



Application for Licence Amendment

Division 3, Part V *Environmental Protection Act 1986*

| | |
|-----------------------|---|
| Licence Number | L4706/1972/17 |
| Licence Holder | Electrical Generation and Retail Corporation T/A Synergy |
| File Number | DER2014/002698-1 |
| 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 |
| Date of Report | 6/1/2020 |

Table of Contents

| | |
|--|----------|
| 1. Definitions of terms and acronyms | 3 |
| 2. Amendment | 4 |
| 2.1 Amendment description | 4 |
| 2.2 Amendment history | 5 |
| 2.3 Location and receptors | 5 |
| 2.4 Risk assessment | 6 |
| 2.5 Decision | 7 |
| 2.6 Licence Holder's comments..... | 7 |
| 3. Conclusion | 7 |
| Appendix 1: Key documents | 8 |
| | |
| Table 1: Definitions | 3 |
| Table 2: Licence amendments | 5 |
| Table 3: Receptors and distance from prescribed premises | 5 |
| Table 4: Risk assessment for proposed amendments during operation | 6 |

1. Definitions of terms and acronyms

In this Amendment Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

| Term | Definition |
|----------------------------|--|
| Amendment Report | refers to this document |
| Category/ Categories/ Cat. | categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations |
| CEO | means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10, Joondalup DC JOONDALUP WA 6919 info@dwer.wa.gov.au |
| Delegated Officer | an officer under section 20 of the EP Act |
| Department | means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act. |
| DWER | Department of Water and Environmental Regulation |
| EP Act | <i>Environmental Protection Act 1986</i> (WA) |
| Licence Holder | Electricity Generation and Retail Corporation T/A Synergy |
| Prescribed Premises | has the same meaning given to that term under the EP Act. |
| Premises | refers to the premises to which this Amendment Report applies, as specified at the front of this Amendment Report. |

2. Amendment

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend Licence L4706/1972/17 issued under the EP Act for the Muja Power Station.

This amendment report is limited only to Category 52. No changes to the aspects of the Licence relating to Categories 12, 53 or 61 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guideline: Decision Making (June 2019)*
- *Guidance Statement: Risk Assessment (February 2017)*

2.1 Amendment description

On 30 October 2019, the Licence Holder submitted an application to amend Licence L4706/1972/17 for the Muja Power Station. Appendix 1 contains a list of the documents which were included as part of the application.

The Licence Holder proposes to change the operation of the Muja Power Station to a mid-merit power station with a single power generating unit in operation at times during the year while the second unit is kept warm to allow for a faster return to service when required. To keep the second unit warm fuel oil needs to be burnt for approximately 60 minutes in every 6 hours, to maintain pressure and temperature to allow the unit to restart quickly. The amendment application is for changes to the Licence conditions to allow this operational strategy to be implemented.

An average cold start of a power generating unit consumes approximately 70 tonnes of fuel oil. It is calculated that by keeping the unit warm, 56 tonnes of fuel oil would be burnt over the same cycle, resulting in reduced use of fuel oil and a corresponding reduction in emissions associated with combustion of the fuel oil.

2.2 Amendment history

Table 2 provides the amendment history for Licence L4706/1972/17.

Table 2: Licence amendments

| Instrument | Issued | Amendment |
|---------------|------------|---|
| L4706/1972/17 | 10/10/2014 | Licence reissue and conversion to new format template |
| L4706/1972/17 | 10/12/2015 | Licensee 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 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 remove redundant improvement conditions. |
| L4706/1972/17 | 11/09/2018 | Amendment Notice 3: <ul style="list-style-type: none"> Removal the Muja A (Boiler 1 and 2) and Muja B (Boiler 3 and 4) references from the Licence as the four boiler units are no longer operating and are in the process of being decommissioned. To amend air emission sampling methods to reflect the capability of the infrastructure to meet the sampling methodology. To allow for the discharge of iron sludge from groundwater to be discharged into the fly ash dam. |
| L4706/1972/17 | 6/1/2020 | This amendment report has assessed changes to the Licence to allow for keep warm conditions and warm start up. The Licence was also amended to consolidate amendment notices 1 to 3. |

2.3 Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the premises which may be receptors relevant to the proposed amendment.

Table 3: Receptors and distance from prescribed premises

| Residential and sensitive premises | Distance from Prescribed Premises |
|-------------------------------------|---|
| Rural farming residential dwellings | 4km east 4.2km south east 5.5km south |

2.4 Risk assessment

Table 4 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 4: Risk assessment for proposed amendments during operation

| Risk Event | | | | | Consequence rating | Likelihood rating | Risk | Reasoning | |
|--|--|--|--|---------------------------|---|-------------------|----------|-----------|---|
| Source/Activities | Potential emissions | Potential receptors | Potential pathway | Potential adverse impacts | | | | | |
| Cat 52: Electric power generation | Keep warm conditions burning fuel oil for 60 minutes every 6 hours | Emissions of PM, SO ₂ , NO _x , and CO in concentrations lower than during cold start up. | Residential receptors within 5km of the premises | Air/Wind dispersion | Health/Amenity impacts from reduced air quality | Slight | Unlikely | Low | <p>The Delegated Officer considers there will be no increase to the overall emissions profile from maintaining the plant in a keep warm state and warm start up as less fuel is used in total when compared to cold start-ups.</p> <p>The Delegated Officer has determined that the current licence conditions are sufficient to manage the change in operations subject to minor wording changes to include keep warm and warm start-ups.</p> <p>No further assessment required.</p> |
| | Warm start-up | | | | | | | | |

2.5 Decision

The Delegated Officer considers that the existing environmental controls that are in place to manage environmental risk associated with the warm start up are adequate.

The Delegated Officer has amended the Licence to allow for keep warm and warm start up by amending condition 2.2.4 to allow the use of fuel oil during keep warm periods. A definition of 'keep warm' has also been included in the amended Licence.

The Delegated Officer has also made the following administrative changes to the Licence:

- Amending the Licence to include the changes in amendment notices 1, 2 and 3 into the Licence.
- Removal of condition 4.2.5 as the audit on the ash dam was submitted to DWER on 27 August 2019.
- Minor formatting changes.

2.6 Licence Holder's comments

The Licence Holder was provided with the draft Amended Licence on 6 December 2019. The Licence Holder provided some minor comments on correcting some typographical errors and retaining the ET1 form for reporting exceedances of targets in tables 2.2.2 and 2.2.3. These changes were made to the Licence and Amendment Report and the Licence Holder waived the remainder of the 21 Day comment period.

3. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Amendment Report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Amended Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Carmen Standing
A/MANAGER, PROCESS INDUSTRIES

an Officer Delegated under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

| | Document title | Availability |
|---|--|---|
| 1 | Licence L4706/1972/17: Including Amendment Notice 1, 2 and 3 | accessed at www.dwer.wa.gov.au |
| 2 | Licence Amendment Application form and supporting documentation received by DWER 30 October 2019 | DWER record DWERDT218035 |
| 3 | DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth. | accessed at www.dwer.wa.gov.au |
| 4 | DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth. | |
| 5 | DER, November 2016. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth. | |
| 6 | DWER, June 2019. <i>Guideline: Decision Making.</i> Department of Water and Environmental Regulation, Perth. | |