



Licence Number	L4706/1972/17
Licence Holder	Electricity Generation and Retail Corporation
ACN	-
Registered business address	Forrest Centre 219 St Georges Terrace PERTH WA 6000
Date of amendment	7 April 2017
Prescribed Premises	Category 12: Screening, etc. of material Category 52: Electric power generation Category 53: Flyash disposal Category 61: Liquid waste facility
Premises	Muja Power Station Being Lot 5192 on Plan 213624, part Lot 4903 on Plan 167984, Lot 1 on Diagram 53100, and portion of State Forest 24, COLLIE WA 6225

Amendment

The Chief Executive Officer (CEO) of 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: 7 April 2017

Jonathan Bailes

A/Senior Manager – Industry Regulation (Process 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.

The following DER Guidance Statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Setting Conditions* (October 2015)
- *Guidance Statement: Decision Making* (November 2016)
- *Guidance Statement: Risk Assessment* (November 2016)

Amendment Description

Licence L4706/1972/17 is held by the Electricity Generation and Retail Corporation (the Licence Holder) for the Muja Power Station. Improvement requirement conditions of the licence required the Licence Holder to install Continuous Emissions Monitoring Systems (CEMS) for monitoring temperature, flow rate, oxygen, opacity and particulates, and sulfur dioxide (SO₂) on the stacks from generation units C and D (emission points A3 and A4). A CEMS for oxides of nitrogen (NO_x) has also been added by the Licence Holder.

In accordance with the submitted implementation plan, CEMS have been installed on the two stacks. Performance testing and Relative Accuracy Test Audits (RATA) were carried out on the CEMS for both units between April and August 2016. The results of the testing were submitted to DER on 23 September 2016 and confirmed that both CEMS had been installed and commissioned in accordance with DER Guideline *Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions* and Australian Standard AS4323.1 – *Stationary Source Emissions. Method 1: Selection of Sampling Positions*.

The Licence Holder has confirmed that the CEMS will be fully operational from 1 December 2016 and will replace the need for quarterly stack testing of the continuously monitored parameters. DER has initiated a licence amendment to update the emissions to air monitoring requirements to reflect the operation of the new CEMS.

As part of this amendment, improvement requirements relating to the submission of an ash dam seepage improvement plan have been removed. The plan was received by DER on 25 February 2016.

The Licence Holder applied on 12 September 2016 to amend the licence to update the registered business address. Amendment Notice 1 was issued 6 January 2017 amending the Licence Holders registered business address.

Decision

The Delegated Officer has reviewed the performance testing and RATA results and has determined that the CEMS are suitable for the ongoing monitoring of emissions from emission points A3 and A4. Requirements for the monitoring of point source emissions to air have been updated to reflect the use of the CEMS instead of quarterly

stack testing.

The Licence Holder already uses CEMS on generation units A and B (emission points A1 and A2). Therefore, existing conditions regarding maintenance, calibration, and reporting of CEMS data are applicable to the new CEMS on units C and D.

The CEMS on units A and B do not measure NO_x, which is currently measured by stack tests quarterly. The Delegated Officer has reduced this to annually to be consistent with other parameters measured by periodic stack tests.

The Delegated Officer has removed Improvement Requirement IR1 from the licence as the required work has been completed. The Licence Holder's registered business address has also been updated.

Amendment History

Instrument	Issued	Amendment
L4706/1972/17	10/10/2014	Licence reissue and DER initiated amendment to convert licence to new template, reflect changes that are detailed in Works Approval W4706/2010/1, and inclusion of ambient SO ₂ targets.
L4706/1972/17	10/12/2015	Licence Holder initiated amendment to revise wastewater acceptance requirements and correct administrative errors.
L4706/1972/17	29/04/2016	Amendment by notice to extend the licence duration to 17 October 2036.
L4706/1972/17	06/01/2017	Amendment Notice 1 Update to Licence Holder's registered business address.
L4706/1972/17	07/04/2017	Amendment Notice 2 Monitoring conditions updated to reflect installation of CEMS on air emission points A3 and A4, and removal of redundant improvement conditions.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 16 December 2016 for review and comment. No comments were received.

Amendment

1. Table 2.2.2 of the licence is amended by the by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Table 2.2.2: Point source emission targets to air			
Emission point Reference	Parameter	Target (including units)^{1,2,4}	Averaging period³
A1 and A2	PM	80 mg/m ³	CEMS (60 minute average)
A3 and A4	PM	250 mg/m ³	Stack test <u>CEMS</u> (Minimum 60 minute average)
	Oxides of nitrogen	800 mg/m ³	Stack test <u>CEMS</u> (Minimum 30 60 minute average)

Note 1: All units are referenced to STP dry

Note 2: All units are referenced to 7% O₂

Note 3: CEMS requires clock hour average. Averaging periods must be referenced by the end time of the averaging period with the first averaging period of a calendar day ending at 01:00am.

Note 4: Emission targets are not applicable during start-up and shut-down periods of operation.

2. Table 3.2.1 of the licence is amended by the by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Table 3.2.1: Monitoring of point source emissions to air						
Emission point reference	Parameter	Units ^{1, 3}	Averaging period	Frequency ²	Method	
A1-A2 <u>A1-A4</u>	Volumetric flow rate	m ³ /s	60 minutes	Continuous	CEMS	
	Stack temperature	°C				
	PM	mg/m ³	60 minutes	Continuous	CEMS via suitable annual correlation of referenced particulates ⁴	
	Sulfur dioxide		60 minutes	Continuous	CEMS	
<u>A3-A4</u>	<u>NOx</u>	<u>mg/m³</u>	<u>60 minutes</u>	<u>Continuous</u>	<u>CEMS</u>	
A3—A4	PM	mg/m ³ —	Stack Test (Minimum 60 Minute average)	Quarterly until CEMS are installed	USEPA Method 5 or 17	
	Sulfur dioxide		Stack Test (Minimum 30 Minute average)		USEPA Method 201A	
<u>A1-A2</u>	NOx	mg/m ³	Stack Test (Minimum 30 Minute average)	Quarterly <u>Annually</u>	USEPA Method 7D or 7E	
A1-A4	Carbon monoxide		Stack Test (Minimum 30 Minute average)	Annually	USEPA Method 10	
	Total Volatile Organic Compounds				USEPA Method 18	
	Benzene		Stack Test (Minimum 60 Minute average)		USEPA Method 29	
	Metals As, Be, Cd, Co, Cr, Cu, Hg, Mn, Ni, Pb, Zn					
	PM ₁₀		Stack Test (Minimum 60 Minute average)		USEPA Method 201A	
	PM _{2.5}					

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 3: Concentration units are referenced to 7% O₂.

Note 4: Where applicable, USEPA Performance Specification 11 including Appendix F, Procedure 2 will be used to convert and substantiate the calculation of particulate matter from raw instrument data.

3. The licence is amended by the deletion of the following condition 4.1.1:

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		
Improvement reference	Improvement	Date of completion
IR1	<p><i>The Licensee shall submit an Ash Dam seepage improvement plan. The Plan shall include but not be limited to:</i></p> <ul style="list-style-type: none"> <i>(i) Assessment of the extent of seepage plume resulting from ash dam leachate;</i> <i>(ii) Assessment of environmental impacts including the risk to groundwater and surrounding vegetation as a result of seepage;</i> <i>(iii) Remedial measures to be undertaken and proposed timeframes;</i> <i>(iv) Assessment of permeability of the fly ash dam, conducted by a suitably qualified geotechnical engineer; and</i> <i>(v) Outcome of the investigation to assess adequacy of existing groundwater monitoring bore network.</i> 	28/02/2016