



Licence

Environmental Protection Act 1986, Part V

Licensee: Fortescue Metals Group Limited

Licence: L8672/2012/1

Registered office: Level 2, Hyatt Centre
87 Adelaide Terrace
EAST PERTH WA 6004

ACN: 002 594 872

Premises address: Newman Operations Centre Rescreening Facility
Area bounded by the following coordinates: 780943.74E, 7415845.90N, 780895.95E,
7415933.74N, 781010.14E, 7415995.87N, 781066.68E, 7415891.97N, 780994.87E,
7415813.89N,
NEWMAN WA 6753
(as depicted in Schedule 1)

Issue date: Wednesday, 7 November 2012

Commencement date: Monday, 12 November 2012


Expiry date: Saturday, 11 November 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: premises on which – (a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) Tailings from metallic or non-metallic ore are reprocessed; or (c) Tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam. | 50 000 tonnes or more per year | 175, 200 tonnes per annual period The assessed capacity is 6000 tonnes per annual period |

Conditions

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


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



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER 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

Fortescue Metals Group Limited (FMG) and its subsidiaries currently operate four iron ore mines in the Pilbara region. These mines are geographically isolated in two operations areas; Solomon and Chichester operations. Both operations are connected via a railway linking the mines with the port infrastructure near Port Hedland.

The Newman Operations centre is located close to the town of Newman. This facility is operated as a research and development (R&D) centre to; test and refine processing methods, and to experiment with the blending of ores from FMGs various mines and mineral exploration areas. Infrastructure includes:

- Fixed and Mobile crushers;
- Fixed and mobile screens;
- Drum rotary sample divider;
- Conveyors;
- Agitated primary holding recirculating tanks;
- Hydro cyclone;
- Up flow classifier;
- Gravity spirals;
- Dewatering screen/ belt filter; and
- X-ray separator.

The equipment is capable of operating at full production of 175,200 tonnes per annum (tpa), however, as this is a Research and Development site, the proposed throughput is 6000 tpa. Ore currently arrives on site from the outlying mines in 200L drums.

An x-ray separation plant is due to be installed on the site. The x-ray separator is part of a trial project testing the feasibility of reprocessing ore tailings on mines. An x-ray will differentiate between ore and waste, waste will be separated using small blasts of compressed air.

This Licence is the result of an amendment sought by the Licensee to add additional infrastructure to the site. This infrastructure is of a mobile nature, largely preassembled and, therefore, a works approval was not considered to be required.

The licences and works approvals issued for the Premises since 12 November 2012 are:

| Instrument log | | |
|----------------|------------|--|
| Instrument | Issued | Description |
| W4768/2010/1 | 15/12/2011 | Works Approval |
| L8672/2012/1 | 12/11/2012 | New application |
| L8672/2012/1 | 04/09/2014 | Licence amendment to add additional crushing and screening equipment, x-ray separator and conversion to Reengineering for Industry Regulation and the Environment (REFIRE) format, and the Environmental Assessment Report was updated to a Decision Document. |



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 January until 31 December;

'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
PO Box 835
KARRATHA WA 6714
Telephone: (08) 9182 2000
Facsimile: (08) 9144 1118
Email: northwest@der.wa.gov.au;

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

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

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

'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

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

'Licence' means this Licence numbered L8672/2012/1 and issued under the Act;

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

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

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

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



- 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

There are no specified conditions relating to Premises operation in this section.

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.

2.2-2.4 Point source emissions to air, surface water and groundwater

There are no specified conditions relating to point source emissions to air, surface water or groundwater in these sections.

2.5 Emissions to land

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



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.
- 2.6.2 The Licensee shall ensure that no visible dust generated by the activities on the Premises crosses the boundary of the Premises.
- 2.6.3 The Licensee shall implement and adhere to the Fortescue Metals Group's: Mobile Crushing and Screening Environmental Management Procedure (CH-PR-EN-0001).

2.7 Odour

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

2.8 Noise

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

3 Monitoring

There are no specified conditions relating to 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) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
 - (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 5.1.3 The Licensee shall complete an Annual Audit Compliance Report (AACR) 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 within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

| 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 |
| 5.1.3 | Compliance | AACR |
| 5.1.4 | Complaints summary | None specified |

Note 1: Forms are in Schedule 2

5.3 Notification

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

| Condition or table (if relevant) | Parameter | Notification requirement ¹ | Format or form ² |
|----------------------------------|---|---|-----------------------------|
| 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 and 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

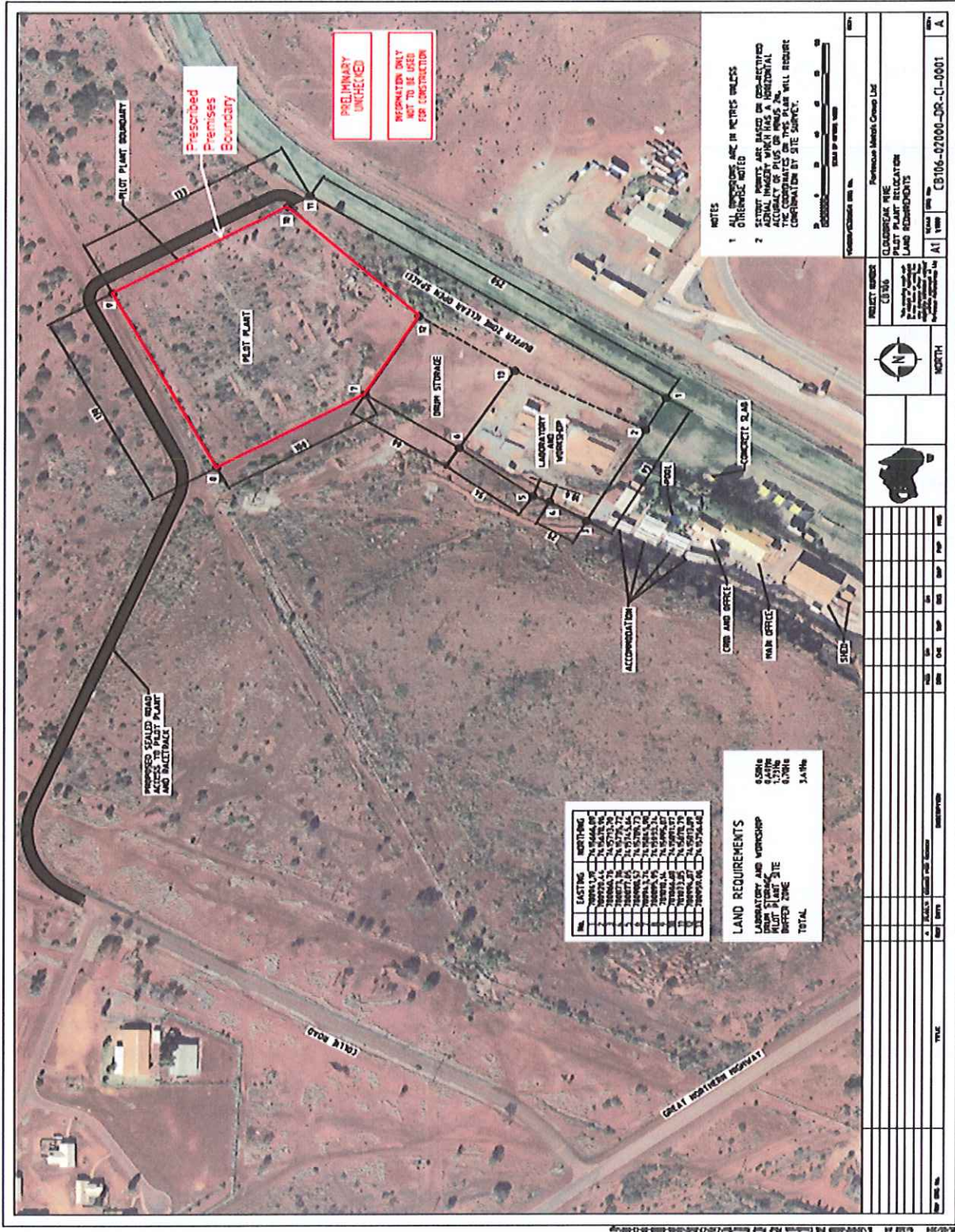
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

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





Schedule 2: Reporting & notification forms

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

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

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

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

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

Yes Please proceed to Section C

No Please proceed to Section B

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

Initial:



SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each licence condition that was not complied with.

| | |
|---|---|
| a) Licence condition not complied with: | |
| | |
| b) Date(s) when the non compliance occurred, if applicable: | |
| | |
| c) Was this non compliance reported to DER?: | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> Reported to DER verbally Date _____ |
| | <input type="checkbox"/> Reported to DER in writing Date _____ |
| <input type="checkbox"/> No | |
| d) Has DER taken, or finalised any action in relation to the non compliance?: | |
| | |
| e) Summary of particulars of the non compliance, and what was the environmental impact: | |
| | |
| f) If relevant, the precise location where the non compliance occurred (attach map or diagram): | |
| | |
| g) Cause of non compliance: | |
| | |
| h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance: | |
| | |
| i) Action taken or that will be taken to prevent recurrence of the non compliance: | |
| | |

Each page must be 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 | <input type="checkbox"/> <input type="checkbox"/> | by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf. |
| A firm or other unincorporated company | <input type="checkbox"/> <input type="checkbox"/> | by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| A corporation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| A public authority (other than a local government) | <input type="checkbox"/> <input type="checkbox"/> | by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| a local government | <input type="checkbox"/> <input type="checkbox"/> | by the chief executive officer of the licensee; or by affixing the seal of the local government. |

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____ / ____ / ____

DATE: ____ / ____ / ____

SEAL (if signing under seal)



Licence: L8672/2012/1
Form: N1

Licensee: Fortescue Metals Group Limited
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 Fortescue Metals Group Limited | |
| Date | |



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Fortescue Metals Group Limited

Licence: L8672/2012/1

Registered office: Level 2
Hyatt Centre
87 Adelaide Terrace
EAST PERTH WA 6004

ACN: 002 594 872

Premises address: Newman Operations Centre Rescreening Facility
Area bounded by the following coordinates: 780943.74E, 7415845.90N,
780895.95E, 7415933.74N, 781010.14E, 7415995.87N, 781066.68E,
7415891.97N, 780994.87E, 7415813.89N.
NEWMAN WA 6753

Issue date: Wednesday, 7 November 2012

Commencement date: Monday, 12 November 2012

Expiry date: Saturday, 11 November 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.

Decision Document prepared by: Ty Matson
Licensing Officer

Decision Document authorised by: Alana Kidd
Manager Licensing



Contents

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1 Purpose of this Document

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

Works approval and licence conditions

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

Standard conditions (SC)

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

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

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

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

Optional standard conditions (OSC)

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

Non standard conditions (NSC)

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



2 Administrative summary

| Administrative details | | |
|--|---|---|
| Application type | Works Approval <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 | Category number(s) | Assessed design capacity |
| | 5 | 175,200 tonnes per year (Assessed at 6,000 tonnes per year). |
| Application verified | Date: 14/08/2012 | |
| Application fee paid | Date: 27/08/2012 | |
| 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 | | |
| Is the proposal a Major Resource Project? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/> |
| Is the proposal subject to Ministerial Conditions? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Ministerial statement No: EPA Report No: |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here. | | |
| Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP. | | |



3 Executive summary of proposal and assessment

The Newman Operations Centre Rescreening Facility (the facility) has been assessed as a "prescribed premises" under category number 5, within Schedule 1 of the *Environmental Protection Regulations 1987*.

Processing or beneficiation of metallic or non-metallic ore: premises on which –

- a) metallic or non-metallic ore is crushed, ground, milled or otherwise process;*
- b) tailings from metallic or non-metallic ore are reprocessed; or*
- c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.*

Fortescue Metals Group Limited (FMG) has constructed a batch wet desanding pilot plant (BWDP) adjacent to the facility. The total capacity of the facility is 175,200 tonnes per annum (tpa) however FMG runs the facility at approximately 6,000 tpa. This BWDP allows FMG to assess the iron ore grade and supply opportunities in order to plan mining operations and establish markets for mined ore from other sites.

The construction of the BWDP was approved under works approval W4768/2010/1. Licence L8672/2012/1 was issued for the operations of this premise.

This amendment is to allow for the use of stationary and mobile crushing and screening plant, and an x-ray separator with the BWDP. This additional processing does not change the licence throughput. During this amendment, the licence was converted to the Re-Engineering for Industry Regulation and Environment (REFIRE) format and the Environmental Assessment Report was converted to a Decision Document.

BACKGROUND

GENERAL COMPANY DESCRIPTION

FMG is developing the Pilbara Iron Ore and Infrastructure Project (the Project), which involves a series of iron ore mines in the Pilbara region of Western Australia. The Project has been separated into a number of stages:

- Stage A Project: Port and a north-south railway from north of the Chichester Ranges in the Central Pilbara to Port Hedland;
- Stage B Project: Christmas Creek and Mindy Mindy mines and an east-west rail spur;
- Cloudbreak Iron Ore Project: The Cloudbreak Iron Ore Mine;
- Port Facility Upgrade: Anderson Point Port Hedland, Dredging and Wharf Construction, Third Berth; and
- Solomon Project, incorporating two mine sites, Firetail and Kings and supporting rail infrastructure.

FMG currently operations significant iron ore mines at Solomon, Cloudbreak and Christmas Creek. Ore from Cloudbreak and Christmas Creek mines is loaded onto trains at each mine site and transported by rail along the east-west railway and the north-south railway to the Anderson Point Materials Handling Facility (Port Facility) (Figure 1). The Solomon mine is connected to the main line via the Hamersley Rail Line (Figure 1).

LOCATION OF PREMISES

The facility is located at the race course, approximately 1.5 km from the Newman town centre. The facility will be located to the east of the Newman Operations Centre, within the following coordinates (MGA 50):



780943.74E, 7415845.90N
780895.95E, 7415933.74N
781010.14E, 7415995.87N
781066.68E, 7415891.97N
780994.87E, 7415813.89N

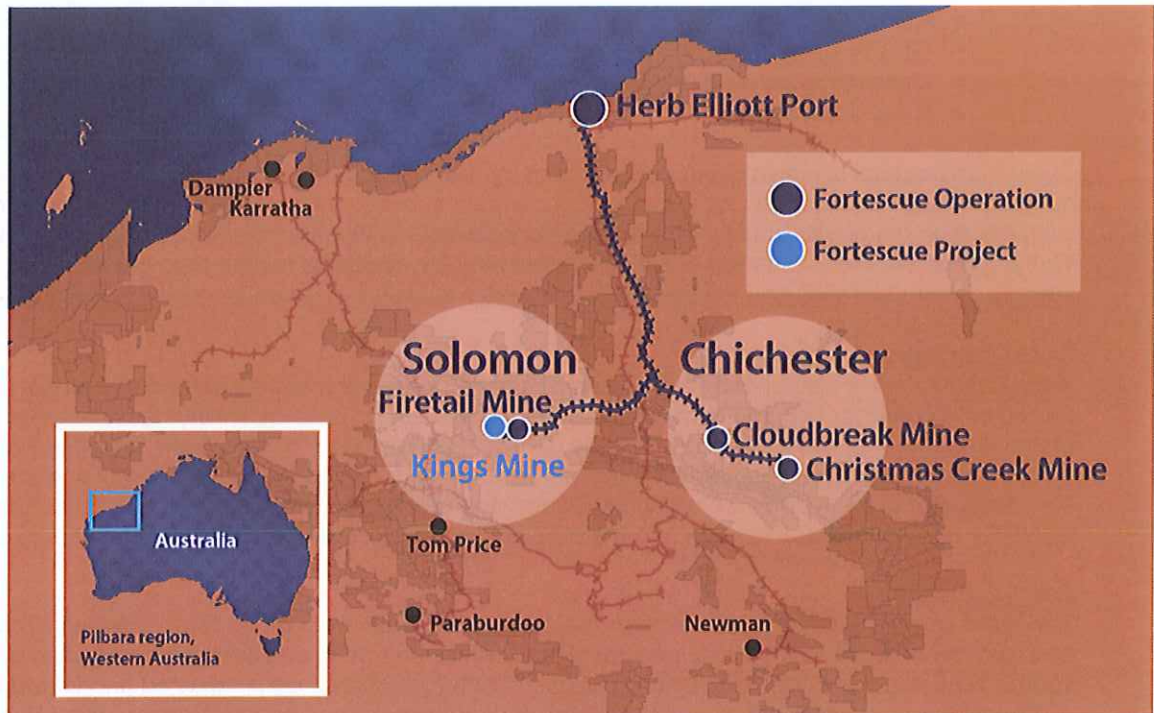


Figure 1: General Location of Fortescue Operations.

The mean annual rainfall for Newman is 321.1mm and annual evaporation rates greatly exceed the mean annual rainfall with two distinct seasons.

Within the Newman area, the regional topography is dominated by the Hamersley Plateau in the south and the Chichester Ranges in the north, with the two features divided by the Fortescue Valley. The vegetation in the area is typically open and frequently dominated by Spinifex, acacias and occasional eucalypts.

PROCESS DESCRIPTION

The facility was constructed to allow FMG to assess the iron ore grade and supply opportunities. This allows FMG to plan mining operations and establish markets for mined iron ore.

The facility assesses the ability to upgrade iron ore (Fe – hematite and goethite) using water to wash and gravity to separate lower specific gravity waste from higher specific gravity and Fe grade iron. The facility receives sub-splits of primary crushed (minus 150 mm and sub split to 150-200 kg) bulk drill samples from FMG mine sites that require processing through all or specific parts of the facility. Additional crushing and screening of some material is required prior to processing. This is undertaken using a combination of fixed and mobile crushing and screening equipment. Crushed materials are combined to form various composites to test the beneficiation performance of different material types.

The facility comprises of the following infrastructure:



- Fixed and mobile crushers;
- Fixed and mobile screens;
- Drum rotary sample divider;
- Conveyors;
- Agitated primary holding recirculating tanks;
- Hydrocyclone;
- Up flow classifier;
- Gravity spirals;
- Dewatering screens/belt filter; and
- X-ray separator.

The <1mm material is mixed in the agitated primary holding recirculating tanks. This feed is then pumped through the hydrocyclone and the concentrate subsequently pumped through an upflow classifier then the gravity spirals. The resulting concentrate is then pumped to a dewatering belt filter. The products are then drummed and dispatched either for additional testing or to the mine site for storage. Batch operating and continuous run are the two scales of operation which are employed.

X-Ray Separation

X-Ray Separation is also undertaken on some material, where dry, coarse screened material is placed on a conveyor belt and passed through an x-ray sensor, which differentiates mineralised material and waste based on specific atomic density. Particles identified as waste are selectively ejected into a separation chamber using a small burst of compressed air. Fortescue will operate the X-Ray Separator at the Newman Operations Centre as part of a pilot feasibility program to determine its suitability for separation of low-grade ore stockpiles across the operating Fortescue mine sites.

Batch operating

The batch operating throughput is approximately one tonne per hour of ore feed. The sample runs continuously in recirculating mode and variables such as operating pressure, percentage solids and various feed rates and operation settings of each of the unit operations is adjusted and fine-tuned. Up to 30 batches of different ore types are trialled, and equipment configurations are modified to best achieve product upgrading. Once all samples are run and results compiled and analysed, a blend of the ore types are composited and a continuous run is made to generate products for customer trials and product characterisation.

Continuous run

The maximum continuous operating throughput is approximately 8 hours per day at 20 tonnes per hour and occurs only a few times a year. In continuous run mode the tailings are sent to the thickener and consolidated into drums for disposal offsite.

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 |
| General conditions | L1.2.3 L1.2.4 L1.2.5 | OSC | <p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Contaminated or potentially contaminated stormwater or soil due to hydrocarbon spills. <i>Impact:</i> Contamination of surrounding land or drainage systems. Potential impact on local ecology. <i>Controls:</i> The use of dedicated service trucks equipped with spill response equipment. Staff to have adequate training in refuelling operations and spill response procedures. The proponent operates a bioremediation area that is used for all soil contaminated by hydrocarbons. The proponent proposes to direct stormwater away from operations through the use of earthen windrows and drains. All captured stormwater is to be treated through an oily water separator prior to discharge to the environment.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant. <i>Likelihood:</i> Possible. <i>Risk rating:</i> Low</p> <p><u>Regulatory Controls</u> The proponent is bound by condition L1.2.3 to store all environmentally hazardous materials in accordance with the "Code of Practice for the Storage and Handling of Dangerous Goods" This document commits the proponent to its</p> | <p>Application supporting documentation.</p> <p>Code of Practice for the Storage and Handling of Dangerous Goods, Department of Mines and Petroleum, Government of Western Australia.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p> |



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 |
|--|---|------------|---|---------------------------------------|
| | | | environmental management plans which adequately cover storage, handling and spill procedures of hydrocarbons. L1.2.4 requires the Licensee to immediately resolve any spills. <u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk rating:</i> Low. | |
| Emissions general | L2.1 | N/A | Operation The nature of this operation does not have descriptive limits of emissions. | Application supporting documentation. |
| Point source emissions to air including monitoring | L2.2 | N/A | There are no anticipated emissions to air. | N/A. |
| Point source emissions to surface water including monitoring | L2.3 | N/A | There are no anticipated emissions to surface water. | N/A. |
| Point source emissions to groundwater including monitoring | L2.4 | N/A | There are no anticipated emissions to groundwater. | N/A. |
| Emissions to land including monitoring | L2.5 | N/A | There are no anticipated emissions to land. | N/A. |



DECISION TABLE

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|----------------------------------|---|------------|--|---|
| Fugitive emissions | L2.6.1 L2.6.2 L2.6.3 | OSC | <p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Dust is generated by mobile plant and when material is processed through the mobile crushing and screening plants (MCSP) and through general material handling activities at the facility. <i>Impact:</i> Dust emissions can have a potential smothering impact on local flora causing vegetation loss, or affect other people offsite. <i>Controls:</i> Dust generated by mobile plant will be adequately controlled by speed restrictions and by the use of water on roads. Dust will be suppressed in the ore processing facilities (OPF) by prewetting material prior to its introduction to the MCSPs, or by using water sprays at strategic points through the facility. The ore is processed in a wet state thus limiting dust emissions.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible. <i>Risk rating:</i> Low.</p> <p><u>Regulatory Controls</u> L2.6.1 requires that the Licensee shall use all reasonable and practical methods to minimise dust emissions from the premises. L2.6.2 ensures that no visible dust is permitted to cross the prescribed premises boundary. L2.6.3 commits the Licensee to adhering to its Mobile Crushing and Screening Environmental Management Procedure. This procedure covers dust emissions in more detail.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant. <i>Likelihood:</i> Unlikely. <i>Risk rating:</i> Low.</p> | Fortescue Metals Group: Mobile Crushing and Screening Environmental Management Procedure (CH-PR-EN-0001). |



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 |
|----------------------------------|---|------------|---|--|
| Odour | L2.7 | N/A | There are no anticipated odour emissions. | N/A |
| Noise | L2.8 | | <p>Operation <u>Emission Description</u> <i>Emission:</i> It is expected that noise will be generated by both mobile plant and the MCSPs. <i>Impact:</i> Noise emissions have the potential to disturb sensitive receptors, particularly the Newman townsite. <i>Controls:</i> Noise is difficult to control when operating heavy machinery. Noise modelling was conducted prior to the construction of this facility. No complaints have been recorded. The Licensee is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i>. The facility will only operate intermittently between 7am and 7pm.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk rating:</i> Low</p> <p>Regulatory Controls No Regulatory controls are stipulated in the licence. The Licensee is still subject to the <i>Environmental Protection (Noise) Regulations 1997</i> and provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk rating:</i> Low</p> <p>No monitoring is required at this premises. There are no planned discharges and the fugitive emissions of dust and stormwater are difficult to quantify.</p> | <p><i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Fortescue Metals Group: Mobile Crushing and Screening Environmental Management Procedure (CH-PR-EN-0001).</p> <p><i>Environmental Protection Act 1986</i>.</p> |
| Monitoring general | L3 | N/A | | N/A. |



DECISION TABLE

| Works Approval / Licence section | Condition number W = Works Approval L = Licence | OSC or NSC | Justification (including risk description & decision methodology where relevant) | Reference documents |
|----------------------------------|---|------------|---|---------------------|
| Monitoring of inputs and outputs | L3 | N/A | There are no inputs and outputs that directly relate to any anticipated emission from this site. | N/A. |
| Process monitoring | L3 | N/A | Process monitoring is not required on this site. Ore is crushed, screened and possibly blended before being returned to the site of origin. | N/A. |
| Ambient quality monitoring | L3 | N/A | Ambient quality monitoring is not required at this site. The new additions are not expected to change any aspect of the site. The site has now been operating for a number of years without receiving complaints despite being within 1.5kms of the Newman town centre. | N/A. |
| Meteorological monitoring | L3 | N/A | Not relevant for this site. | N/A |
| Improvements | L4 | N/A | No improvements are required for this site. | N/A |
| Information | L5.1.3 L5.1.4 L5.2.1 L5.3.1 | N/A | Standard reporting conditions in the form of an Annual Environmental Report and an Annual Audit Compliance Report are required. The Licensee is also required to report any incidents that may cause pollution. | N/A |



5 Advertisement and consultation table

| Date | Event | Comments received/Notes | How comments were taken into consideration |
|------------|---|---|--|
| 12/11/2012 | Application advertised in West Australian (or other relevant newspaper) | None Received. | |
| 11/08/2014 | Proponent sent a copy of draft instrument | Comments received and incorporated where appropriate. | |



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 |

