



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Pilbara Iron Company
 (Services) Pty Ltd

Works Approval Number: W5813/2015/1

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

ACN: 107 210 248

Premises address: Nammuldi Operation Primary Crushing Facility
 Mining lease G47/01242 and LGE G848907 within coordinates
 536367.8922 E, 7525036.112 N; 536655.3259 E, 7525129.423 N;
 537008.1326 E, 7524427.799 N; 536689.1008, 7524378.036 N;
 536525.0828 E, 7524929.823 N; 536401.3291 E, 7524886.902 N;
 536367.8922 E, 7525036.112 N
 MT SHEILA WA 6751
 As depicted in Schedule 1.

Issue date: Thursday, 6 August 2015

Commencement date: Monday, 10 August 2015

Expiry date: Thursday, 9 August 2018

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

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	7,500,000 tonnes per annual period

Conditions

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

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



Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 January to 31 December in the same year;

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

'CEO' for the purpose of correspondence means;

Manager - Licensing (Resource Industries)

At the following addresss:

Department of Environment Regulation

Locked Bag 33

CLOISTERS SQUARE WA 6850

Telephone: (08) 9333 7510

Facsimile: (08) 9333 7550

Email: industry.regulation@der.wa.gov.au;

'Commissioning' means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application;

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

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Works Approval' means this Works Approval numbered W5813/2015/1 and issued under the Act; and

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.

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

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



1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements ¹		
Document	Parts	Date of Document
Works Approval Application Form	All	30 September 2014
Works Approval Application – Silvergrass East, Primary Crusher Facility at Nammuldi Operation	All, including Drawings and Appendices	12 January 2015
Email correspondence, “RE: Nammuldi Processing Plant works approval – AIN rfr7oh – ALTERATION to Occupier Name 4/3/15, authored by Katrina Burke	All	4 March 2015
Email correspondence, “Nammuldi Primary Crushing Plant works approval – further information required – W5813?..Sediment pond details 9/4/15”, authored by Katrina Burke	All	9 April 2015
Email correspondence, “Nammuldi Primary Crushing Plant works approval – further information required – W5813?..Crushing Facility and Conveyor details 20/7/15, authored by Katrina Burke	All, including Attachment	20 July 2015

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.2 The Works Approval Holder shall commission the Nammuldi Operation Primary Crushing Facility, for a period not exceeding three (3) months.

2 Information

2.1 Reporting

2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.

2.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the Works Approval; and
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

2.2 Notification

2.2.1 The Works Approval Holder shall ensure that the parameters listed in Table 2.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

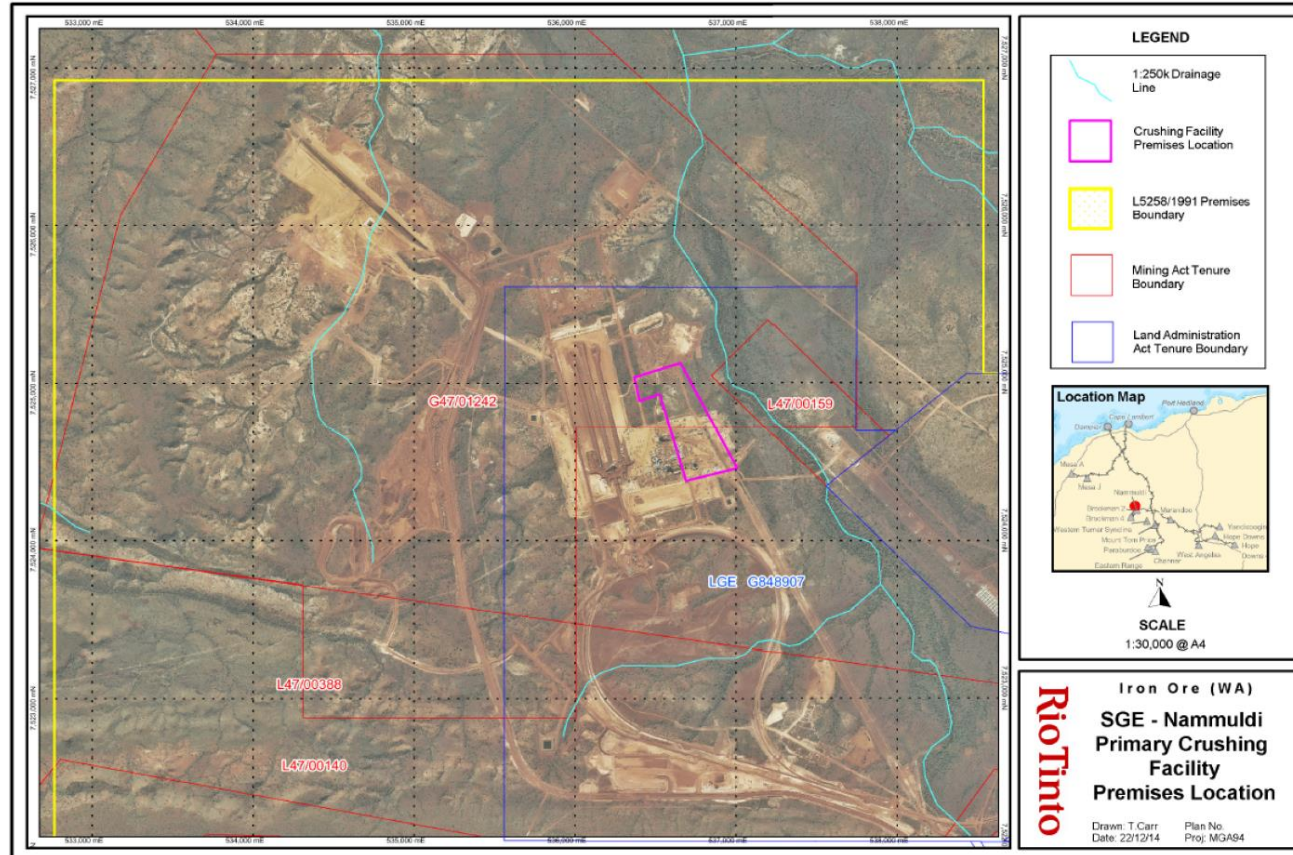
Table 2.2.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement	Format or form
1.2.2	Commencement of commissioning	7 days prior to start	None specified
	Completion of commissioning	7 days after completion	



Schedule 1: Maps

Premises map

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





Decision Document

Environmental Protection Act 1986, Part V

Proponent: Pilbara Iron Company (Services) Pty Ltd

Works Approval: W5813/2015/1

Registered office: Level 22, Central Park
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PERTH WA 6000

ACN: 107 210 248

Premises address: Nammuldi Operation Primary Crushing Facility
Mining lease G47/01242 and LGE G848907 within coordinates
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MT SHEILA WA 6751

Issue date: Thursday, 6 August 2015

Commencement date: Monday, 10 August 2015

Expiry date: Thursday, 9 August 2018

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Works Approval 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:

Danielle Eyre
Delegated Officer



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1 Purpose of this Document

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



2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/>	New Licence <input type="checkbox"/>
	Licence amendment <input type="checkbox"/>	Works Approval amendment <input type="checkbox"/>
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	7,500,000 tonnes per annual period
Application verified	Date: 5 March 2015	
Application fee paid	Date: 25 March 2015	
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 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"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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"/>
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

Pilbara Iron Company (Services) Pty Ltd (PICS) proposes to commence above water table mining from the Silvergrass East (SGE) Project located approximately 15 kilometres (km) north of the existing Brockman 2 Nammuldi Operation. It is proposed to transport excavated ore approximately 9.4km by road train from SGE to a primary crushing plant (the subject of this works approval application), to be located adjacent to the existing Nammuldi Below Water Table (NBWT) processing plant. Ore will be unloaded from the road trains onto a laydown area and front end loaders will dump the ore into the primary crusher feed hopper at a controlled rate.

The primary crushing plant will have a maximum design capacity of 7.5 million tonnes per annum (Mtpa). It is anticipated that crushed product will be produced at a rate of 5 Mtpa and transported via conveyor to the existing NBWT processing facility for secondary processing.

The ore will not be subjected to any wet processing, but instead be processed through the secondary crushing and dry screening circuit of the existing NBWT plant to produce lump and fines products. The lump and fines product will be conveyed to the existing NBWT product stockpiles, from where it will be transferred to the rail facilities for transport.

The primary crusher facility will be located approximately 75km north-west of Tom Price in the Pilbara region of Western Australia, within the Shire of Ashburton. Operating hours for the facility is anticipated to comprise a 24 hour a day, 7 days a week rotation. Normally, one annual shutdown of approximately 2 weeks is anticipated as well as unplanned shutdowns.

The plant will comprise of a primary jaw crushing station, three Grass Hopper conveyors and a 230 metre long overland conveyor on which crushed ore will be transported to the existing NBWT processing facility for further processing.

Ancillary infrastructure required for the construction and operation of the primary crushing plant include water pipes, a small fuel storage area, generators and a switch room.

On receipt of the Works approval, the project is planning to commence construction in August 2015. Commissioning is anticipated to take approximately 1 month but PICS is requesting a three month commissioning period to allow for potential construction delays. PICS anticipates operating the plant for up to 24 months.

The plant will be operated under the existing Mt Brockman and Nammuldi Iron Ore Mines licence L5258/1991/11, within the approved Category 5 design capacity currently specified on the licence.



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.

Note: The existing Mt Brockman and Nammuldi Iron Ore Mine operating Licence (L5258/1991/11) has not yet been updated to the latest version of the Licence template. Where applicable, references have been made to the existing Licence conditions.

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	W1.2.2 Licence conditions	<p>Construction</p> <p>Condition 1.2.2 has been included in the Works Approval. PICS has indicated that the crushing and screening plant will commission for a period not exceeding three months. Under condition 1.2.2 of the Works Approval, PICS will have three months to commission the plant.</p> <p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Stormwater and plant wash down water contaminated with ore and hydrocarbons from crushing operations and hydrocarbon spills to the surrounding environment. <i>Impact:</i> Contamination of surrounding land and surface water drainage systems. Potential impacts on ecology of land and surface water from the addition of sediment, hydrocarbons and heavy metals. <i>Controls:</i></p> <ul style="list-style-type: none"> - Stormwater and plant wash down water will be captured in an unlined sediment basin to remove sediment prior to offsite discharge. The basin will be designed to a 1 in 10 year, 6 hour rainfall event; - The sediment basin (to be located adjacent to the crushing plant) can be visually inspected on a daily basis. Sediment will be removed as required and/or when 	<p>Application supporting documentation</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Australian Standard 1940:2004 The storage and handling of flammable and combustible liquids</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>rain is forecast to minimise the likelihood of an overflow of sediment laden water into the environment;</p> <ul style="list-style-type: none"> - Spill response procedures will ensure that any hydrocarbons spilled on the pavement will be appropriately cleaned up, minimising concentrations of hydrocarbons in stormwater and plant washdown water; - Hydrocarbon spills outside of bunded areas will be immediately controlled, contained, cleaned up and reported; and - Lubricants and oils required to service the plant will be stored in adequately bunded facilities in accordance with the Dangerous Goods (Storage and Handling of Non-explosives) Safety Regulations 2007 and Australian Standard 1940:2004. <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> The existing Licence has conditions relating to stormwater management and liquid chemical storage. No additional conditions are required to be added to the Licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	
Emissions general	N/A	There are no specified conditions relating to premises operation included in the Works Approval.	N/A
Point source emissions to	N/A	Construction and Operation There will be no point source emissions to air expected during construction or operation of	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
air including monitoring		<p>the plant.</p> <p>No specified conditions relating to point source air emissions or the monitoring of these emissions are required to be added to the Works Approval or Licence.</p>	<p><i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Works Approval application supporting documentation</p>
Point source emissions to surface water including monitoring	N/A	<p>Construction and Operation</p> <p>There will be no point source emissions to surface water during construction or operation of the plant.</p> <p>No specified conditions relating to point source emissions to surface water or the monitoring of such emissions are required to be added to the Works Approval or Licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Works Approval application supporting documentation</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to groundwater including monitoring	N/A	<p>Construction and Operation There will be no point source emissions to groundwater during construction or operation of the plant.</p> <p>No specified conditions relating to point source emissions to groundwater or the monitoring of such emissions are required to be added to the Works Approval or Licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Works Approval application supporting documentation</p>
Emissions to land including monitoring	N/A	<p>Construction and Operation There will be no point source emissions to land during construction or operation of the plant.</p> <p>No specified conditions relating to point source emissions to land or the monitoring of such emissions are required to be added to the Works Approval or Licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Works Approval application supporting</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			documentation
Fugitive emissions	Existing licence conditions	<p>Construction and Operation – Dust emissions</p> <p><u>Emission Description</u> <i>Emission:</i> Dust will be generated during construction and operation of the plant from the movement of rock and product, vehicular movement and the ore handling and crushing process. <i>Impact:</i> Dust emissions can be harmful to human health, impact ambient environmental quality and smother vegetation. <i>Controls:</i> Dust emissions will be managed by:</p> <ul style="list-style-type: none"> - Visual monitoring of dust generated by road train activities and water carts utilised as required to minimise dust emissions from laydown areas, roads and stockpile areas; - Stockpile height will be managed and supplementary water will be added to moisture condition the ore at the stockpile location; - Enclosure of transfer points and minimise height between transfer points; - Appropriate design and maintenance of skirting on transfer points; - Suitable width and trough angle of the conveyors to ensure ore is contained to minimise dust; - Suitable atomiser and deluge type sprays will be installed at transfer points to maintain the ore moisture above the dust extinction point; and - Sprays will be set up with flow rate control to ensure they operate at the optimum design. <p><u>Risk assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u></p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>Works Approval application supporting documentation</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>No specified conditions relating to fugitive dust emissions have been included in the Works Approval. The proponent has demonstrated that appropriate management measures will be implemented to manage dust during construction and commissioning.</p> <p>The existing Licence has conditions relating to dust management. No additional conditions are required to be added to the Licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Odour	N/A	<p>Construction and Operation No odour emissions are expected from the construction and operation of the plant.</p> <p>No specified conditions relating to odour emissions are required to be added to the Works Approval or Licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>Works Approval application supporting documentation</p>
Noise	N/A	<p>Construction and Operation <u>Emission description</u> <i>Emission:</i> Noise and vibration emissions produced by construction activities and operation of the primary crushing plant. <i>Impact:</i> Noise and vibrations may impact on fauna and people. <u>Controls:</u></p> <ul style="list-style-type: none"> - The plant will be operated to comply with the <i>Environmental Protection (Noise) Regulations 1997</i>; and 	<p><i>Environmental Protection (Noise) Regulations 1997</i></p> <p>General provisions of the <i>Environmental Protection Act</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul style="list-style-type: none"> - Predictive modelling has demonstrated that the operation at full capacity would not cause attenuation above the recommended noise levels of 25dBA at the Brockman 2 Accommodation Village and Jeeriwah Camp, located approximately 1.96km and 2.1km respectively, from the primary crushing plant. <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p> <p><u>Regulatory Controls</u> No specified conditions relating to noise emissions are required to be added to the Works Approval or Licence. The <i>Environmental Protection (Noise) Regulations 1997</i> will provide adequate regulatory control.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p>	1986 Works Approval application supporting documentation
Monitoring general	N/A	As no monitoring of emissions will be required, no specified conditions relating to monitoring will be included on the Works Approval or Licence.	N/A
Monitoring of inputs and outputs	N/A	Monitoring of input or outputs is not required and therefore no specified conditions relating to monitoring of inputs and outputs are required to be added to the Works Approval or Licence.	N/A
Process monitoring	N/A	No specified conditions relating to process monitoring are required to be added to the Works Approval or Licence.	N/A
Ambient quality monitoring	N/A	No ambient quality monitoring is required as the main emissions produced by the proposal, noise and dust, have been assessed within this document as being low risk. No specified conditions relating to ambient quality monitoring are required to be added to the	N/A



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Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Works Approval or Licence.	
Meteorological monitoring	N/A	Monitoring of meteorological conditions is not required to adequately manage emissions from this proposal and has therefore not been added to the Works Approval or Licence.	N/A
Improvements	N/A	No specified conditions relating to improvements are required to be added to the Works Approval or Licence.	N/A
Information	W2.2.1	Condition 2.2.1 has been added to the Works Approval, which requires the proponent to notify the CEO at the commencement and completion of commissioning of the plant. The existing Licence has conditions relating to the submission of an Annual Environmental Report and Annual Audit Compliance Report by the 30 April each year.	N/A
Licence Duration	N/A	Operating Licence L5258/1991/11 was issued on 26 May 2011 for a five year period, it is due to expire on 28 May 2016. This Works Approval will have a duration of three years.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
6 April 2015	Application advertised in West Australian (or other relevant newspaper)	No comments were received.	N/A
28 July 2015	Proponent sent a copy of draft instrument	The proponent requested that: <ul style="list-style-type: none">• Pilbara Iron Company (Services) Pty Ltd be referenced as 'PICS' instead of 'Pilbara Iron';• A three month commissioning period be allowed to account for any construction delays; and• The page numbers in the Works Approval be corrected.	The Works Approval and Decision Document have both been updated in response to the proponents comments.



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