Government of Western Australia
Department of Environment Regulation

Licence

Environmental Protection Act 1986, Part V

Licensee: Process Minerals International Pty Ltd

Licence: L7753/2001/7

Registered office: 1 Sleat Road
APPLECROSS WA 6153

ACN: 063 988 894

Premises address: Coobina Chromite Operations
Mining Tenements ML52/10, M52/791 and M52/798
NEWMAN WA 6753
As depicted in Schedule 1

Issue date: Thursday, 23 February 2012

Commencement date: Monday, 27 February 2012

Expiry date: Sunday, 26 February 2017

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	50,000 tonnes per annual period
64	Class II putrescible landfill	20 tonnes or more per year	365 tonnes per annual period

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

Date signed: 28 January 2016
.....
Alana Kidd
Manager – Licensing (Resource Industries)
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 regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements
This Licence is issued under Part V of the Act. Conditions contained with 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 the Premises has been assessed under Part IV of the Act, it 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 Coobina Chromite Operations (Coobina) is located approximately 80 kilometres (km) south-east of Newman in Western Australia. Open cut mining, mineral processing areas and associated infrastructure at Coobina are located on Mining Tenements M52/10, M52/791 and M52/798.

The project area consists of an extensive plain with sub-parallel greenstone belts and breakaways. These give way to gently inclined sheet flood plains draining to the southeast and east to the Caramulla Creek. Land use in the area is mainly used for mining and pastoral activities. The premises is isolated with the nearest sensitive premises located 27 km away.

Chromite ore is mined from open cut pits in the Coobina hills and shallow gravel deposits on the adjacent plains. The chromite ore is processed by crushing, screening and beneficiation to produce chromite product. The beneficiation plants use ferrosilicon, gravity and water in the separation processes. The only chemical additives used are flocculants, which are utilised in the thickener to assist in the aggregation and precipitation of ultrafine particles. The final chromite product is transported by covered haul trucks to Port Hedland for export.

A Class II landfill is located at the premises and is used for the burial of wastes generated at Coobina. Tyres are disposed of in the waste rock dump.

Site infrastructure also includes diesel power generation, fuel storage, wash down bays and mechanical workshops, camp facilities and a small waste water treatment plant.

The site has been in care and maintenance since November 2013. Process Minerals International Pty Ltd requested an amendment to reduce the Licenced Category 5 approved Premises production or design capacity to the minimum required for the licence to remain active. An amendment to the licence will be required for production to increase above the approved Premises production or design capacity. The last 6 licences and works approvals issued for the Premises are:

Instrument log		
Instrument	**Commenced**	**Description**
L7753/2001/5	27/02/2006	Licence reissue
W4439/2008/1	04/09/2008	New application for works approval
L7753/2001/6	27/02/2009	Licence reissue
L7753/2001/7	27/02/2012	Licence reissue
L7753/2001/7	18/12/2014	Licence amendment. Change of ownership and conversion into new Licence format.
L7753/2001/7	28/01/2016	Licence amendment to remove invalid groundwater monitoring bores, include disposal of tyres, reduce throughput capacity and monitoring frequency, and update to Licence format v2.9.

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 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 5667.11' 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;

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

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

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

'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 L7753/2001/7 and issued under the Act*;*

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'mbgl' means metres below ground level;

'mg/L' means milligrams per litre;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

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

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

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

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

'S/m' means Siemens per metre;

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

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

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

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

1.2.3 The Licensee shall:

(a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and

(b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.[1]

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 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;
c) it meets any specification listed in Table 1.3.1; and
d) it conforms to the description in the documentation supplied by the producer and holder.

Table 1.3.1: Waste acceptance

Waste	Quantity Limit	Specification
Clean fill	None specified	None specified
Inert Waste Type 1	Combined total of 365 tonnes per annual period	None specified
Putrescible waste		None specified
Special Waste Type 1		Only asbestos waste that has been generated at the premises
Inert Waste Type 2 (tyres only)	None specified	Only waste tyres that have been generated at the premises.

1.3.2 The Licensee shall ensure that waste disposed into the landfill or the waste rock dump are only subjected to the process(es) set out in Table 1.3.2 and in accordance with process limits described in that Table, and that cover requirements are in accordance with the requirements set out in Table 1.3.3.

Table 1.3.2: Waste processing

Waste type	Process(es)	Process limits[1]
Clean Fill	Handling, associated storage and disposal of waste by landfilling	<u>All waste types</u> Disposal of waste by landfilling shall only take place within the landfill area shown on the Landfill Area Map in Schedule 1. Waste to be disposed of in a defined trench or within an area enclosed by earthen bunds. The tipping area shall be restricted to a maximum linear length of 30 metres. The tipping area shall be no greater than 2 metres in height (only for above ground disposal methods). No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 metres. A firebreak of at least 3 metres is maintained around the boundary of the landfill. <u>Special Waste Type 1</u> Only to be disposed of into a designated asbestos disposal area within the landfill. Not to be deposited within 2 metres of the final tipping surface of the landfill. No works shall be carried out on the landfill that could lead to a release of asbestos fibres.
Inert Waste Type 1		
Putrescible waste		
Special Waste Type 1		
Inert waste Type 2 (Tyres only)	Handling, associated storage and disposal of waste tyres by burial	Disposal of tyres by burial shall only take place within the Tyre burial area shown on the Tyre burial area map in Schedule 1. The location of where tyres are buried will be surveyed and the latitude and longitude recorded. Tyres shall be buried in batches separated from each other by at least 100mm of soil and each consisting of not more than 1,000 whole tyres.

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

Table 1.3.3: Cover requirements[1]

Waste type	Material	Depth	Timescale
Putrescible Wastes	Inert and incombustible material	A minimum of 200 mm. No waste is to be left exposed after covering	Cover shall be applied monthly
Inert waste Type 2 (Tyres)	Clean fill or Inert Waste Type 1	A final cover of at least 500mm.	As soon as practicable

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

1.3.4 The Licensee shall take all reasonable and practical measures to ensure that no wind-blown waste escapes from the Premises and that wind-blown waste is collected on at least a monthly basis and returned to the tipping area.

1.3.5 The Licensee shall ensure that tailings are only discharged into dams with the relevant infrastructure requirements and at the location specified in Table 1.3.4 and identified in Schedule 1.

Table 1.3.4: Containment infrastructure			
Containment point reference	**Dam number(s)**	**Material**	**Infrastructure requirements**
Sedimentation Ponds	None specified	Tailings	None specified

1.3.6 The Licensee shall manage ponds in Table 1.3.4 such that:
(a) a minimum top of embankment freeboard of 500mm is maintained; and
(b) methods of operation minimise the likelihood of erosion of the embankments by wave action.

1.3.7 The Licensee shall ensure the limits specified in Table 1.3.5 are not exceeded.

Table 1.3.5: Production or design capacity limits		
Category[1]	**Category description**[1]	**Premises production or design capacity limit**
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes per annual period
64	Class II putrescible landfill	365 tonnes per annual period

Note 1: *Environmental Protection Regulations 1987,* Schedule 1.

2 Monitoring

2.1 General monitoring

2.1.1 The Licensee shall ensure that:
(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1 unless stated in Condition 2.1.1(b);
(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
(c) all samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in relevant table.

2.1.2 The Licensee shall ensure that annual monitoring is undertaken at least 9 months apart.

2.2 Ambient environmental quality monitoring

2.2.1 The Licensee shall undertake the monitoring specified in Table 2.2.1.

Table 2.2.1: Monitoring of ambient groundwater quality				
Monitoring point reference	**Parameter**	**Units**	**Averaging period**	**Frequency**
MB1, MB2, MB3, PB1, and PB5	pH[1]	-	Spot sample	Annually
	Standing water level	mbgl		
	Electrical conductivity	S/m		
	Aluminium	mg/L		
	Arsenic			
	Cadmium			
	Calcium			
	Chromium III			
	Chromium VI			
	Copper			
	Iron			
	Lead			
	Nickel			
	Mercury			
	Magnesium			
	Manganese			
	Potassium			
	Sodium			
	Sulfate			
	Total dissolved solids			
	Total recoverable hydrocarbons			
	Total suspended solids			
	Zinc			

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

3 Information

3.1 Records

3.1.1 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 3.1.1(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.

3.1.2 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.

3.1.3 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.

3.2 Reporting

3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 53.2.1: 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
L1.3.7	Summary of authorised activities including comparison of the approved production and design capacities and actual production/throughput for the Annual period.	Brief summary
Table 2.2.1	Monitoring of ambient groundwater quality	GR1
L3.1.2	Compliance	Annual Audit Compliance Report (AACR)
L3.1.3	Complaints summary	None specified

Note 1: Forms are in Schedule 2

3.2.2 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
(b) a list of any original monitoring reports submitted to the Licensee from third parties in the reporting period and make these reports available on request.

3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements

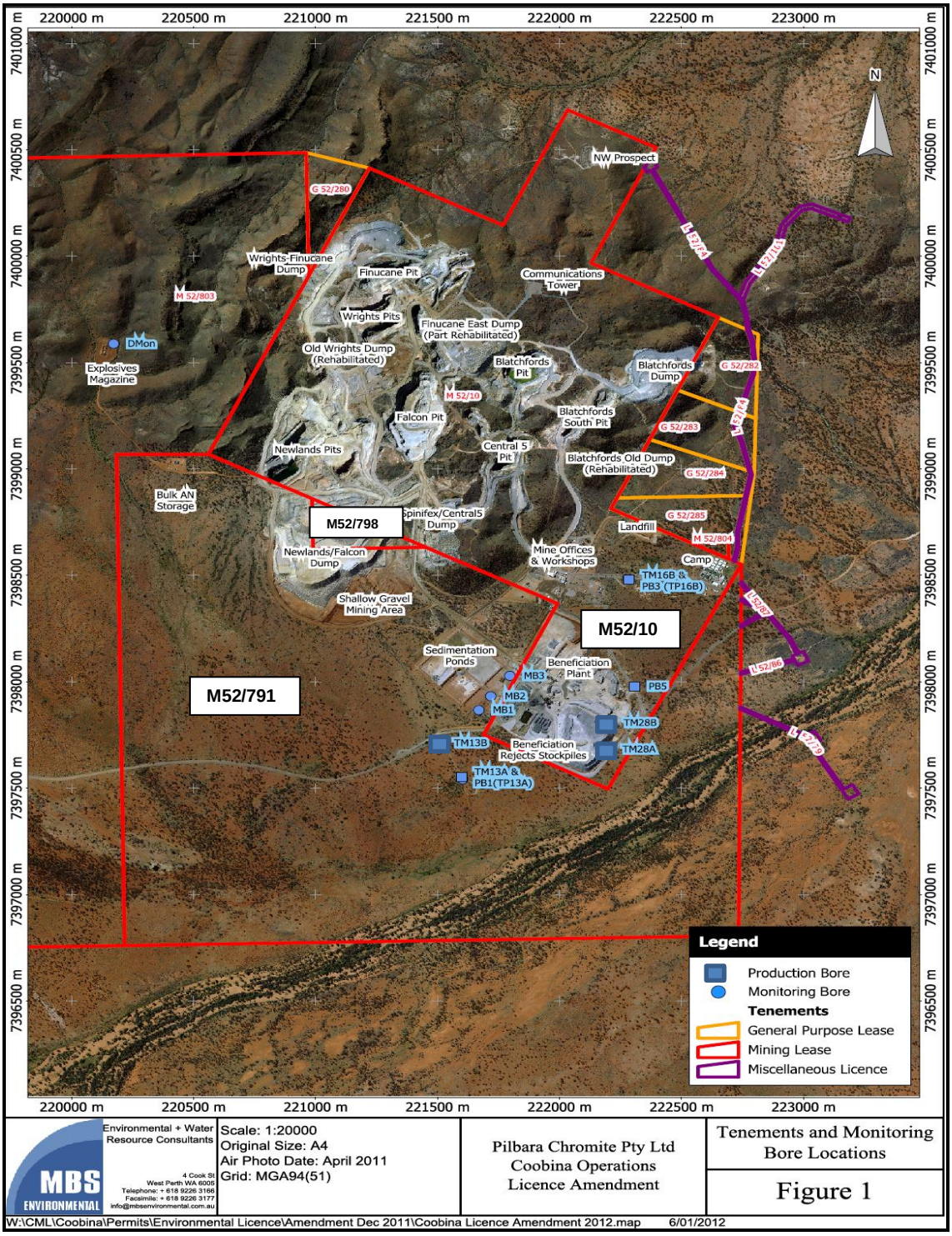
Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
L1.3.6 L1.3.7	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
-	Production recommencing	At least 90 days prior to production recommencing.	None specified

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

Schedule 1: Maps

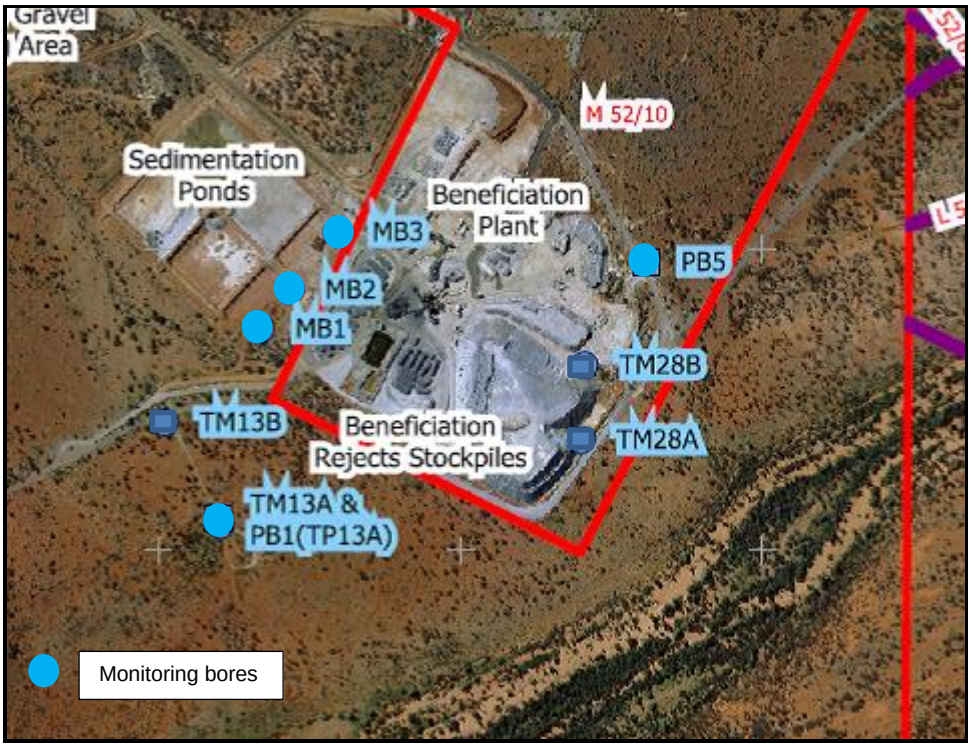
Premises map

The Premises is shown in the map below. The red line bounding M52/10, M52/791 and M52/798 depicts the Premises boundary.



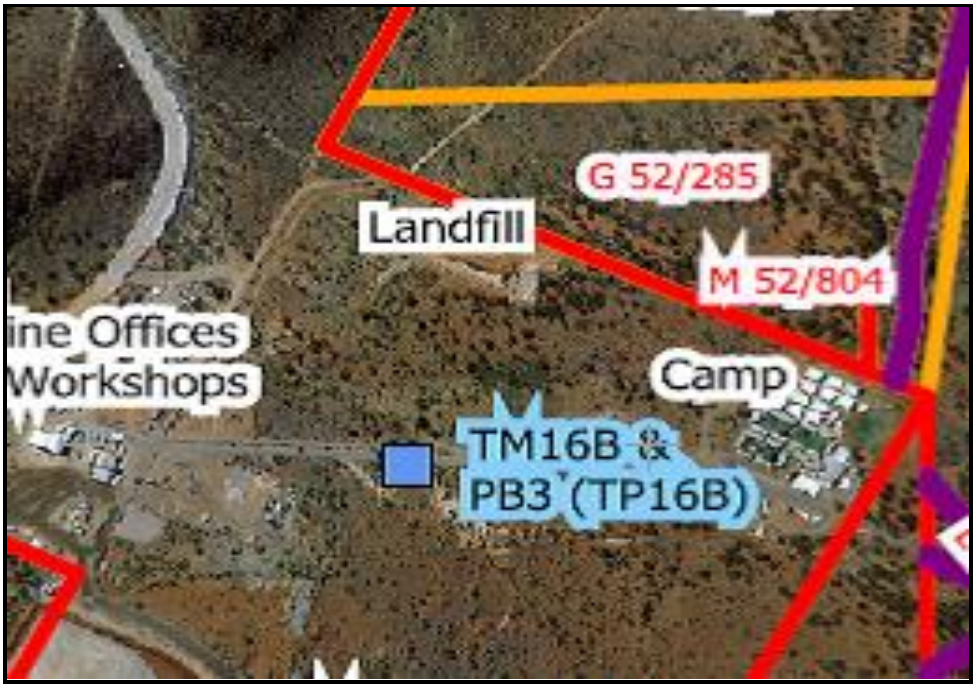
Map of monitoring locations

The locations of the monitoring points defined in Table 2.2.1 are shown below.



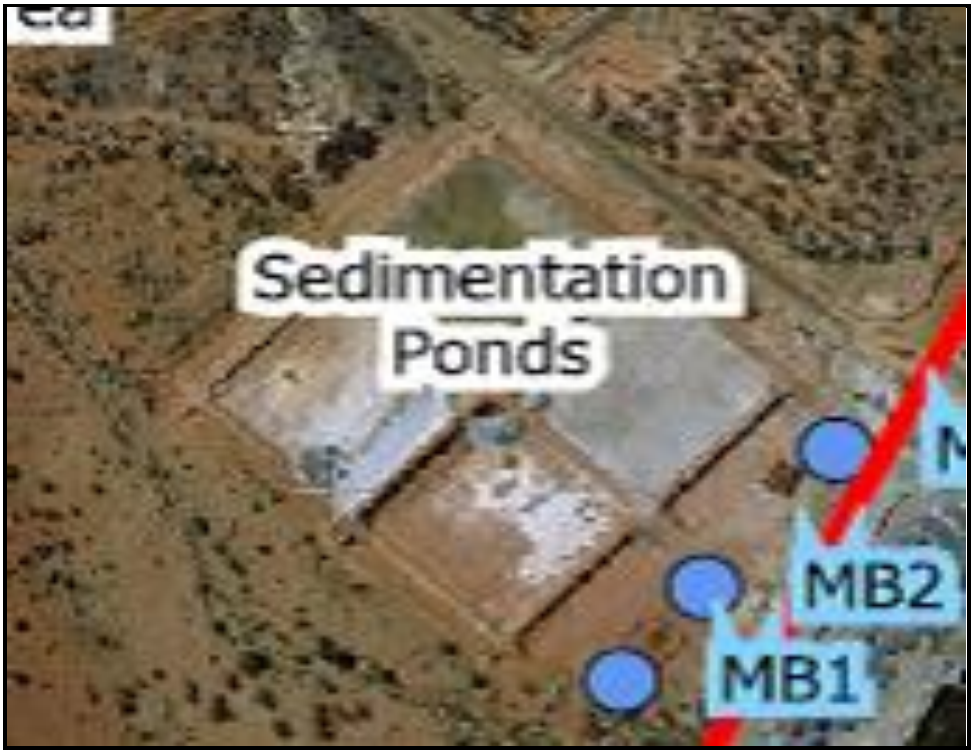
Landfill Area Map

The area in which the disposal of waste by landfilling may take place is show in the map below.



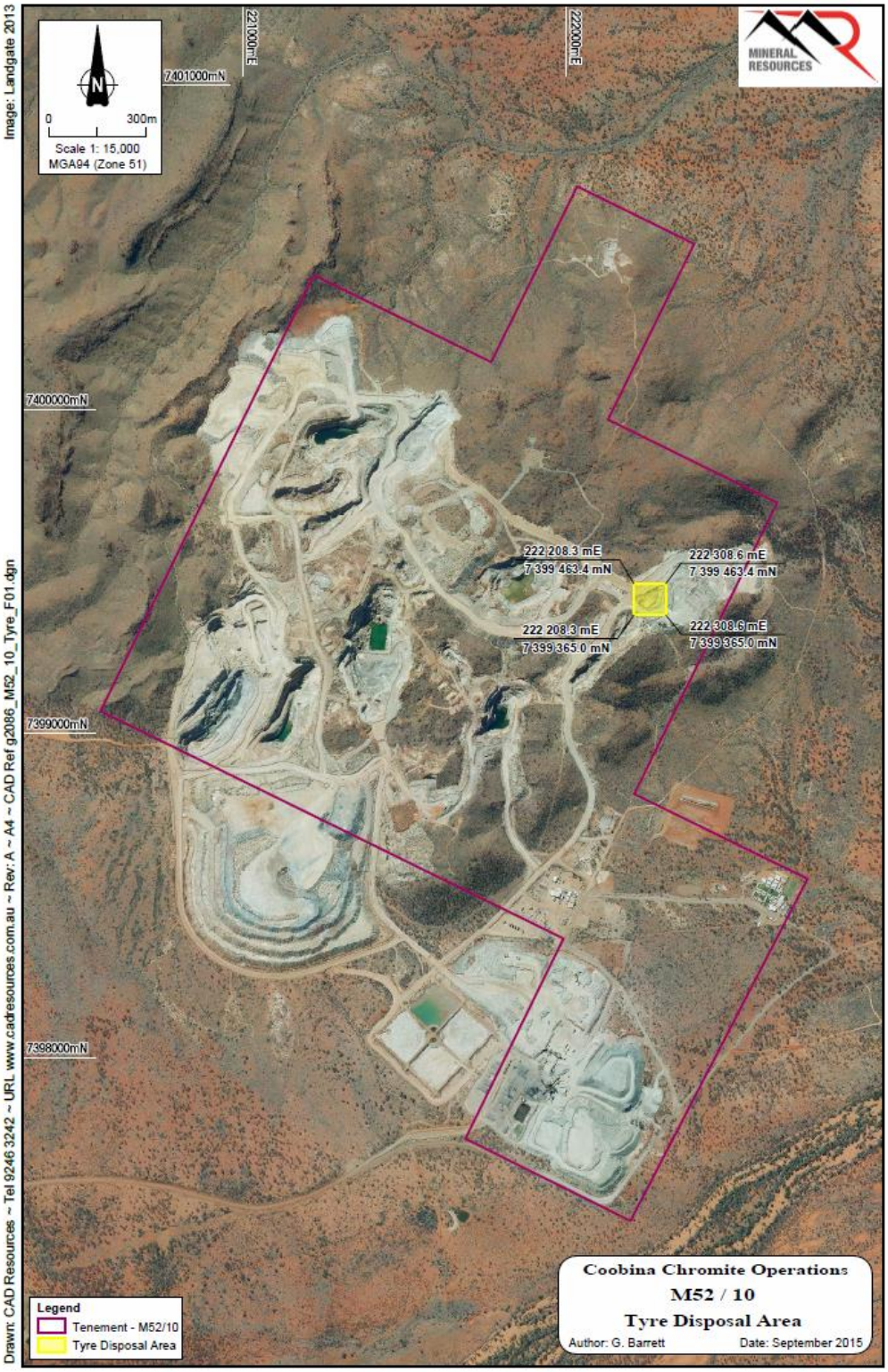
Map of storage locations

The location of the storage area defined in Table 1.3.4 is shown below.



Tyre burial area map

The area in which the burial of tyres may take place is show in the map 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 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 Date _____ ☐ Reported to DER in writing 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) 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	□ □	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: L7753/2001/7
Form: GR1
Name: Monitoring of ambient groundwater quality

Licensee: Process Minerals International Pty Ltd
Period :

Monitoring point	Parameter	Result	Sample date & times
MB1, MB2, MB3, PB1,and PB5	pH		
	standing water level	mbgl	
	electrical conductivity	S/m	
	aluminium	mg/L	
	arsenic	mg/L	
	cadmium	mg/L	
	calcium	mg/L	
	chromium III	mg/L	
	chromium VI	mg/L	
	copper	mg/L	
	iron	mg/L	
	lead	mg/L	
	nickel	mg/L	
	mercury	mg/L	
	magnesium	mg/L	
	manganese	mg/L	
	potassium	mg/L	
	sodium	mg/L	
	sulphate	mg/L	
	total dissolved solids	mg/L	
	total recoverable hydrocarbons	mg/L	
	total suspended solids	mg/L	
	zinc	mg/L	

Signed on behalf of Process Minerals International Pty Ltd: ……..

Date: ……

Licence: L7753/2001/7 Licensee: Process Minerals International 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	

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	
Position	
Signature on behalf of Process Minerals International Pty Ltd	
Date	

Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Process Minerals International Pty Ltd

Licence: L7753/2001/7

Registered office:	1 Sleat Road APPLECROSS WA 6153
ACN:	063 988 894
Premises address:	Coobina Chromite Operations Mining Tenements: M52/10, M52/791 and M52/798 NEWMAN WA 6753
Issue date:	Thursday, 23 February 2012
Commencement date:	Monday, 27 February 2012
Expiry date:	Sunday, 26 February 2017

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue an amended Licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements, and that the amended Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by:	Paul Anderson/Lindy Twycross Licensing Officer
Decision Document authorised by:	Alana Kidd Delegated Officer

Contents

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval ☐ New Licence ☐ Licence amendment ☒ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)**	**Assessed design capacity**
	5	50,000 tonnes per annual period
	64	365 tonnes per annual period
Applications verified Application fee paid	Date: 16/9/2015 and 12/01/2016 Date: N/A	
Works Approval has been complied with Compliance Certificate received	Yes☐ No☐ N/A☒ Yes☐ No☐ N/A☒	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome	N/A	
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: Managed under Part V ☐ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☒	

Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒ If Yes include details of which EPP(s) here.
Is the Premises subject to any EPP requirements? Yes☐ No☒ If Yes, include details here, eg Site is subject to SO_2 requirements of Kwinana EPP.

3 Executive summary of proposal and assessment

The Coobina Chromite Operations (Coobina) is located approximately 80 kilometres (km) south-east of Newman in Western Australia. Coobina is located on Mining Tenements M52/10, M52/791 and M52/798. Mineral Resources International Pty Ltd (Mineral Resources) are the Licence holders for Coobina.

The project area consists of an extensive plain with sub-parallel greenstone belts and breakaways. These give way to gently inclined sheet flood plains draining to the southeast and east to the Caramulla Creek. The main land use is mining and pastoral activities. The premises is isolated with the nearest sensitive premises located 27 km away.

Groundwater levels in the vicinity of Coobina are typically at a depth of 20 to 30 metres. The local groundwater flow direction is generally to the southeast moving from high ground towards Caramulla Creek. The groundwater quality is neutral to slightly alkaline, brackish (2,800 to 3,900 milligrams per litre) and of sodium chloride/bicarbonate type.

Chromite ore is mined from open cut pits in the Coobina hills and shallow gravel deposits on the adjacent plains. The chromite ore is processed by crushing, screening and beneficiation to produce chromite product. The beneficiation plants use ferrosilicon, gravity and water in the separation processes. The only chemical additives used are flocculants, which are utilised in the thickener to assist in the aggregation and precipitation of ultrafine particles. The waste water from the process is pumped to sedimentation ponds to settle out suspended solids and the resultant water in these ponds is recycled back to the beneficiation plants. Sediments are occasionally removed from the sedimentation ponds and encapsulated in the coarse reject stockpile. The final chromite product is transported by covered haul trucks to Port Hedland for export.

A Class II landfill is located at the premises and is used for the burial of wastes generated at Coobina.

Site infrastructure also includes diesel power generation, fuel storage, wash down bays and mechanical workshops, camp facilities and a small waste water treatment plant.

The Coobina Licence was amended on 18 December 2014 when a change of ownership of the Premises occurred. At that time the Licence was also converted into the latest format. Mineral Resources advised DER on 16 September 2015, that there was an error in the Licence amendment whereby obsolete groundwater monitoring bores had incorrectly been included in the Licence. Mineral Resources submitted a licence amendment application to correct the groundwater monitoring bores listed in the Licence and also requested that disposal of tyres be included in the Licence. Mineral Resources has further requested to include in this amendment to: reduce the approved Premises production or design capacity to the threshold amount for Category 5, because the premises is in care and maintenance; and to reduce the groundwater monitoring frequency from six monthly to annual.

As part of this Licence amendment, DER has updated the Licence into the latest version 2.9. Justification is provided for each change or alteration to a condition which has occurred as part of the amendment.

4 Decision table

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

DECISION TABLE			
Works Approval / Licence section	**Condition number** **W = Works Approval** **L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
General conditions	L1.2.1 to L1.2.3	**Operation** Previous condition 1.2.2 refers to the code of practice for the storage and handling of dangerous goods and has been removed as part of licence version update. Storage of these substances is considered adequately regulated by the *Dangerous Goods Safety Act 2004* and associated Regulations and the *Environmental Protection Act 1986*. Unauthorised discharges of environmentally hazardous materials may be subject to the provisions of the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.	Application supporting documentation *Dangerous Goods Safety Act 2004* General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004*
Premises operation	L1.3.1 to L1.3.7	**Operation** Table 1.3.1 of condition 1.3.1 has been amended by combining the quantity limit for Inert Waste Type 1, Putrescible waste and Special Waste Type 1 wastes accepted onto the Premises landfill. Stockpiles of clean fill are stored at the landfill and are used for covering waste. This is not considered a material that is accepted for burial and therefore has not been included in the total combined quantity limit.	Application supporting documentation General provisions of the

DECISION TABLE			
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Table 1.3.1 has also been amended to include the acceptance of tyres at the waste rock dump. Previous condition 1.3.2 has been removed as it is not applicable to a mine site. Table 1.3.2 includes process conditions for disposal of tyres, including location and batch size. Table 1.3.3 includes cover requirements for burial of tyres. Approved Production or design capacity has been amended to the Category 5 prescribed activity threshold of 50,000 tonnes per annual period, because the site is on care and maintenance. L1.3.7 has been included to ensure the Licensee does not exceed this amount.	*Environmental Protection Act 1986.*
Emissions	N/A	**Operation** Previous condition was removed from the Licence because no descriptive or numerical limits have been applied in section 2 of the Licence. Nil condition conditions and the headings have been removed from this Licence. Conditions 2.6.1 and 2.6.2 relating to fugitive dust emissions have been removed from the Licence. Any unreasonable dust emissions are now managed through the provisions of the *Environmental Protection Act 1986.*	Application supporting documentation General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004*

DECISION TABLE			
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Monitoring general	L3.1.1	**Operation** Previous nil condition conditions 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.9 and the headings are no longer applicable and have been removed from this Licence. Monitoring is now Section 2.	Application supporting documentation General provisions of the *Environmental Protection Act 1986.*
Ambient environmental quality monitoring	L2.2.1	**Operation** Condition 2.2.1 (previously 3.8.1) requires analysis of samples taken from groundwater monitoring bores located at the sediment pond (tailings storage facility) to determine the ambient groundwater quality. Mineral Resources has advised DER that three of the groundwater bores were incorrectly added to the Licence when it was amended in December 2014. Groundwater bores TM13B, TM28A and TM28B are no longer suitable for monitoring. These bores have been removed from this condition. Groundwater monitoring bores MB1, MB2 and MB3, which were installed during 2012, are the replacement groundwater monitoring bores. Groundwater monitoring bores PB1 and PB5 remain on the Licence. These groundwater monitoring bores will continue to be sampled and the results reported as per the requirements of the Licence. Condition 2.2.1 (previously 3.8.1) has also been amended by removing targets for Total Recoverable Hydrocarbons (TRH). There are no adopted standards for TRH values in groundwaters. Historical sampling of the groundwater since 2013 indicates there have been no hydrocarbons detected (below level of detection). Additionally, there are no nearby sensitive receptors and depth to groundwater is greater than 20 m below ground level. Therefore taking all these factors into consideration, DER has determined that the setting of a limit for TRH in ambient groundwater quality is not necessary. Reporting for TRH in groundwater are still a requirement of the Licence.	Application supporting documentation General provisions of the *Environmental Protection Act 1986.* Australian and New Zealand guidelines for fresh and marine water quality – 2000 (ANZECC)

DECISION TABLE			
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Targets were not applied previously to any of the other parameters in condition 2.2.1 because the discharge of tailings into the TSF was considered a low risk to the environment. This risk assessment remains the same. Therefore limits have not been applied to these parameters. Monitoring frequency Mineral Resources submitted an application to amend the frequency of monitoring from six monthly to annual. The site has been on care and maintenance between 2008 and August 2010 and since November 2013. A letter from Dr GD Campbell of Graeme Campbell and Associates Pty Ltd dated 2 April 2008, prior to construction of Tailings Storage Facility (TSF) No 1 (or sedimentation pond) states: "The tailings-solids sample is devoid of sulphide-materials, and has a gangue which contains serpentenite as a major component – serpentenite buffers effectively at pH = 7+. The tailings-solids are enriched in Cr, but the Cr is incorporated into the crystal-lattice of chromite, and therefore unavailable for leaching. The tailings-slurry-water is mildly alkaline (pH 8-10) and of potable salinity. Minor-element concentrations are below, or close to, the respective detection limits. In brief, the process-tailings stream produced during the Coobina Chromite Project is geochemically benign" Three monitoring bores MB1, MB2 and MB3 downstream of the TSF (sedimentation pond) were constructed in 2008 and were monitored by the Licensee at the time, but were not included in the licence until 2013. The 2013/2/14 monitoring report indicated TDS was slightly elevated at MB1, MB2 and MB3 (2400 – 5,500 mg/L) from the baseline data, however major ions remained below the ANZECC livestock drinking guidelines. Standing water levels increased significantly, likely due to cessation of mining and decrease in abstraction rates.	

DECISION TABLE			
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Hexavalent chromium ranged from 0.01 – 0.011 mg/L at these bores. The 2014/15 monitoring report indicates water quality at MB1, MB2 and MB3 was below the ANZECC livestock drinking water guideline. Standing water levels continued increasing. Hexavalent chromium ranged from 0.003 - 0.012 mg/L. Overall water quality values were reported as being comparable with historical values and indicating that the Coobina Operations have had little impact of groundwater quality. Given that the tailings are considered benign; monitoring results indicate no significant impact recorded; and the site is on care and maintenance, monitoring frequency has been reduced from six monthly to annual.	
Information	L3.1.1 to 3.1.4 L3.2.1 to 3.2.2 L3.3.1 to 3.3.3	Table 3.2.1 and 3.3.1 (previous 5.2.1 and 5.3.1) have been amended to reflect updates to table numbers and licence format versions. Table 3.3.1 has been amended to require the Licensee to notify DER 90 days in advance of production recommencing. (Note that an amendment to the Licence will be required for production to increase above the approved amount).	Application supporting documentation General provisions of the *Environmental Protection Act 1986.*
Licence Duration	NA	DER considers this Licence amendment has not significantly increased the risk profile of the Premises and therefore no change has been made to the Licence expiry date which is currently 26 February 2017.	NA

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
3/12/2015	Proponent sent a copy of draft instrument	Disposal of tyres was not included.	Redrafted to include disposal of tyres.
17/12/2015	Proponent sent a copy of draft instrument (2)	No changes requested, but an additional application to amend the Licence was submitted to reduce throughput capacity and groundwater monitoring frequency, and for both amendment applications to be combined.	Application placed on hold whilst new amendment application was processed.
18/01/2016	Proponent sent a copy of draft instrument (3)	No comments received	Not applicable

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