



Application for a licence amendment

Division 3, Part V *Environmental Protection Act 1986*

Licence number	L5245/1967/14
Licence holder	Alcoa of Australia Limited
ACN	004 879 298
DWER file number	2010/007402-3
Premises	Kwinana Alumina Refinery Hogg Road NAVAL BASE WA 6167
Date of report	25 June 2024
Status of report	Final

1. Amendment description

Licence L5245/1967/14 is held by Alcoa of Australia (Alcoa; licence holder) for the Kwinana Alumina Refinery (the premises), located at Naval Base, WA 6167.

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

This amendment is limited to operational changes to 15 run-off water storage (ROWS) pond evaporators and six land-based evaporators on the residue storage area K (RSA K).

In completing the assessment documented in this report, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at [DWER Regulatory documents | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/regulatory-documents).

1.1 Purpose and scope of assessment

On 17 May 2024 Alcoa submitted an application to the department to amend licence L5245/1967/14. Alcoa is seeking approval to change the operational requirements of the evaporator units within the ROWS pond and RSA K areas, to allow spray drift to be contained within the RSA management areas.

1.2 Background

Alcoa notified the department on 9 January 2024 of their plan to curtail production at the Kwinana Alumina Refinery beginning in the second quarter of 2024. The planned curtailment of production at the premises will result in a surplus of process water, and evaporator units on the ROWS pond and RSA K will be operated to manage water storage capacity at the premises in the short-term (Alcoa 2024a). An amendment to L5245/1967/14 was granted on 29 April 2024 to authorise the installation and operation of the evaporators on the premises to manage water storage. Alcoa has stated that they intend to manage the premises including the alumina refinery and residue storage areas over the longer term.

2. Proposed amendment

Alcoa proposes to change the operational requirements for the evaporators which are specified in condition W18, Table 17. The condition currently requires that the evaporators must be operated in a manner that does not result in spray drift outside the embankments of the RSA K and the ROWS pond.

Alcoa has requested that this requirement is altered to specify that the evaporators must be operated in a manner that does not result in spray drift outside the RSA Management Area as defined by a boundary illustrated in Attachment 8 of the licence. There are no human or environmental receptors within the RSA Management Area and any spray drift settling within the RSA Management Area will be captured by existing surface water controls or underdrainage systems and ultimately contained within the premises.

The evaporators have automated controller wind settings that allow the evaporators to be operated with different maximum allowable wind speed based on wind direction. Wind speed settings govern the operation of the evaporators and are adjusted to manage the spray drift extent. The wind speed criteria and sector set-up will continue to be managed during commissioning and operations to prevent spray drift impacting vegetation located south and east of the ROWS pond, while allowing for some spray drift to occur within the RSA Management Area.

3. Decision

The delegated officer has determined the proposal to change the operational requirements of the evaporators on the ROWS pond and RSA K area is unlikely to change the assessed risk for operation of the evaporators. The April 2024 Amendment Report includes the risk assessment for the operation of the evaporators and will remain on the department's website for reference. This determination is based on the following:

- the proposal does not involve an increase in production throughput, or the volume of wastewater being managed at the premises;
- the change will allow for some spray drift to occur however it will be confined within the already disturbed RSA Management Area and existing surface water controls and under drainage systems will ensure it does not impact beyond this area;
- the proposed changes do not change the risk profile associated with the TEC located immediately south of the ROWs pond as spray drift must be confined within the defined RSA Management Area, and
- a commissioning report (requirement of existing condition W19) will be prepared and submitted to DWER which details the meteorological control criteria developed and performance against the operational requirements defined in the existing condition W18 Table 17.

3.1 Licence holder comments on draft decision

The licence holder was provided with a draft of the amended licence and this Amendment Report for comment on 20 June 2024. The licence holder responded on 21 June 2024 and provided no additional comments on the draft amendment and the department's response.

4. Conclusion

Based on this assessment, it has been determined to amend the existing licence, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Alcoa of Australia (Alcoa) 2024, *Kwinana Alumina Refinery Licence Amendment Application submitted 16 May 2024*, Applecross, Western Australia.
2. Alcoa of Australia (Alcoa) 2024a, *Kwinana Alumina Refinery Licence Amendment Application Supplementary Information – RSA K Evaporators*, Applecross, Western Australia.
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Decision Making*, Perth, Western Australia.
5. Department of Water and Environmental Regulation 2020, *Guideline: Risk Assessments*, Perth, Western Australia
6. Department of Water and Environmental Regulation (DWER) 2024, *Alcoa of Australia Limited, Kwinana Alumina Refinery Amendment Report for Licence L5245/1967/14 issued 29 April 2024*, Perth, Western Australia.