



Dr Mark Alchin
Environment Superintendent – Eastern Mines
BHP Billiton Iron Ore Pty Ltd
PO Box 655
NEWMAN WA 6753

Dear Dr Alchin

ENVIRONMENTAL PROTECTION ACT 1986 - AMENDMENT TO LICENCE L4503/1975/14
Premise name: Mt Whaleback/Orebody 29/30/35
Premises Location: Tenements E52/2009, ML244SA and G52/19-G52/277, NEWMAN WA 6753

Further to my letter dated 4 June 2015, please find enclosed your amended *Environmental Protection Act 1986* Licence.

If you have any questions or objections relating to the licence, please do not hesitate to contact the enquiries officer above on 9182 2034 for clarification or discussion of any grievances you have.

If you are concerned about, or object to any aspect of the amendment, you may lodge an appeal with the Minister for the Environment within 21 days from the date on which this licence is received. The Office of the Appeals Convenor can be contacted on 6467 5190 to find out the procedure and fee.

Members of the public may also appeal the amendments. The Appeals Registrar at the Office of the Appeals Convenor can be contacted after the closing date of appeals to check whether any appeals were received.

If you have any questions please contact Haley Brunel on 9182 2034.

Yours sincerely,

Alana Kidd
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

Thursday, 11 June 2015



Licence

Environmental Protection Act 1986, Part V

Licensee: BHP Billiton Iron Ore Pty Ltd

Licence: L4503/1975/14

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

ACN: 008 700 981

Premises address: Mt Whaleback/Orebody 29/30/35
Tenements E52/2009, ML244SA and G52/19-G52/277
NEWMAN WA 6753
as depicted in Schedule 1

Issue date: Thursday, 7 November 2013

Commencement date: Sunday, 17 November 2013

Expiry date: Wednesday, 16 November 2018

Prescribed premises category

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	50 000 tonnes or more per year	80 000 000 tonnes per annual period
61	Liquid waste facility	100 tonnes or more per year	5 100 tonnes per annual period
64	Class II putrescible landfill site	20 tonnes or more per year	6 000 tonnes per annual period
73	Bulk storage of chemicals, etc.	1 000 cubic metres in aggregate	9 500 cubic metres
85	Sewage facility	More than 20 but less than 100 cubic metres per day	78.3 cubic metres per day
85B	Water desalination plant	0.50 gegalitres or more per year	4.38 gegalitres per annual period

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

Licence	1
Contents	2
Introduction	2
Licence conditions	6
1 General	6
2 Emissions	13
3 Monitoring	17
4 Improvements	21
5 Information	21
Schedule 1: Maps	23
Schedule 2: Reporting & notification forms	25

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.

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

BHP Billiton Iron Ore Pty Ltd (BHPBIO) operates the Mt Whaleback Orebody 29/30/35 Iron Ore Mine. The Mine is located on tenements E52/2009, ML244SA and G52/19-G52/277 and is approved under the *Iron Ore (Mount Newman) Agreement Act 1964*.

The mine is located approximately five kilometres (km) west of Newman township and commenced operation in 1969. The ore from the Mt Whaleback deposit is combined with the product from smaller adjacent satellite mines to produce the Mt Newman Joint Venture blend. The satellite orebodies (OB), which currently supplement production at Mt Whaleback, include, OB24/25, OB29, OB30 and OB35. Iron Ore from the site is transported approximately 426km by rail to Port Hedland Operations at Nelson Point.

Iron ore at Mt Whaleback is mined by conventional open cut methods. The ore is drilled and blasted and then loaded onto haul trucks and processed using primary and secondary crushers. The ore is then conveyed to the Newman Hub which includes a car dumper, reclaiming facilities stockyards and a crushing and screening plant. The ore with lower iron level is further processed through a beneficiation plant, removing some of the non-ferrous material. Product from the plant is conveyed to stockpiles and the tailings are thickened and pumped to the tailing storage facility (TSF).

Ancillary facilities at the mine site include administration facilities and an industrial area providing maintenance, storage and fabrication support for the mine and rail.

Approximately 15% of mining overburden at Mt Whaleback is potentially acid forming (PAF) pyritic shales. When exposed to the atmosphere, the PAF material oxidise and produce significant heat and sulfur dioxide and carbon dioxide gases. When combined with water these materials can produce dilute sulfuric acid, commonly known as Acid Mine Drainage (AMD).

A liquid waste facility is located at the mine site. Liquid waste is collected from other BHPBIO sites and transported by controlled waste contractor to the liquid waste facility. The liquid waste consists only of waste oil and is stored onsite in a purpose built tank. The waste oil is then transferred to larger trucks for transport by controlled waste carrier to the treatment facility in Kalgoorlie.

Wastewater from the Yarnima Power Station (L8803/2013/1) reverse osmosis water treatment plant (WTP) and blowdown water from the heat recovery system generation and the cooling tower is discharged into the AMD evaporation ponds. A pipeline carries the water from the Yarnima site to the evaporation ponds. The peak flow of brine is expected to be approximately 2.9 megalitres (ML/day) and the brine will have a Total Dissolved Solids concentration of up to 5,900 mg/L.

BHPBIO operates inert landfills, a putrescible landfill and a tyre dump at the site which accepts waste material generated onsite. There are also two asbestos disposal sites operated onsite which accept Type 1 Special Wastes (Asbestos) contained within demolition debris waste from onsite and from other BHPBIO premises in the vicinity of Newman. Fibrous material from drill holes during exploration and production drilling is also disposed of at the asbestos disposal sites.



Bulk fuel storage facility on site consists of 3 steel vertical tanks which have the capacity to store up to 9 500 cubic metres of fuel. The facility is compliant with Australian standards and is fitted with high level alarms.

The site has eight sewage treatment facilities (STF) located around the premises. Six of the plants discharge their treated effluent to designated irrigation areas, one discharges to a lined evaporation pond and one to an unlined evaporation/infiltration pond.

A reverse osmosis (RO) water treatment plant (WTP) with a design capacity of 12 ML/day operates at the site and produces potable water for the town of Newman. The plant can produce up to 6 ML/day of brine depending on the nature of the source water. The brine is discharged to the AMD evaporation ponds. DMP have approved the use of the AMD evaporation ponds for this use.

This Licence is the result of an amendment sought by the Licensee to:

- construct a lined evaporation pond to contain treated wastewater from a new oily water separator (OWS) near the Mobile Equipment Workshop;
- establish two inert landfills;
- extend the hydrodynamic trial until 7 May 2016; and
- include a provision to allow the disposal of used conveyor belts in overburden storage areas within the prescribed premises.

The licences and works approvals issued for the Premises since 17/11/2000:

Instrument log		
Instrument	Issued	Description
L4503/1975/5	17/11/2000	First licence noted in the Industry Licensing System
L4503/1975/6	17/11/2001	Licence reissue
L4503/1975/7	17/11/2002	Licence reissue
L4503/1975/8	17/11/2003	Licence reissue
L4503/1975/9	17/11/2004	Licence reissue
L4503/1975/10	17/11/2005	Licence reissue
L4503/1975/11	17/11/2006	Licence reissue
W4255/2006/1	8/03/2007	Works approval for the construction of processing infrastructure (car dumper, crushing and screening plant and ore stockyard)
L4503/1975/12	17/11/2007	Licence reissue
L4503/1975/13	17/11/2010	Licence reissue
W4972/2011/1	4/08/2011	Works approval for category 85B
W5017/2011/1	6/10/2011	Works approval for the installation of a Biomax wastewater treatment plant (STF) and hydrocarbon storage area at the expanded warehouse
W5024/2011/1	6/10/2011	Works approval for the installation of a Biomax STF at the new drug and alcohol testing facility at the Newman gatehouse
L4503/1975/13	22/12/2011	Licence amendment to increase capacity of category 5 to 58Mtpa, change premises boundary and include category 61 to the licence
L4503/1975/13	16/02/2012	Licence amendment to include category 85B constructed under W4972/2011/1
W5242/2012/1	6/09/2012	Works approval to construct a new movable (mobile) crushing and screening plant, with a design capacity of 5Mtpa
L4503/1975/13	7/11/2012	Licence amendment to incorporate three additional water treatment cells to the existing Newman temporary water treatment plant
L4503/1975/14	7/11/2013	Licence reissue
L4503/1975/14	9/10/2014	Licence amendment – additional discharge points and REFIRE format
L4503/1975/14	11/06/2015	Licence amendment – two inert landfills, oily water separator treated wastewater evaporation pond and contingency discharge point, extension of the hydrodynamic trial timeframe and disposal of used conveyor belts



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*;

'Acceptance Criteria' has the meaning defined in Landfill Definitions;

'AMD' means Acid Mine Drainage;

'annual period' means the inclusive period from 1 July until 30 June in the following year;

'AS 3580.1.1' means the Australian Standard AS 3580.1.1 *Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment*;

"AS 3580.9.11" means the Australian Standard AS 3580.9.11 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM₁₀ beta attenuation monitors*;

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

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

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

'asbestos' means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysolite, crocidolite, tremolite and any mixture containing 2 or more of those;

'asbestos fibres' has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009);

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

'CEMS' means continuous emissions monitoring system;

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

'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*;

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

'**CEO**' for the purpose of correspondence means;
Manager Licensing (North West)
Department of Environment Regulation
Locked Bag 33
Cloisters Square
PERTH WA 6714
Telephone: (08) 9182 2000
Facsimile: (08) 9144 1118
Email: industry.regulation@der.wa.gov.au;

'**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;

'**hydrodynamic trial**' means the trial involving the abstraction of up to 6.8 ML/day of water from bores located in-pit and near pit over a period of 18 months. It is expected that abstracted water will be used locally by Mt Whaleback for ore processing and dust suppression, but during periods of high rainfall or relatively low demand at Mt Whaleback the surplus water will be discharged to Ophthalmia Dam;

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

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

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

'**Licence**' means this Licence numbered L4503/1975/14 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;

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

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



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

'Putrescible' has the meaning defined in Landfill Definitions;

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

'rehabilitation' means the completion of the engineering of a landfill cell and includes capping and/or final cover;

'RO' means reverse osmosis;

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

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

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

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

'STF' means sewage treatment facility;

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

'tipping area' means the area of the landfill in which waste other than cover material is being deposited;

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

'µS/cm' means microsiemens per centimetre.

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

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

1.2 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 materials 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 only accept waste on to the landfill, asbestos disposal areas, sewage treatment plants and liquid waste facility if:
- (a) it is of a type listed in Table 1.3.1;
 - (b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
 - (c) it meets any specification listed in Table 1.3.1 .

Table 1.3.1: Waste acceptance		
Waste type	Quantity limit	Specification ¹
Inert Waste Type 1	6 000 tonnes/year	None specified
Inert Waste Type 2		Tyres and plastic only
Putrescible Waste		None specified
Clean Fill		None specified
Special Waste Type 1		Cement bonded and fibrous asbestos
Controlled waste category 6: oils and emulsions	4 000 tonnes/year	None specified
RO brine discharge	1 100 tonnes/year	Discharged to AMD evaporation ponds with a Total Dissolved Solids less than 5 900 mg/L
	1 058.5 ML/yr	
Sewage	78.3 m ³ /day	Accepted through sewer inflow(s) only

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

- 1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.
- 1.3.3 The Licensee shall ensure that wastes accepted onto the landfill, sewage treatment facility and liquid waste facility are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that Table.



Table 1.3.2: Waste processing		
Waste type(s)	Process	Process limits ^{1,2}
All	Disposal of waste by landfilling	<p>Shall only take place within the areas shown in Schedule 1.</p> <p>No waste shall be temporarily stored or landfilled within 35 m from the boundary of the premises.</p> <p>The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.</p>
Clean Fill	Receipt, handling and disposal by landfilling	None specified
Inert Waste Type1		
Inert Waste Type 2 – Tyres ¹ and used conveyor belts	Receipt, handling, storage prior to disposal by landfilling	<p>To be stored in piles of up to 100 units with a 6 m separation distance between piles.</p> <p>Shall only be buried in overburden storage areas located within the prescribed premises boundary shown in Schedule 1.</p> <p>Tyres shall only be landfilled:</p> <ul style="list-style-type: none"> • in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 cubic metres of tyres reduced to pieces; or • in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1000 whole tyres.
Putrescible Waste	Receipt, handling, storage prior to disposal by landfilling	Shall only be placed in the putrescible landfill shown in Schedule 1.
Special Waste Type 1 (Asbestos Waste ²)	Receipt, handling and disposal by landfilling	<p>Shall only be disposed of into the designated asbestos disposal area shown in Schedule 1.</p> <p>Not to be deposited within 2m of the final tipping surface of the landfill.</p> <p>No works shall be carried out on the landfill that could lead to a release of asbestos fibres.</p>
Controlled waste: oils and emulsions	Receipt, handling and storage prior to removal from site	Only stored in designated storage tanks as depicted in Schedule 1.
RO brine	Receipt and disposal by evaporation	Only disposed of at the AMD evaporation ponds as depicted in Schedule 1.
Tailings	Treatment and storage	<p>Only stored in Tailings Storage Facility (TSF) as depicted in Schedule 1.</p> <p>A minimum freeboard of 300 mm maintained at the TSF.</p>
Sewage	Biological, physical and chemical treatment	None specified
Sewage sludge	Drying and storage	None specified
Hydrocarbon contaminated waste	Bioremediation	Contaminated soil is only to be remediated within the bioremediation facility shown in Schedule 1.

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

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



- 1.3.4 The Licensee shall manage the landfilling activities to ensure:
- (a) waste is levelled and compacted as soon as practicable after it is discharged;
 - (b) waste is placed and compacted to ensure all faces are stable and capable of retaining rehabilitation material; and
 - (c) rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.
- 1.3.5 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.3 and that sufficient stockpiles of cover are maintained on site at all times.

Waste Type	Material	Depth	Timescales
Inert Waste type 1	N/A	N/A	No cover required
Inert Waste Type 2	Type 1 Inert waste, clean fill or soil	100 mm	Monthly
Putrescible Waste		150 mm	As soon as practicable and not later than weekly
		1 000 mm	Within 3 months of achieving final waste contours
Special Waste Type 1		300 mm	As soon as practicable after deposit and prior to compaction
		1 000 mm	By the end of the working day in which the asbestos waste was deposited

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

- 1.3.6 The Licensee shall prevent unauthorised access to the landfill.
- 1.3.7 The Licensee shall ensure that wind-blown waste is contained within the boundary of the Premises and that wind-blown waste is returned to the tipping area on at least a monthly basis.
- 1.3.8 The Licensee shall manage the irrigation of treated wastewater such that:
- (a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area(s);
 - (b) treated wastewater is evenly distributed over the irrigation area;
 - (c) no soil erosion occurs;
 - (d) irrigation does not occur on land that is waterlogged; and
 - (e) vegetation cover is maintained over the irrigation areas identified in Table 2.5.1.
- 1.3.9 The Licensee shall manage the wastewater treatment evaporation and infiltration pond such that:
- (a) overtopping of the ponds does not occur;
 - (b) a freeboard at or below 500mm is maintained;
 - (c) the integrity of the containment infrastructure is maintained; and
 - (d) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.
- 1.3.10 The Licensee shall manage the wastewater treatment vessels such that:
- (a) overtopping of the wastewater treatment vessels does not occur;
 - (b) stormwater runoff is prevented from entering the wastewater treatment vessels;
 - (c) there is no discernible seepage loss from the wastewater treatment vessels; and
 - (d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the wastewater treatment vessels.
- 1.3.11 The Licensee shall only operate the hydrodynamic trial up to 7 May 2016.
- 1.3.12 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds listed in Table 1.3.4 and identified in Schedule 1 in accordance with the requirements specified within Table 1.3.4.



Table 1.3.4: Containment Infrastructure		
Storage vessel or compound	Material	Requirements
P3 OWWTP evaporation pond	Treated water from the Mobile Equipment Workshop oily water separator	<ul style="list-style-type: none">• 1.5 mm HDPE lined evaporation pond to achieve a permeability of $<10^{-9}$ m/s; and• minimum vertical freeboard of 300 mm during normal operations



2 Emissions

2.1 General

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

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

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

Emission point reference	Emission point reference on Map of emission points	Description	Source including abatement
W1	W1 – Ophthalmia Dam discharge point	Contingency discharge to Ophthalmia Dam in the event that reuse and storage of water have been exhausted	Water abstracted from Orebory 29, as part of the hydrodynamic trial
W2	W2 – Whaleback Creek discharge point	Emergency discharge to Whaleback Creek in the event that reuse and storage of water have been exhausted	Stormwater from West End of Whaleback Pit

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

Emission point reference	Parameter	Limit (including units)	Averaging period
W1	Volume	6.8 ML/day	Continuous
W1 – W2	Total Recoverable Hydrocarbons (TRH)	15 mg/L	Spot sample

2.3.3 The Licensee shall target point source emissions to surface water to meet the levels specified in Table 2.3.3.



Table 2.3.3: Point source emission targets to surface water			
Emission point reference	Parameter	Target (including units)	Averaging period
W1 – W2	pH	≥6.0 and ≤9.0	Spot sample
	Total Dissolved Solids (TDS)	<1000 mg/L	
	Total Suspended Solids (TSS)	<281 mg/L	
W1	Silver (Ag)	<0.00005 mg/L	
	Aluminium (Al)	<0.3 mg/L	
	Arsenic (As)	<0.001 mg/L	
	Boron (B)	<0.0005 mg/L	
	Calcium (Ca)	<61 mg/L	
	Cadmium (Cd)	<0.002 mg/L	
	Chlorine (Cl)	<85 mg/L	
	Carbonate (CO ₃)	<2 mg/L	
	Chemical Oxygen Demand (COD)	<442 mg/L	
	Chromium (Cr)	<0.04 mg/L	
	Copper (Cu)	<0.02 mg/L	
	Iron (Fe)	<0.77 mg/L	
	Bicarbonate (HCO ₃)	<440 mg/L	
	Mercury (Hg)	<0.0005 mg/L	
	Potassium (K)	<5 mg/L	
	Magnesium (Mg)	<67 mg/L	
	Manganese (Mn))	<1.28 mg/L	
	Molybdenum (Mo)	<0.001 mg/L	
	Sodium (Na)	<76 mg/L	
	Nickel (Ni)	<0.02 mg/L	
	Nitrate (NO ₃)	<1.1 mg/L	
	Lead (Pb)	<0.005 mg/L	
	Selenium (Se)	<0.01 mg/L	
	Sulfate (SO ₄)	<78 mg/L	
	Total Nitrogen (TN)	<20 mg/L	
Total Phosphorus (TP)	<6 mg/L		
Zinc (Zn)	<0.14 mg/L		

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

2.5.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.5.1 [and identified on the map of emission points in Schedule 1] it is done so in accordance with the conditions of this licence.



Table 2.5.1: Emissions to land			
Emission point reference	Emission point reference on Map of emission points	Description	Source including abatement
L1	Beneficiation plant STF irrigation area	Discharge from Beneficiation plant STF to designated irrigation area	Treated wastewater pipeline from Beneficiation plant STF
L2	Laboratory STF irrigation area	Discharge from Laboratory STF to designated irrigation area	Treated wastewater pipeline from STF at laboratory STF
L3	Security gate STF irrigation area	Discharge from Security Gate STF to designated irrigation area	Treated wastewater pipeline from Security Gate STF
L4	Warehouse STF irrigation area	Discharge from Warehouse STF to designated irrigation area	Treated wastewater pipeline from Warehouse STF
L5	Ponderosa STF irrigation area	Discharge from Ponderosa STF to designated irrigation area	Treated wastewater pipeline from Ponderosa STF
L6	Dyno Nobel ANFO	Discharge from Dyno Nobel ANFO STF to designated irrigation area	Treated wastewater pipeline from Dyno Nobel ANFO STF
L7	EPCO STF and OWW separator discharge pond	Discharge from EPCO STF and from oily water separator to unlined pond	Treated wastewater from EPCO STF and treated wastewater from oily water separator on site
L8	L8	Contingency discharge from Tank XD57 in the event that temporary storage and reuse and tank storage has been exhausted	Excess water for processing and dust suppression
L9	Hub Turkeys Nest discharge	Contingency discharge from Hub Turkeys Nest in the event that temporary storage and reuse, and Turkeys Nest storage has been exhausted	Excess water for processing and dust suppression

2.5.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.5.2.

Table 2.5.2: Emission limits to land			
Emission point reference	Parameter	Limit (including units)	Averaging period
L1-L6	Load of Total Nitrogen (TN)	480 kg/ha/year	Annual
	Load of Total Phosphorus (TP)	120 kg/ha/year	
L7	Total Recoverable Hydrocarbon (TRH)	15mg/L	Spot Sample

2.5.3 The Licensee shall target emissions to land to meet the levels specified in Table 2.5.3.



Emission point reference	Parameter	Target (including units)	Averaging period
L1-L7	pH	≥ 6.5 and ≤ 8.5	Spot sample
	5-Day Biochemical Oxygen Demand (BOD)	<20 mg/L	
	Total Suspended Solids (TSS)	<30 mg/L	
	Total Nitrogen (TN)	<20 mg/L	
	Total Phosphorus (TP)	<6 mg/L	
	<i>E.coli</i>	<1000 cfu/100 ml	
L8-L9	Total Dissolved Solids	<2000 mg/L	

2.6 Fugitive emissions

2.6.1 The Licensee shall use all reasonable and practical measures to prevent and where that is not practicable to minimise dust emissions from the Premises.

2.7 Odour

2.7.1 The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.

2.8 Noise

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



3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1, with the exception of holding times where these are not achievable;
- (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (c) all surface water sampling is conducted in accordance with AS/NZS 5667.4 or AS/NZS 5667.6 as relevant;
- (d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters to be measured unless indicated otherwise in the relevant table.

3.1.2 The Licensee shall ensure that:

- (a) monthly monitoring is undertaken at least 15 days apart; and
- (b) quarterly monitoring is undertaken at least 45 days apart.

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

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

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

3.2 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

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

Table 3.3.1: Monitoring of point source emissions to surface water					
Emission point reference	Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
W1	Flow meter to discharge point	Volumetric flow rate (cumulative)	ML/day	Monthly	Continuous when discharging
	Discharge point	pH ¹ pH, TDS, TSS, TRH, Ag, Al, As, B, Ca, Cd, Cl, CO ₃ , COD, Cr, Cu, Fe, HCO ₃ , Hg, K, Mg, Mn, Mo, Na, Ni, NO ₃ , Pb, Se, SO ₄ , TN, TP, Zn	pH units mg/L	Spot sample	Quarterly when discharging
W2	Flow meter to discharge point	Volumetric flow rate (cumulative)	ML/day	Monthly	Continuous when discharging
	Discharge point	pH ¹ TDS, TRH, TSS	pH units mg/L	Spot sample	Quarterly when discharging

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



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

3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Monitoring of emissions to land					
Emission point reference	Monitoring point location	Parameter	Units	Averaging Period	Frequency
L1-L7	Flow meter to irrigation area or evaporation pond	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
	Final storage tank - prior to discharge to emission points	pH ¹	pH units	Spot sample	Quarterly
		BOD, TSS, TN, TP	mg/L		
		<i>E.coli</i>	cfu/100ml		
L7	Flow meter to evaporation pond	Volumetric flow rate (cumulative)	m ³	Monthly	Continuous
	Prior to discharge to infiltration evaporation pond	TRH	mg/L	Spot sample	Quarterly
L8-L9	Flow meter to discharge point	Volumetric flow rate (cumulative)	ML/day	Monthly	Each discharge event
	Discharge point	TDS	mg/L	Spot sample	

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

3.6 Monitoring of inputs and outputs

3.6.1 The Licensee shall undertake the monitoring in Table 3.6.1 according to the specifications in that table.

Table 3.6.1: Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Averaging period	Frequency
Waste Inputs	Inert Waste Type 1	tonnes	N/A	Monthly records of total waste arriving at each landfill facility
	Inert Waste Type 2			
	Putrescible Waste			
	Clean Fill			
	Special Waste Type 1			
RO brine from Yarnima	Volume	ML	Quarterly	Continuous
	TDS	mg/L	Spot sample	Quarterly

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						
Monitoring point reference and location on map	Process description	Parameter	Units	Limit	Averaging period	Frequency
P1 (Hub STF)	Discharge from Mt Whaleback Hub STF to lined evaporation pond	Volumetric flow rate (cumulative)	m ³ /day	N/A	Monthly	Continuous
		BOD, TSS, TN, TP	mg/L	N/A	Spot sample	Quarterly
		<i>E.coli</i>	cfu/100 ml	N/A		
P2 (Acid Mine Drainage (AMD) Evaporation Cells)	Brine from the Newman Water Treatment Plant to the clay lined AMD evaporation ponds	Volumetric flow rate (cumulative)	m ³ /day	N/A	Monthly	Continuous
		pH ¹	pH units	N/A	Spot sample	Quarterly
		TDS	mg/L	N/A		
P3 (OWWTP evaporation pond)	Treated wastewater from the Mobile Equipment Workshop oily water separator	TRH	mg/L	N/A	Spot sample	Quarterly
		Contingency discharge during high rainfall events	Volumetric flow rate	m ³ /day	N/A	Monthly
	TRH		mg/L	15 mg/L	Spot sample	

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

3.8 Ambient environmental quality monitoring

3.8.1 The Licensee shall undertake the monitoring in Tables 3.8.1, 3.8.2 and 3.8.3 according to the specifications in those tables and record and investigate results that do not meet any target specified.

Table 3.8.1: Monitoring of ambient air quality						
Monitoring point reference and location	Parameter	Target	Units ¹	Averaging period	Frequency	Method
Background 3 (WBAQRT011) North Mt Whaleback	Particulates as PM ₁₀	N/A	µg/m ³	24 hours	Continuous	AS 3580.9.11
Background 2 (WBAQRT004) Corner B Tank		N/A				
Newman 1 Town Centre (WBAQRT010)		<70				
Newman 3 (WBAQRT006) McLennan Drive						

Note 1: All units are referenced to STP dry



3.8.2 The Licensee shall ensure that the siting of ambient air monitoring equipment is in accordance with AS 3580.1.1.

Table 3.8.2: Monitoring of ambient surface water quality				
Monitoring point reference and location	Parameter	Target and unit	Averaging period	Frequency
Whaleback Creek upstream (WBSW042) Whaleback Creek downstream (WBSW043) Power station Creek downstream (WBSW049)	pH ¹	≥6.0 and ≤8.0	Spot sample	Quarterly when flowing
	Total dissolved solids (TDS)	<310 mg/L		
	Total suspended solids (TSS)	<300 mg/L		
	Total recoverable hydrocarbons (TRH)	<15 mg/L		
	Silver (Ag)	<0.00005 mg/L		
	Aluminium (Al)	<0.3 mg/L		
	Arsenic (As)	<0.001 mg/L		
	Boron (B)	<0.0005 mg/L		
	Calcium (Ca)	<33 mg/L		
	Cadmium (Cd)	<0.002 mg/L		
	Chlorine (Cl)	<67 mg/L		
	Carbonate (CO ₃)	<1.5 mg/L		
	Chemical Oxygen Demand (COD)	<442 mg/L		
	Chromium (Cr)	<0.04 mg/L		
	Copper (Cu)	<0.02 mg/L		
	Iron (Fe)	<5.1 mg/L		
	Bicarbonate (HCO ₃)	<87 mg/L		
	Mercury (Hg)	<0.0005 mg/L		
	Potassium (K)	<5.7 mg/L		
	Magnesium (Mg)	<9 mg/L		
Manganese (Mn)	<1.28 mg/L			
Molybdenum (Mo)	<0.001 mg/L			
Sodium (Na)	<230 mg/L			
Nickel (Ni)	<0.02 mg/L			
Nitrate (NO ₃)	<4.5 mg/L			
Lead (Pb)	<0.005 mg/L			
Selenium (Se)	<0.01 mg/L			
Sulfate (SO ₄)	<170 mg/L			
Zinc (Zn)	<0.14 mg/L			

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

Table 3.8.3: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Target and unit	Averaging period	Frequency
WBGW050S WBGW050D WBGW010 WBGW011 WBGW022 WBGW023	pH ¹	≥6.0 and ≤9.0	Spot sample	Quarterly
	Total dissolved solids (TDS)	<2000 mg/L		
	Aluminium (Al)	<0.01 mg/L		
	Arsenic (As)	<0.001 mg/L		
	Cadmium (Cd)	<0.0001 mg/L		
	Chromium (Cr)	<0.001 mg/L		
	Copper (Cu)	<0.002 mg/L		
	Iron (Fe)	<0.05 mg/L		
	Mercury (Hg)	<0.0001 mg/L		
	Manganese (Mn)	<0.01 mg/L		
	Nickel (Ni)	<0.004 mg/L		
	Lead (Pb)	<0.001 mg/L		
	Sulfate (SO ₄)	<1000 mg/L		
	Zinc (Zn)	<0.06 mg/L		

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



3.9 Meteorological monitoring

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

4 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) for the following records, be retained until the expiry of the Licence:
 - (i) off-site environmental effects;
 - (ii) matters which affect the condition of the land or waters; and
 - (iii) records on (i) and (ii) from previous licences.

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 1 October 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 form¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	Target exceedances	None specified
Table 3.3.1 (W1)	W1 contingency discharge to Ophthalmia Dam for each discharge event: <ul style="list-style-type: none"> • monitoring results; • date and duration of the discharge; and • reason for discharge. 	None specified
Table 3.3.1 (W2)	W2 emergency discharge to Whaleback Creek for each discharge event: <ul style="list-style-type: none"> • monitoring results; • date and duration of the discharge; and • reason for discharge. 	None specified
Table 3.5.1	L8 and L9 contingency discharge for each discharge event: <ul style="list-style-type: none"> • monitoring results; • date and duration of the discharge; and • reason for discharge. 	None specified
Table 3.5.1	Volume, pH, BOD, TSS, TN, TP, <i>E.coli</i> , TRH	None specified
Table 3.6.1	Input monitoring results	None specified
Table 3.7.1	Process monitoring results	None specified
Table 3.8.1	PM ₁₀ monitoring results	None specified
Table 3.8.2	Ambient surface water monitoring results	None specified
Table 3.8.3	Ambient groundwater monitoring results	None specified
5.1.3	Compliance	Annual Audit Compliance Report
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:
- any relevant process, production or operational data recorded under Condition 3.1.3; and
 - an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.

5.3 Notification

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

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.	N1
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part B: As soon as practicable	

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

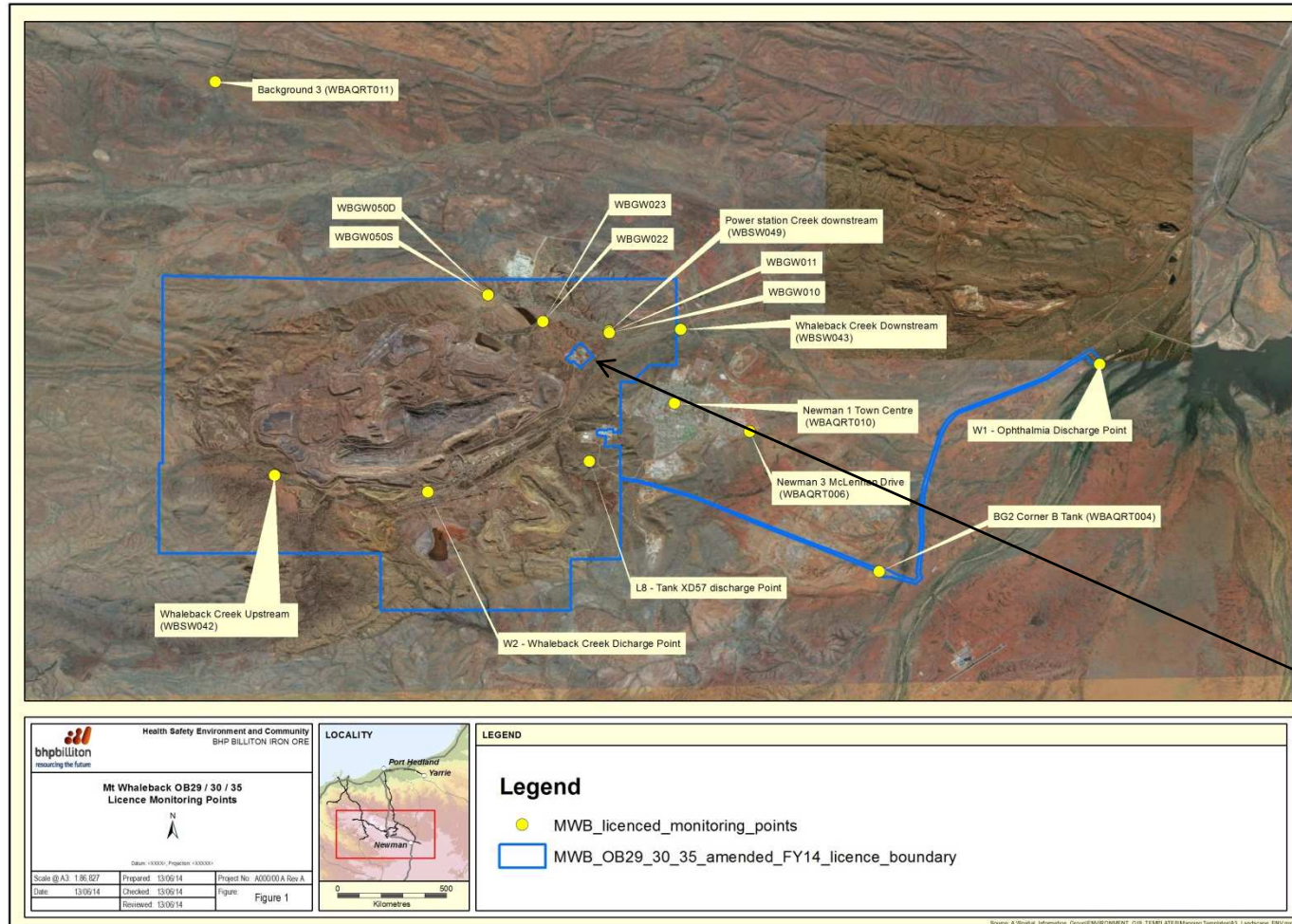
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

The Premises boundary is depicted in blue and the location of discharge point defined in Table 2.3.1 and monitoring points defined in Tables 3.8.1, 3.8.2 and 3.8.3 are shown in the map below.



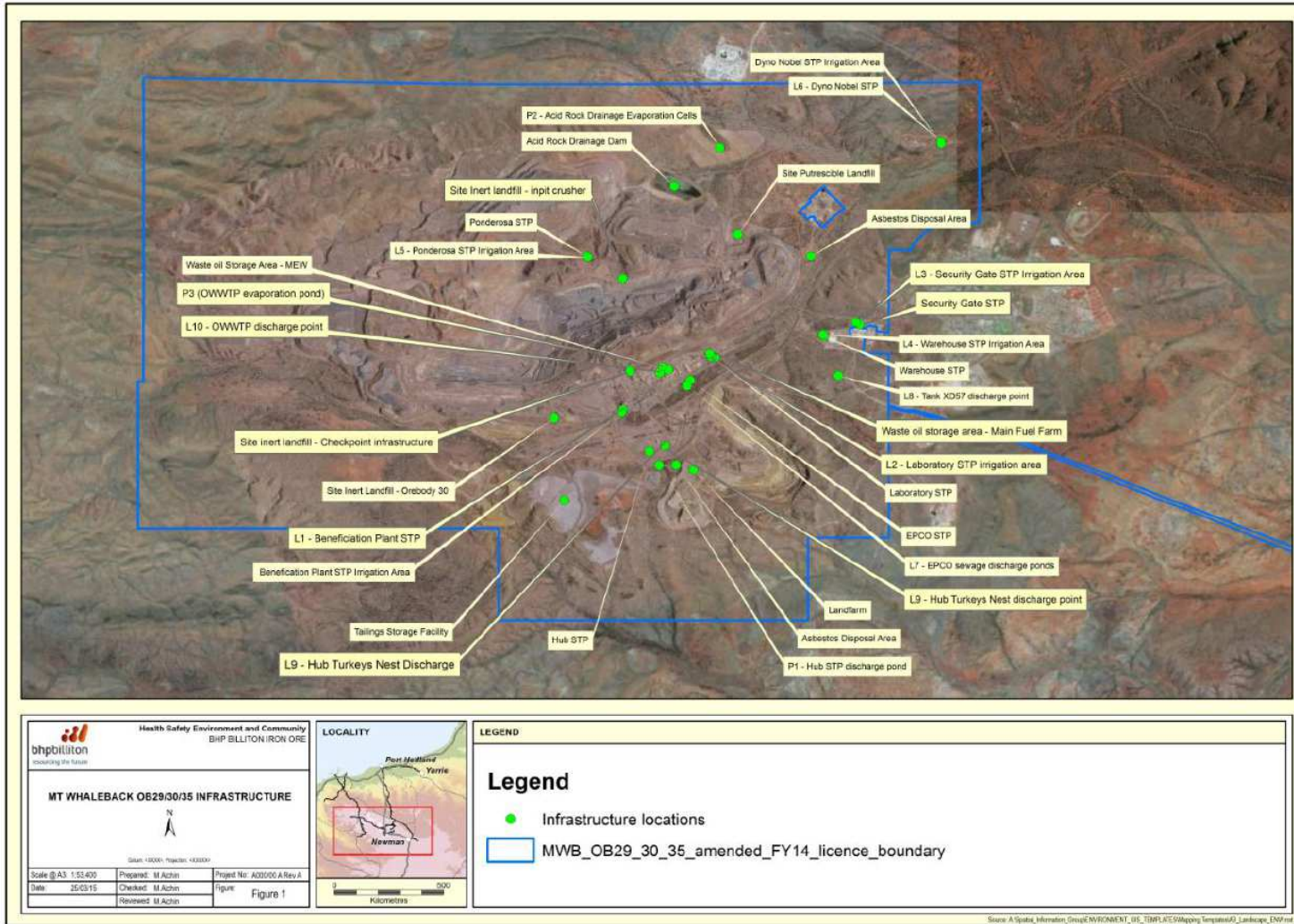
Area excluded from premises boundary

GPS Location ID Waypoint (GDA94 MGA50)	Easting	Northing
A	777446	7415805
B	777114	7415493
C	776994	7415638
D	777006	7415647
E	776976	7415683
F	776957	7415669
G	776944	7415683
H	776891	7415640
I	776779	7415779
J	776945	7415921
K	776921	7415956
L	776968	7415995
M	776954	7416014
N	777140	7416161



Map of emission points

The locations of the emission points defined in Tables 2.3.1, and 2.5.1 and monitoring points defined in Tables 3.6.1 and 3.7.1 are shown below.





Schedule 2: Reporting & notification forms

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

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

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

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the licence complied with within the reporting period? (please tick the appropriate box)

Yes Please proceed to Section C

No Please proceed to Section B

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

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

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

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

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the 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: ____/____/____



Licence: L4503/1975/14
 Form: N1

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



Partial Decision Document

Environmental Protection Act 1986, Part V

Proponent: BHP Billiton Iron Ore Pty Ltd

Licence: L4503/1975/14

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

ACN: 008 700 981

Premises address: Mt Whaleback/Orebody 29/30/35
Tenements E52/2009, ML244SA and G52/19-G52/277
NEWMAN WA 6753

Issue date: Thursday, 7 November 2013

Commencement date: Sunday, 17 November 2013

Expiry date: Wednesday, 16 November 2018

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 that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Haley Brunel
Licensing Officer

Decision Document authorised by: Alana Kidd
Manager Licensing



Contents

Partial Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	3
3 Executive summary of proposal and assessment	4
4 Decision table	5
5 Advertisement and consultation table	7
6 Risk Assessment	8

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.

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 <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	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>80 000 000</td> </tr> <tr> <td>61</td> <td>5 100 tonnes per annual period</td> </tr> <tr> <td>64</td> <td>6 000 tonnes per annual period</td> </tr> <tr> <td>73</td> <td>9 500 cubic metres</td> </tr> <tr> <td>85</td> <td>78.3 cubic metres per day</td> </tr> <tr> <td>85B</td> <td>4.38 gigalitres per annual period</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	5	80 000 000	61	5 100 tonnes per annual period	64	6 000 tonnes per annual period	73	9 500 cubic metres	85	78.3 cubic metres per day	85B	4.38 gigalitres per annual period
	Category number(s)	Assessed design capacity													
	5	80 000 000													
	61	5 100 tonnes per annual period													
	64	6 000 tonnes per annual period													
	73	9 500 cubic metres													
85	78.3 cubic metres per day														
85B	4.38 gigalitres per annual period														
Application verified	Date: N/A														
Application fee paid	Date: N/A														
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>														
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>														
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
Commercial-in-confidence claim outcome	N/A														
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Referral decision No: 1982 Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>														
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Ministerial statement No: 963 EPA Report No: 1501														
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.															
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.															



3 Executive summary of proposal and assessment

BHP Billiton Iron Ore Pty Ltd (BHPBIO) operates the Mt Whaleback Orebody 29/30/35 Iron Ore Mine. The mine is located on tenements E52/2009, ML244SA and G52/19-G52/277 and is approved under the *Iron Ore (Mount Newman) Agreement Act 1964*.

The mine is located approximately five kilometres (km) west of the Newman township and commenced operation in 1969. Ore from the Mt Whaleback deposit is combined with the product from smaller adjacent satellite mines to produce the Mt Newman Joint Venture blend. The satellite orebodies (OB) which currently supplement production at Mt Whaleback include OB24/25, OB29, OB30 and OB35. Iron Ore from the site is transported approximately 426km by rail to Port Hedland Operations at Nelson Point for export.

Mt Whaleback operates under Licence L4503/1975/14 which BHPBIO has recently applied to amend. The following amendments have been requested:

- the addition of a lined evaporation pond to contain treated wastewater from a new oily water separator (OWS) near the Mobile Equipment Workshop;
- establishment of two inert landfills;
- extension of the hydrodynamic trial until 7 May 2016; and
- provisions to allow the disposal of used conveyor belts in overburden storage areas within the prescribed premises.

DER's assessment and decision making with respect to these changes have been detailed in Section 4 of this document. As part of the amendment, DER has not re-assessed the acceptability of impacts of emissions and discharges from the premises or re-visited any existing emission control levels.



4 Decision table

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

DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises operation	L1.3.1-L1.3.7 L1.3.11 L1.3.12	OSC NSC OSC	BHPBIO proposes a number of amendments which require either the addition of new, or the amendment of existing conditions on the Licence. DER assessment and decision making with respect to these changes are detailed in Appendix A.	Application supporting documentation General provisions of the <i>Environmental Protection Act 1986</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Emissions general	L2.1.1	OSC	Descriptive limits will be set through condition 2.6.2 of the licence and therefore OSC regarding recording and investigation of exceedances of limits or targets has been included.	N/A
Monitoring general	L3.1.1	OSC	OSC 3.1.1 already exists on the Licence and requires that the sampling of wastewater is conducted in accordance with the relevant Australian Standards and that laboratory samples are submitted to and tested by a laboratory with	Australian Standard AS/NZS 5667.10 <i>Water</i>



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
			current NATA accreditation. This requirement will also apply to the sampling of the OWS treated wastewater.	<i>Quality – Sampling – Guidance on sampling of waste waters</i>
Process monitoring	L3.7.1	OSC	The contingency discharge of treated wastewater from the OWS treated wastewater evaporation pond has been captured under the process monitoring section of the Licence. The Licensee has indicated that this contingency discharge will only be utilised in the event of high rainfall, during which excess treated wastewater will be discharged to a nearby drain. The risk assessment associated with this emission is detailed in Appendix A, under the premises operation section.	Application supporting documentation <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> General provisions of the <i>Environmental Protection Act 1986</i>
Information	L5.2.1	OSC	OSC 5.2.1 has existing provisions requiring BHPBIO to provide the results of monitoring required under the process section. This will include the results of monitoring to determine the concentration of TRH in water discharged during contingency discharge events. Further to this, BHPBIO will be required to report to DER if the limit stipulated on the Licence is exceeded.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
04/06/2015	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

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

Premises operation

Inert landfills

BHPBIO proposes to construct two inert waste disposal locations within the prescribed premises. The first facility, to be known as the Checkpoint Landfill, will be used to dispose of approximately 1,400 tonnes of inert waste generated from the demolition of the Checkpoint Lower Production Office, Checkpoint Refuelling Facility and associated infrastructure. The waste will consist of concrete, scrap steel, construction materials and general building rubble. The Licensee is currently undertaking an assessment to determine if the Checkpoint facilities that are to be decommissioned contain any asbestos materials. In the event that asbestos materials are identified they will be disposed of appropriately at the Mt Whaleback asbestos landfill.

The second facility, to be known as the In-pit Crusher Landfill, will be used to bury a decommissioned in-pit crusher plant which has been out of use since 1994. It is estimated that approximately 1,500 tonnes of inert material will be buried at this location. BHPBIO has identified that the redundant crusher plant could still contain up to 500 litres of transformer oil, however, is not possible to access the transformer oil for removal due to serious safety issues (ie unstable infrastructure).

The Mt Whaleback Licence currently allows the disposal of up to 6,000 tonnes of waste under Category 63. The operation of these two inert landfills will remain below the approved premises throughput.

DERs assessment of the emissions associated with the operation of the landfills is detailed below.

Emission description

Emission: Stormwater potentially contaminated with hydrocarbons and other chemicals from the burial of the Checkpoint refuelling facility infrastructure. Transformer oil from the crusher plant infiltrating through the soil and accessing groundwater.

Impact: Contamination of soil, surface water and groundwater, deterioration of ecosystem health, adverse impacts to flora and fauna.

Controls: BHPBIO has committed to stripping all the hydrocarbons and hydrocarbon contaminated material from the Checkpoint refuelling facility prior to disposal within the inert landfill.

BHPBIO has advised that it is not possible to safely access the transformer oil in order to remove it. The relatively small volume of oil will be encapsulated within a large volume of inert waste reducing the likelihood of the oil moving into the soil profile and impacting groundwater.

Risk assessment

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

OSC 1.2.5 requires the Licensee to implement all practical measures to prevent stormwater run-off becoming contaminated and to treat contaminated or potentially contaminated stormwater as necessary prior to being discharged. This requirement, along with BHPBIO's commitment to strip the refuelling facility of hydrocarbon contaminated components prior to disposal, will minimise the likelihood of contaminated stormwater gaining access to the environment.

OSCs 1.3.1-1.3.7 regulates the operation of the landfills within the prescribed premises. The requirements of these conditions, which include waste acceptance limits, waste processing requirements, minimum cover etc, will also be applied to the operation of the two new inert landfills.



These existing conditions are considered sufficient to effectively manage the landfills and minimise potential risks to the environment.

Residual Risk

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Conveyor belt disposal

The Licensee has requested approval to dispose of used conveyor belts within overburden storage areas located within the prescribed premises. OSC 1.3.2, which currently allows for the disposal of tyres within overburden storage areas, has been updated to also allow for the disposal of used conveyor belts within these areas.

Hydrodynamic trial

In November 2013 the Mt Whaleback operating Licence was reissued and conditions to allow the operation of a hydrodynamic trial were included on the Licence.

The trial involves the abstraction of up to 6.8 megalitres per day (ML/day) of groundwater from bores located in pit at Orebody 29 (OB29). Abstracted water is used locally by Mt Whaleback for ore processing and dust suppression, but during periods of high rainfall or relatively low demand at Mt Whaleback the surplus water is discharged to Ophthalmia Dam. The trial was originally scheduled for completion by 7 May 2015. BHPBIO has advised that the commencement date of the hydrodynamic trial was delayed to February 2015 and is requesting that the trial completion date be amended to 7 May 2016, allowing for the trial to run for the anticipated 18 months. Following the completion of the trial, BHPBIO will submit the results to DER as supporting documentation to amend the Licence to include Category 6.

The existing Licence includes Conditions requiring the Licensee to monitor the volume and quality of water discharged during the operation of the trial, as well as targets for water quality. The monitoring of ambient surface water quality is also required under the Licence. The results of the monitoring conducted as part of the hydrodynamic trial are required to be reported to DER through the Annual Environmental Report. These requirements will continue to be implemented for the duration of the trial.

NSC 1.3.11, relating to the operation of the hydrodynamic trial has been amended to allow the trial to run until 7 May 2016.

OWS evaporation pond and contingency discharge

BHPBIO proposes to install an OWS near the Mobile Equipment Workshop to treat potentially contaminated water from the heavy vehicle washbay and workshop. Treated wastewater from the OWS will discharge to a lined evaporation pond which will be constructed with an emergency contingency overflow for use during high rainfall events.

An assessment of the emissions associated with the OWS has been undertaken and are detailed below.

Normal operations

Emission description

Emission: Treated wastewater and slurry from sediment sumps with elevated concentrations of hydrocarbons and other chemicals gaining access to the environment.

Impact: Contamination of soil, surface water and groundwater, deterioration of ecosystem health, adverse impacts to flora and fauna.

Controls: BHPBIO has committed to implementing the following controls:



- wastewater will be treated through an OWS designed to achieve a total recoverable hydrocarbon (TRH) concentration of less than 15 mg/L;
- treated wastewater will be discharge to a lined evaporation pond;
- potentially contaminated slurry from the sediment sumps will be collected for remediation at the onsite bioremediation facility;
- an emergency contingency overflow will be constructed on the pond, minimising the likelihood of an uncontrolled discharge;
- quarterly sampling of TRH in treated wastewater will be carried out; and
- volumetric flow rates and TRH concentrations will be sampled during contingency discharge events.

Risk assessment

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

OSC 1.3.12 has been included on the Licence to specify the operational requirements for the OWS treated wastewater evaporation pond, including permeability requirements for the high density polyethylene liner and maintaining a 300 mm operational freeboard during normal operations.

BHPBIO has committed to regular monitoring of the treated wastewater to determine if TRH concentrations are acceptable. These monitoring requirements are discussed further in the process monitoring section.

Residual Risk

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Abnormal operations

Emission description

Emission: Treated wastewater, potentially with elevated concentrations of hydrocarbons accessing the environment during high rainfall events.

Impact: Contamination of soil, surface water and groundwater, deterioration of ecosystem health, adverse impacts to flora and fauna.

Controls: BHPBIO has committed to implementing the following controls:

- wastewater will be treated through an OWS designed to achieve a total recoverable hydrocarbon (TRH) concentration of less than 15 mg/L;
- the emergency overflow will only occur during high rainfall events;
- quarterly sampling of TRH in treated wastewater will be carried out; and
- volumetric flow rates and TRH concentrations will be sampled during contingency discharge events.

Risk assessment

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

OSC3.7.1 has been updated to require quarterly monitoring of TRH concentrations in the treated wastewater in the OWS evaporation pond. During contingency discharge events flow rate and TRH



will also need to be monitored. A limit of 15 mg/L for TRH concentrations in water discharged during contingency discharge events has been established through this condition.

Provided the OWS is appropriately maintained and wastewater is treated to acceptable quality, there is minimal risk to the environment from the contingency overflow.

Residual Risk

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low