1986*<br><br>*Environmental Protection (Noise) Regulations 1997*<br><br>Application supporting documentation |

| DECISION TABLE | | | | |
|---|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **OSC or NSC** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| **Monitoring general** | L3.1.1 – L3.1.4 | OSC | **Operation**<br><br>OSCs 3.1 have been included in the Licence requiring that wastewater samples are collected in accordance with the applicable standard and submitted to a NATA accredited laboratory for analysis. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Monitoring of inputs and outputs** | L3.6 | N/A | The monitoring of inputs or outputs is not required and as such no specified conditions are required to be added to the licence. | N/A |
| **Process monitoring** | L3.7.1 | OSC | **Operation**<br><br>The treated effluent is discharged to the HDPE lined evaporation pond. To ensure that the WWTP is functioning appropriately OSC 3.7.1 has been added to the licence requiring the monitoring of pH, biochemical oxygen demand, total suspended solids, residual chlorine, total nitrogen, total phosphorus, and *E.coli* prior to discharge to the lined evaporation pond. Monitoring for the volumetric flow rate of wastewater discharged into the ponds is also included. | General provision of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Ambient quality monitoring** | L3.8 | N/A | No specified conditions relating to ambient quality monitoring have been added to the licence. | N/A |
| **Meteorological monitoring** | L3.9 | N/A | No specified conditions relating to ambient quality monitoring have been added to the licence. | N/A |
| **Improvements** | L4 | N/A | No requirement for specified improvement conditions to be added to the licence. | N/A |
| **Information** | L5.1 – L5.3<br>L5.3.1 | N/A<br>OSC | OSC5.2.1 – 5.2.3 has been added to the licence, requiring the reporting of monitoring data and making available copies of original monitoring reports on request.<br><br>OSC5.3.1 contains standard notification requirements. As the premises is currently under care and maintenance, a requirement for the proponent to notify | N/A |

| DECISION TABLE | | | | |
|---|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **OSC or NSC** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | | DER at least 28 days prior to operations recommencing has also been included. | |
| **Licence** | N/A | N/A | The Cowra camp WWTP has been assessed as presenting a low risk to the environment during operations. The licence will be 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 |
|---|---|---|---|
| 26/01/2015 | Application advertised in West Australian (or other relevant newspaper) | No submissions received | N/A |
| 05/02/2015 | Proponent sent a copy of draft instrument | No comments received | N/A |

# 6 Risk assessment

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

| 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 |