

Statement of reasons

Licence Number:

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|--------------------------|---|
| Licensee name: | ALG Macquarie Pty Limited |
| Common name of Premises: | Bayswater Power Station |
| Scheduled activities: | Generation of electrical power from coal (and others) |
| Reviewing officer: | Matthew Corradin |
| Review due date: | 11 June 2020 |
| Allocated officer: | Hamish Rutherford |

What to consider

| Consider | What to check | Date completed / comment |
|---|--|--|
| Is the Licensee aware of the review? | Contact Licensee to let them know review is underway. | Notification Letter sent 12/12/2019. NIL response received. |
| Are the Licensee details correct? | Check accountable party details against: www.asic.gov.au , www.abr.business.gov.au . Check contact details with Licensee. | Licensee details checked against ASIC and ABR registers 25/05/2020. Licensee details correct. |
| Are the Premises details correct? | Check location name and address. Check land title details in SixMaps . | Premises details checked against SIXMaps and Nearmap 25/05/2020. Spatial details correct. Address details correct. Note1: the EPA wrote to the Licensee on 14/02/2020 requesting a new plan for the Premises be developed which will detail in graphical format the extent of the Premises, onsite infrastructure, discharge and monitoring points and other items of relevance which will then be referenced in the Licence at condition A2.1. Note2: The EPA will make any necessary changes to the Premises details listed on the licence following receipt and consideration of the new Premises plan. |
| Are the scheduled/fee-based activities correct? | Check against the last Annual Return and the details of the last site inspection. | This constitutes ongoing actions. Scheduled activity details have been checked against Schedule 1 of the POEO Act as part of the NSW Coal Fired Power Station Review Project. |

The Scheduled activities need updating.

The EPA will expand the list of scheduled activities in line with previous changes made to the Vales Point and Eraring Power Stations during a previous review of scheduled activities applicable to coal fired power stations and included relevant ancillary activities as a separate condition of the Licence.

Fee-based activity scales will be updated if and as required.

Are the types and locations of discharge/monitoring points correct?

Check against site map.
Check against standard approach for describing points.

This constitutes ongoing actions.

Discharge and monitoring points have been checked as part of the NSW Coal Fired Power Station Review Project against onsite infrastructure.

Points contained in the Licence are currently being updated and reorganised across the coal fired power generation sector.

Discharge points are correct although descriptions will be updated on receipt of requested Premises plan.

Monitoring points (air) are being updated to more accurately reflect 1) the positions along the flue gas ducting where emission monitoring is performed and/or emission samples collected and 2) how emissions from each boiler unit are discharged allowing for more transparent reporting of emission concentrations from each boiler

Monitoring points (water/land) are also being revised where required.

Are limit/monitoring tables correct?

Check limits are appropriate.
Check frequency is appropriate.
Check method against Approved Methods.
<https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/sampling-analysing-air-emissions>
<https://www.epa.nsw.gov.au/licensing-and-regulation/licensing/environment-protection-Licences/licensing-under-poeo-act-1997/licensing-to-regulate-water-pollution/approved-methods-for-sampling-and-analysing-water-pollutants>

This constitutes ongoing actions.

Emission limits and monitoring requirements have been checked as part of the NSW Coal Fired Power Station Review Project

The EPA finds that changes to the existing limit or monitoring tables are likely to result from the finalisation of works to address recommendations from the NSW Coal Fire Power Station Review Project.

Water/land concentration limits have generally remained the same.

Corresponding water/land concentration monitoring have generally remained the same with some slight improvements to monitoring (particularly volume).

Are non-standard conditions and pollution

Check for correct plain English.
Check that Licensee can comply.

Conditions are written in plain English and are able to be complied with.

| | | |
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| <p>reduction programs (PRPs) still appropriate?</p> <p>List all non-standard conditions and PRPs.</p> | <p>Check that EPA can enforce the condition.</p> <p>Check that PRP dates are still current.</p> | <p>Conditions are written in a manner that allows them to be enforceable.</p> <p>The EPA finds that changes the existing non-standard conditions are likely to result from the finalisation of works to address recommendations from the NSW Coal Fire Power Station Review Project.</p> |
| <p>Have submissions and any issues outstanding from other EPA actions been considered?</p> | <p>Check CM9 for any public/Licensee submissions.</p> <p>Check whether outstanding matters from previous reviews, Compliance Audit, prosecutions, penalty notices or complaints should be actioned.</p> | <p>Numerous public submissions were received during the reviews of the Vales Point, Eraring and Mount Piper Power Station Environment Protection Licences (see SF18/100537).</p> <p>The public submissions that related to the Environmental Justice Australia form submission, of which there were about 1501, also asked that the matters raised be applied to the future review of the Liddell and Bayswater Power Station Environment Protection Licences. The EPA has considered those submissions in this review.</p> <p>The EPA has provided a submissions report attached to this Licence Review/Environmental Risk Assessment (ERA) Checklist identifying the nature of the submissions and response to the submissions.</p> |
| <p>Has Section 45 of the POEO Act been considered, as appropriate?</p> | <p>Check the Licence against <u>Section 45 POEO Act</u>:</p> <ul style="list-style-type: none"> a) any protection of the environment policies b) objectives of the EPA (in regard to section 6 of the Protection of the Environment Administration Act 1991) c) the pollution being or likely to be caused by the activity or work and likely impacts of the pollution on the environment d) practical measures that could be taken to prevent, control, abate or mitigate that pollution, and to protect the environment from harm from that pollution e) any relevant tradeable emission or other scheme involving economic measures in Part 9.3 f) whether the person is a fit and proper person (section 83) f1) in relation to an activity or work that causes, is likely to cause or has caused water pollution: <ul style="list-style-type: none"> (i) the environmental values of water affected by the activity or work, and | <p>The NSW Coal Fired Power Station Review Project (which is ongoing as of the date of this review with a variation to the Licence pending) has resulted in a number of actions that address the considerations listed under Section 45 of the POEO Act (replicated to the left).</p> <p>Provided below are responses to the considerations identified to the left:</p> <ul style="list-style-type: none"> a) There are currently no PEPs in place in NSW. b) Changes to each of the 5-coal fired power station environment protection licences are in keeping with objectives of the EPA, continue to provide protection to human and environmental health through strict conditions contained in each environment protection licence and also require greater rigour by the licensee and oversight by the EPA of the activities permitted by the Licence. c) The Licence was in-force prior to this review being undertaken and therefore no increase in pollution above current levels is likely to be caused as a result of this review. The EPA is further reviewing the air emissions concentration limits following a detailed analysis of historic |

(ii) the practical measures that could be taken to restore or maintain those environmental values.

site-specific air emission data as detailed above.

d) Practicable measures are in place to prevent, control, abate or mitigate pollution at the premises, including best practice techniques to control particle emissions.

e) The EPA's Load Based Licensing Scheme and Hunter River Salinity Trading Scheme applies to the Licence and Premises and follows the principal of the polluter pays.

f) The EPA generally considers the Licensee to be a fit and proper person.

f1) The EPA generally considers that the Licence addresses environmental values of the receiving waters with the Hunter River Salinity Trading Scheme being a key mechanism protecting the environmental values.

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| Risk Based Licensing – Environmental Risk Assessment (1) | Has there been any change to the Licensee's activities since the last ERA? If yes, need to undertake new ERA. | No. Broadly, the Licensee's activities remain unchanged since the last ERA. |
| Risk Based Licensing – Environmental Risk Assessment (2) | Has there been any changes to the Licensee's pollution controls, environmental management systems or incident management systems since the last ERA? If yes, need to undertake new ERA. | No. Licence varied in January 2020 to include a number of Environmental Improvement Programs and Pollution Reduction Studies aimed at delivering operations and environment improvements, and further mitigating potential impact. However, the Licensee's broader pollution controls, environmental management systems and incident management systems are unchanged since the last ERA. |
| Risk Based Licensing – Environmental Risk Assessment (3) | Has there been any changes to the receiving environment or location of sensitive receptors since the last ERA? If yes, need to undertake new ERA. | No. There have been no changes to the receiving environment or the location of known sensitive receptors. |

| | Detail | Date | Comment |
|------------------------|---|------------|--|
| Recommendation: | <input checked="" type="checkbox"/> Vary Licence <input type="checkbox"/> No change to Licence <input type="checkbox"/> Other | 01/06/2020 | Continue with NSW Coal Fired Power Station Review Project and work to finalise s58 Notice 1591556 to vary the Licence. |
| Reviewing Officer: | Name: Matthew Corradin | | |
| Authorisation: | HROU: Mark Hartwell | 11/06/2020 | |
| PALMs update: | <input type="checkbox"/> Verified – | 11/06/2020 | |

BAYSWATER POWER STATION s 78 LICENCE REVIEW REPORT

1. Introduction

The Environment Protection Authority (EPA) is required, under Section 78 of *the Protection of the Environment Operations Act 1997* (POEO Act), to undertake a review of environment protection licences issued under Chapter 3 of the POEO Act.

Section 78 of the POEO Act states as follows:

(1) The appropriate regulatory authority is required to review each licence at intervals not exceeding 5 years after the issue of the licence.

(2) The appropriate regulatory authority must give public notice of the licenses that are to be reviewed as follows:

(a) not less than 1 month, and not more than 6 months, before the review is undertaken, a notice of the review of each licence is to be published on the website of the EPA,

(b) (Repealed)

(c) the notice is to specify the activity or work to which the licence relates and the address of the premises (if any) at which it is carried out.

(3) Any failure by the EPA to comply with the requirements of this section to review a licence is to be reported by the EPA to the Board of the EPA, and in the annual report of the EPA, together with a statement of reasons for the failure.

(4) Any failure by a regulatory authority (other than the EPA) to comply with the requirements of this section to review a licence is to be reported to the EPA by that authority.

4A) The EPA must audit, on an industry wide or regional basis, compliance with licence requirements under this Act and whether such requirements reflect best practice in relation to the matters regulated by the licenses.

(5) Any failure to comply with the requirements of this section cannot be the subject of proceedings under this Act.

The EPA undertakes such reviews utilising the Licence Review/ERA Checklist – Statement of Reasons document preceding this review report to ensure that relevant items are considered as part of any review. This includes considering any public submissions made which have been addressed by the themes at Section 6 of this review report.

Notwithstanding the formal review process, the EPA has the ability to review any environment protection licence at any time and make changes to such licences as and if required.

Environment Protection Licence 779 (Licence) is held by **AGL Macquarie Pty Limited** (AGL) for the **Bayswater Power Station** and is due for review by **11 June 2020**.

Provide below is a review of these requirements and public submissions received.

2. Compliance

The EPA has reviewed Section 78 of the POEO Act to determine compliance with statutory requirements as outlined below:

1. **Section 78(1):** The EPA has completed the review by the due date, and no early than 14 days prior to the due date as per EPA policy, using the Licence Review/ERA Checklist – Statement of Reasons document above and including this review report. Note: the finalisation of this review by 11 June 2020 does not limit any actions identified or required to be actioned and/or implemented post this date.
2. **Section 78(2 a, b and c):** the EPA's Education, Programs & Engagement Branch is responsible for the publication of all reviews. Advice obtained from the EPA's Education, Programs & Engagement Branch on 01 June 2020 indicates that the review was publicised on or about 11 December 2019 which is greater than one month before and equal to 6 months from the due date.
3. **Section 78(3):** not applicable.
4. **Section 78(4):** not applicable.
5. **Section 78(4A):** the EPA has a well established Strategic Environmental Compliance and Performance Review program which focussed on priority areas/issues with the main objective being to improve industry's level of performance. This provision does not require auditing of all licences as part of the review process, but rather aims to focus regulator attention on priority industry sections or regions.
6. **Section 78(5):** noted.

Based on the above, the EPA is compliant with Section 78 of the POEO Act.

3. Assumptions

The EPA, in preparing this review report, has considered all submissions received up until 28 May 2020, 11:59pm, in keeping with EPA policy and as advertised with the publication of the review which states "any member of the community interested in making submissions to the EPA in relation to any licence listed below should do so in writing not less than 2 weeks before the licence review due date".

If at any time the EPA becomes aware of any outstanding or unidentified public submission(s) received up until 11 June 2020, 11:59PM, these will be considered external to this review.

4. Submission summary

During the review of the Vales Point, Eraring and Mount Piper environment protection licences in December 2018 and January 2019, the EPA received about **1501** submissions coordinated through Environmental Justice Australia submissions campaign. These submissions were written in a way that related to all five of the base load coal fired power stations in NSW, including the Bayswater Power Station. Therefore, the EPA has accepted these submissions as also relating to this particular review.

Details of the Environmental Justice Australia form submission is provided below for context.

Thank you for the opportunity to comment on the Environment Protection Licences for the Eraring, Mount Piper and Vales Point power stations.

The five coal-fired power stations in NSW are the state's main source of several toxic air pollutants including fine particles (PM2.5), sulfur dioxide (SO2) and oxides of nitrogen (NOx). These five power stations cause a range of chronic and acute health problems for residents in the Greater Sydney Metropolitan Region, the Central Coast, Lake Macquarie, Newcastle and Lithgow. These impacts including asthma, reduced lung function and birth weight, and premature birth.

Power stations in other countries are required to emit toxic pollutants at much lower concentrations than the NSW power stations. In the United States, new power stations are required to keep NOx emissions below 100 milligrams per cubic metre, 15 times lower than the NSW licences permit. To comply with these limits, generators have installed pollution controls including Flue Gas Desulfurisation which reduces SO2

emissions by as much as 95%, Selective Catalytic Reduction which reduces NOx emissions by 90% and activated carbon injection to reduce emissions of mercury by about 90%.

These measures have become standard practice internationally, but they're not yet installed at any Australian power station. It's time they were. The EPA should strengthen stack emission limits in all three licences to best practice international standards and require the installation of SCR and FGD to protect community health.

We also need a strategy to control air pollution for NSW and incentives for pollution control. I urge you to complete the review of the Load-Based Licencing Scheme, increasing the fees that polluters pay, and to finalise the NSW air pollution control strategy that was drafted in 2016.

Communities closest to coal-fired power stations deserve to know about the air they breath. I urge you to expand the NSW Office of Environment and Heritage air pollution monitoring network to include new monitors in Lithgow and on the Central Coast and ensure communities can access this data.

You can protect community health by requiring these power stations to fit readily available pollution controls. I urge you to do that.

I would appreciate a response to my submission.

No additional submissions have been received since the review was advertised.

5. Grouping of submissions

The EPA has grouped public submissions into categories or themes for ease of understanding, review and response given the number received.

These categories, or themes, are detailed below and which are represented at Section 6 below:

1. **EPA Performance:** being complaints about the EPA's regulatory performance.
2. **Closure and/or Transition:** being the closure of the power stations or the non-renewal of their environment protection licences or a transition to renewable and sustainable energy.
3. **Health Impacts:** being the impacts to the health and wellbeing of humans (particularly around respiratory illnesses and corresponding reduction in life expectancy and premature deaths in infants and children) and including full health accounting and risk assessment of impacts.
4. **Environmental Impacts:** being the impacts to the health and wellbeing of the receiving environment (separate to those issues identified above) such as receiving waters.
5. **Operational Issues:** being critique of emission limits, pollution control equipment (most notably for NOx, SOx and particulates), monitoring requirements (lack of continuous monitoring for pollutants of concern), data availability and other operational issues (such as coal quality and dust).
6. **Ambient Monitoring:** being critique of ambient air quality monitoring, particularly around the Central Coast and Lake Macquarie given the proximity to the Sydney Metropolitan Area (SMA).
7. **Other Controls:** being the finalisation of the NSW Air Pollution Control Strategy and the review of the NSW Load Based Licensing Scheme, changes to legislation and other similar matters.
8. **Other Matters:** being those matters that do not fit the categories or themes above.

The EPA's response to the public submissions is below.

6. Response to submissions

| | Issue raised in submissions | EPA response to issue raised |
|---|--|--|
| EPA Performance | <p>The EPA is not doing its job in regulating power stations</p> | <p>The EPA takes its role regarding human and environmental health protection seriously which is enshrined in the <i>Protection of the Environment Administration Act 1991</i>, the POEO Act and the EPA's Strategic Plan. The EPA also has a strong focus on compliance and enforcement activities with actions listed on the EPA's POEO Act Public Register and with an overview of regulatory action provided in EPA Annual Reports.</p> <p>In response to community concern about coal fired power stations in NSW, the EPA previously undertook a detailed review of the compliance of all five base-load coal fired power stations in NSW. The focus of the review was compliance with emission limits, monitoring and reporting requirements. The full report and the recommendations contained within this report can be accessed here. The EPA is working to address the recommendations contained in this report.</p> <p>Complaints about the EPA not fulfilling its duties or not undertaking its duties in a proper manner can be made to the NSW Ombudsman.</p> |
| Closure and/or Transition to renewables | <p>Close all the coal fired power stations</p> <p>Do not renew the environment protection licences</p> <p>Transition from coal to renewables</p> | <p>This is beyond the scope of a single power station licence review.</p> <p>The 5-year statutory review is not a renewal of an environment protection licence.</p> <p>This is beyond the scope of a single power station licence review.</p> |
| Health Impacts | <p>Power stations are impacting human health</p> | <p>The EPA requested feedback from the NSW Ministry of Health regarding the submission from Dr Ben Ewald on potential health impacts from power station emissions. The EPA also partnered with the Centre for Air Quality Research (CAQR) on a separate peer reviewed study. The NSW Ministry of Health advised that the Ewald report had relatively greater uncertainty than the CAQR study. The Ewald report also predicts relatively greater potential impacts. Notwithstanding, the EPA acknowledges that exposure to air pollution contributes to population health effects. The EPA continues to take an evidence-based approach to informing policy and regulatory requirements. The licence includes emission limits, monitoring, reporting and operational requirements to control emissions from the Premises.</p> |

| Issue raised in submissions | EPA response to issue raised |
|------------------------------|--|
| Environmental Impacts | <p>Power stations are impacting the environment</p> <p>A number of public submissions have raised concerns about impacts from noise/vibration and emissions/dust, impacts to groundwater and surface water, as well as other impacts caused by the operation of the ash dams onsite. Generally, complaints can be, and are, made about noise/vibration and emissions/dust on a specific basis and responded to at the time by the EPA. The EPA encourages any site-specific concerns to be reported to its Environment Line on 131 555. Furthermore, the EPA has and will incorporate concerns regarding groundwater and surface water issues and ash dam management as part of routine licensing actions.</p> |
| Operational Issues | <p>Tighten stack emission limits</p> <p>The EPA's review of NSW Coal Fire Power Station Air Emissions and Monitoring compliance made recommendations in relation to the consistency of stack emission limits and opportunities to tighten limits where there is a clear history of compliance by an appreciable margin and these are being implemented. This project is ongoing and the continuing actions as part of this project are not limited to this licence review period.</p> |
| | <p>Install additional pollution controls</p> <p>The EPA continues to take an evidence-based approach to considering new information on the need for additional pollution controls.</p> <p>The EPA requested feedback from the NSW Ministry of Health regarding the submission from Dr Ben Ewald on potential health impacts from power station emissions. The EPA also partnered with the Centre for Air Quality Research (CAQR) on a separate peer reviewed study as mentioned above. The EPA considers studies, such as these, along with the practical measures available to control emissions when setting licence requirements.</p> <p>The EPA is implementing the recommendations of its review of NSW Coal Fired Power Station Air Emissions and Monitoring compliance.</p> |
| | <p>Improve emission monitoring</p> <p>The EPA's review of NSW Coal Fired Power Station Air Emissions and Monitoring compliance has made recommendations in relation to improved emission monitoring and data reporting and these are being implemented. This project is ongoing and the continuing actions as part of this project are not limited to this licence review period.</p> |
| | <p>Emission monitoring and data availability</p> <p>The EPA's review of NSW Coal Fired Power Station Air Emissions and Monitoring compliance has made recommendations in relation to improved emission monitoring and data reporting and these are being implemented. This project is ongoing and the continuing actions as part of this project are not limited to this licence review period.</p> <p>Licensees are required under Section 66(6) of the POEO Act to publish pollution monitoring data (which will increase as indicated) on their website of which all of the base-load coal</p> |

| Issue raised in submissions | EPA response to issue raised |
|--|---|
| | fired power stations operate a website. Requests can also be made direct to licensees regarding pollution monitoring data with ambient data also held by licensees. |
| | Quality of coal used The EPA's review of NSW Coal Fired Power Stations Air Emissions and Monitoring compliance found no evidence that coal blending has been used to purposely lower emissions during testing periods and produce unrepresentative test results. |
| | Management of coal stockpiles and dust The environment protection licences for the coal fired power stations contain conditions that relate to undertaking activities in a competent manner as well as conditions relating to dust management. The EPA is implementing the recommendations of its review of NSW Coal Fired Power Station Air Emissions and Monitoring compliance which includes ensuring that conditions are consistent across the coal fired electricity generating sector. |
| Ambient Monitoring | Offsite ambient monitoring needs to be expanded to give the public better access to data about pollutants that may affect human health and wellbeing The Department of Planning, Industry and Environment operates a number of ambient air quality monitoring stations across NSW with the Newcastle and Hunter Valley ambient air quality monitoring networks being expanded over time in response to community concerns about industry. Furthermore, environment protection licences require ambient monitoring, particularly in relation to coal fired power stations, coal mines and other industrial sites which can be utilised by the EPA and the Department of Planning, Industry and Environment when assessing available data. |
| | Other Controls |
| Finalise the NSW Air Pollution Control Strategy Clean Air for NSW is under consideration by the NSW Government. | |
| Finalise the EPA's review of the Load Base Licensing (LBL) scheme The EPA is continuing to review the LBL scheme and to develop a proposal paper. The EPA has consulted on an LBL issues paper and stakeholder feedback has informed a comprehensive review of the scheme's efficiency and effectiveness. The issues paper provided information about the performance of the load-based licensing scheme, identified a range of issues and various options for its improvement. The EPA will notify stakeholders of further consultation opportunities. | |

| Issue raised in submissions | EPA response to issue raised |
|---|---|
| <p data-bbox="255 268 286 459">Other Matters</p> <p data-bbox="367 201 880 261">Standardise the environment protection licences for all power stations</p> | <p data-bbox="934 201 2112 363">The EPA's review of NSW Coal Fired Power Stations Air Emissions and Monitoring compliance made recommendations in relation to the consistency of licences which are being implemented, noting that there may be some differences between the environment protection licences to account for site specific and operational issues. This project is ongoing and the continuing actions as part of this project are not limited to this licence review period.</p> |
| <p data-bbox="367 448 837 509">Improve the NPI system, particularly around data reporting practices</p> | <p data-bbox="934 448 2112 541">The NSW Government is participating in the review of the National Pollutant Inventory currently being undertaken by the National Environment Protection Council. Further information can be found at www.npi.gov.au.</p> |

7. Conclusions

The EPA has concluded that no changes to the licence are required due to this review. This conclusion is based on the evidence available to EPA at the time of review and noting the on-going actions arising from the EPA's NSW Coal Fired Power Station Review Project.

The EPA does note that work to address the recommendations of the EPA's NSW Coal Fired Power Station Review Project is ongoing and is likely to result in subsequent variation to current licence conditions.

Review of the public submissions received and details of the EPA's responses to the issues raised (at Section 6 above) to these submissions, indicates that the implementation of the recommendations from the EPA's NSW Coal Fired Power Station Review Project will address many of the concerns raised in public submissions regarding operational issues and may lead to further licence amendments.

The other issues raised in the public submissions have been considered as part of this review of the Licence.

8. Recommendations

- 1 No changes are required to the existing conditions of the Bayswater Power Station Environment Protection Licence 779 as a result of this review, noting the advice above.
2. That the review be marked as complete.