



Licence Number	L8308/2008/2
Licensee	CITIC Pacific Mining Management Pty Ltd
ACN	119 578 371
Registered business address	45 St Georges Terrace PERTH WA 6000
Date of amendment	16 December 2016
Prescribed Premises	Category 5: Processing or beneficiation of metallic or non-metallic ore Category 6: Mine dewatering discharge Category 12: Screening, etc. of material Category 52: Electric power generation Category 54: Sewage facility Category 57: Used tyre storage (general) Category 64: Class II putrescible landfill site Category 73: Bulk storage of chemicals, etc
Premises	Sino Iron Project Mine Site Mining Tenements M08/123, M08/124, M08/125, M08/264, M08/265, M08/266, G08/54 and L08/126 MARDIE WA 6714

Amendment

The Department of Environment Regulation (DER) has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice.

Date signed: 16 December 2016

Alana Kidd
Manager Licensing – Resource Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Amendment Notice

This Notice is issued under section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

Amendment Description

This Amendment Notice is the result of an Applicant initiated amendment and relates to an administrative change to extend the date of completion for Improvement program IR1 from 31 December 2016 to 30 June 2018 (see excerpt from licence below).

Table 4.1.1: Improvement program		
Improvement reference	Improvement ¹	Date of completion
IR1	The Licensee shall certify that the point source air emission levels from each turbine unit of the Power Station for oxides of nitrogen (NO _x) and carbon monoxide (CO) of <25 ppmv and <50 ppmv, respectively, have been met at full load.	31 December 2016

Note 1: All units are referenced to STP dry at 15% O₂

Commissioning of the gas turbine units up to full load, allowing the certification of point source air emission levels, has been delayed due to insufficient and variable load demand as a result of a prolonged construction and commissioning period at the processing plant.

As the equipment has remained idle for some time, some rectification works are also required on the inter-stage duct burners. Sourcing and installing this equipment and then final commissioning of the inter-stage duct burners is proposed to be completed by Quarter 4 2017.

The existing continuous emissions monitoring system (CEMS), LSA CEMS, is in the process of being replaced by a new ABB CEMS that is certified by the manufacturer as compliant for use in accordance with the CEMS Code for Stationary Source Air Emissions (DER 2016). This shall be operational by Quarter 2 2017.

Location, environmental siting and potential receptors

Table 1 below lists the relevant human receptors in the vicinity of the prescribed premises.

Residential and Sensitive Premises	Distance from Prescribed Premises Boundary
Fortescue River Mouth recreational area (not a registered campsite by the City of Karratha)	More than 5 km to the north-west
Mardie Station Pastoral Lease	More than 20 km south-west
Fortescue River Roadhouse	More than 25 km to the south

Table 2 below lists the relevant environmental receptors in the vicinity of the prescribed premises.

Environmental receptor	Distance from Prescribed Premises Boundary
Fortescue River	More than 5 km to the north-west
Deboulay Creek	More than 2.5 km to the north
Edward Creek	Onsite
Yaggobiddy Creek	Onsite

Risk assessment

Tables 3 and 4 below apply a risk assessment to the potential emissions which may arise from the amendment application. Both tables identify whether these emissions present a material risk requiring regulatory controls.

Risk Assessment

Table 3. Risk assessment for extension of IR1 condition completion date

		Potential Emissions	Potential Receptors	Potential Pathway	Potential Impacts	Material Risk	Reasoning	
Source	Category 52: Electric power generation	Commissioning of the Power Station	Air: Release of air emissions (particularly CO and NOx) during commissioning of the Power Station	Fortescue River Mouth recreational area	Air: Transport through air then transfer through respiratory system	Human health impacts – respiratory illness	No	<p>The Delegated Officer considers the distance to human receptors to be acceptable to prevent health impacts to occur. Fortescue River Mouth recreational area is at the recommended separation distance of 5,000 m. The area is utilized to access the boat ramp so visitation is typically only for short periods. In addition, commissioning activities will not extend for a long-term duration.</p> <p>According to the 2016 AER, GT7 typically achieved the manufacturer CO emission guarantee of <50ppmv, corrected to 15% O₂, even under low base load operating conditions. When operated at base loads of approximately 70-100% capacity (i.e. ~30.8MW – ~44MW). GT7 typically achieved the manufacturer NOx emission guarantee of <25 ppmv corrected to 15% O₂, however, the Power Station operated at lower base loads for the majority of the monitoring period, resulting in NOx exceeding the manufacturer guarantee. Results for GT1-6 are similar in that CO is consistently below the manufacturer's emission guarantee for all loads. NOx typically achieved the manufacturer emission guarantee when operated at higher loads.</p> <p>As the Processing Plant, which is the biggest consumer of power onsite, is optimising and load demand is increasing and stabilising, base load is typically in excess of 70% and emissions guarantee are thus likely to be met. The ground level ambient NOx monitoring station, which is located 3km north of the Power Station has been achieving concentrations well within the National Environment Protection Measure (NEPM).</p> <p>Given that there is Continuous Emissions Monitoring (CEMS) on GT7, the proponent is in the process of converting the other GTGs over to the new CEMS by Q2 2017 and the NEPM for NOx is met, the Delegated Officer has determined the consequence to be <i>slight</i> and the likelihood of consequence to be <i>unlikely</i> and the. The risk rating is therefore <i>low</i>.</p>

		Noise and vibration: Associated with commissioning of the Power Station	Fortescue River Mouth recreational area	Air/Wind	Human health impacts – amenity impacts	No	<p>The Delegated Officer considers the distance to human receptors to be acceptable to prevent health impacts to occur. In addition, commissioning activities will not extend for a long-term duration.</p> <p>Fortescue River Mouth recreational area is at the recommended separation distance of 5,000 m.</p> <p>Continuous sound level monitoring was conducted from 2008 at the Fortescue River recreational area and Mardie Homestead. All exceedences were attributable to natural phenomena (i.e. strong winds, rain, thunderstorm, cyclonic activity, bird calls and/or insect noises. This was then discontinued in 2014 and the Applicant transitioned to a complaints based monitoring program.</p> <p>The Delegated Officer has determined the likelihood of impact to be unlikely and the consequence to be slight. The risk rating is therefore low.</p>
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Decision

The Delegated Officer has determined that the key emissions associated with the extension of the date of completion for Improvement Program IR1 to be air emissions.

The Delegated Officer considers that the risks associated with these emissions are low due to distances to sensitive receptors and the Licensee's controls. No additional conditions are required on the licence, other than the extension of the date of completion for Improvement program IR1 from 31 December 2016 to 30 June 2018.

Amendment History

Instrument	Issued	Amendment
L8308/2008/1	23/01/2014	Licence amendment to include the operation of PC1 and PC2 (W5005/2011/1), ML1 (W4447/2008/1) and the Biomax WWTP (W5273/2012/1).
L8308/2008/2	24/03/2016	Licence amended to increase the design capacity of category 5 (inclusion of PC3, PC4, ML2 to ML4 and TSF Stage 1) and category 64, inclusion of categories 12 and 57 and expansion of the premises boundary.
L8308/2008/2	28/07/2016	Licence amended to increase the design capacity of category 5 (inclusion of ML5 and 6).
L8308/2008/2	24/11/2016	Licence amended to include category 6 mine dewatering discharge for 2GL discharge.
L8308/2008/2	16/12/2016	Amendment Notice 1 Licence amendment to change the date of completion for Improvement program IR1 from 31 December 2016 to 30 June 2018

Amendments

1. The date of completion for Improvement program IR1 is amended from:

31 December 2016

to:

30 June 2018

Condition 4.1.1 has been updated to reflect this.

- 4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.

Table 4.1.1: Improvement program		
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