



**Works Approval Number** W4661/2010/1

**Works Approval Holder** Alcoa of Australia Limited

**ACN** 004 879 298

**File Number** 2010/004167

**Premises** Pinjarra Refinery  
Lot 19 on Diagram 44739, Part of Lot 109 on Diagram 60089, Part of Lot 151 on Plan 10914, Lot 221 on Plan 302638, Lot 222 on Plan 302638, Part of Lot 251 on Plan 35963 and Lot 252 on Plan 35963  
Southwest Hwy  
OAKLEY WA 6208

**Date of Amendment** 25 October 2017

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Works Approval in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Date signed: 25 October 2017

**Jonathan Bailes**

**A/Senior Manager Industry Regulation (Process Industries)**

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

# Definitions and interpretation

## Definitions

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

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Application	refers to the application for works approval amendment lodged by the Works Approval Holder on 20 September 2017
CEO	means Chief Executive Officer
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	Environmental Protection Act 1986 (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
mbgl	metres, below ground level
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Amendment Notice applies, as specified at the front of this Amendment Notice.
RSA	Residue storage area

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Works Approval 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 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* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)
- *Guidance Statement: Environmental Siting* (November 2016)

## Amendment description

Works Approval W4661/2010/1 was granted to the Works Approval Holder on 25 June 2010 for the conversion of existing wet Residue Storage Area 1 (RSA1) to a dry stacked RSA at Pinjarra Refinery. The Works Approval was amended on 25 June 2015, 23 June 2016, and 23 December 2016 to extend its duration.

The Works Approval Holder lodged an application to amend the Works Approval on 20 September 2017 (the Application) to remove references to groundwater monitoring bores ML035A/B and ML036A/B that will be decommissioned. The Works Approval Holder advised in the Application that the monitoring bores are required to be decommissioned to allow for the reinstatement of residue area under construction and for the progression of residue storage at the refinery.

The Works Approval Holder provided an updated version of its works approval application supporting document *Works Approval Application Supporting Information – Pinjarra Alumina Refinery – Residue Storage Area 1 Conversion (to a Residue Drying Area) Project – 12 September 2017*. The specific changes within this document are:

- Deleted reference to ML035A/B and ML036A/B in section 3.4;
- Updated Figure 4 – RSA1 Project Conversion Area; and
- Updated Figure 8 – Changes to Groundwater Monitoring Bores.

The Works Approval Holder stated in its Application that it considered the decommissioning of the two monitoring bores to be low impact as:

- Historical monitoring has allowed for the risk from the contamination plume from RSA1 to any sensitive receptors to be determined as low. The shallow groundwater in the immediate vicinity of RSA1 is the only potential receptor of alkaline seepage from RSA1. This groundwater is not valued as a possible water supply and does not support an ecosystem.
- The Works Approval Holder has an extensive monitoring network including a series of bores on the perimeter of the residue footprint that could allow for the detection of impact prior to any impact on sensitive receptors.

## Amendment history

Table 2 provides the amendment history for Works Approval W4661/2010/1.

**Table 2: Works approval amendments**

Instrument	Issued	Amendment
W4661/2010/1	25/10/2017	Amendment Notice 3 - Works Approval Holder initiated amendment to remove decommissioned groundwater monitoring bores
	23/12/2016	Amendment Notice 2 - Works Approval Holder initiated amendment to extend duration from 27 December 2016 to 27 December 2020
	23/06/2016	Amendment Notice 1 - Works Approval Holder initiated amendment to extend duration from 27 June 2016 to 27 December 2016
	25/06/2015	Works approval amended - Works Approval Holder initiated amendment to extend duration from 27 June 2015 to 27 June 2016

## Location and receptors

Table 3 below lists the relevant environmental receptors in the vicinity of the Premises which may be receptors relevant to the proposed amendment.

**Table 3: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from the premises	Environmental Value
Groundwater	Typically less than 5 mbgl (superficial aquifer) Superficial Aquifer: 0-15 mbgl Leederville Aquifer: 10-120 mbgl Cattamara Aquifer 3-120 mbgl.	The rate of vertical movement of groundwater to deeper strata is assumed to be low due to clayey sediments in the superficial (Guildford Clay) formation. Alkaline seepage may impact on shallow groundwater in the immediate vicinity of RSA1. The localised shallow groundwater in the vicinity of RSA1 is of low environmental value or beneficial use.

## Decision

The Delegated Officer noted that the Works Approval Holder seeks to decommission groundwater monitoring bores ML0035A/B and ML036A/B for the progression of RSA1 conversion works under Works Approval W4661/2010/1. These groundwater bores are not specified on Licence L5271/1983/14 as part of the ongoing groundwater monitoring program for the Premises.

The Works Approval Holder has an extensive monitoring network, including a series of existing groundwater bores on the perimeter of the residue area footprint, including bores ML051A, ML002A and ML052A to the south, which are specified on Licence L5271/1983/14 and monitored on a biannual basis.

The Premises are classified under the *Contaminated Sites Act 2003* (CS Act). Reports produced for the purposes of investigations and management of groundwater under the CS Act confirm the extent of the monitoring bore network and the Works Approval Holder's internal monitoring programme (Rockwater 2016). The report also confirms that groundwater in the immediate vicinity of RSA1 is of low environmental value with limited beneficial use, as outlined in Table 3 above.

The Delegated Officer determined that the Works Approval can be amended to reflect the decommissioning of groundwater monitoring bores ML0035A/B and ML0036A/B. No additional changes are required as there are appropriately located existing bores monitored to meet the requirements of Licence L5271/1983/14.

## Works Approval Holder's comments

The Works Approval Holder was provided with the draft Amendment Notice on 16 October 2017 for comment. The Works Approval Holder notified DWER on 24 October 2017 that it waived the remainder of the 21 day comment period and requested that the Amendment Notice is issued as soon as possible. The Works Approval Holder also identified a typographical error in the 'Decision' section in reference to the groundwater bore numbers, which has been corrected.

## Amendment

1. Condition 1 of the Works Approval is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

- 1 *The works approval holder shall construct the works in accordance with:*
  - (i) *The works approval application form dated ~~12 March 2010~~ 12 September 2017, titled "~~Pinjarra Alumina Refinery Residue Storage Area 1 Conversion (to a Residue Drying Area) Project~~" "Works Approval Application Supporting Information, Pinjarra Alumina Refinery, Residue Storage Area 1 Conversion (to a Residue Drying Area) Project"; and*
  - (ii) *Appendix A of the works approval application: "~~Pinjarra Alumina Refinery Residue Storage Area 1 Conversion (to a Residue Drying Area) Project. Table of Commitments~~", ~~12 March 2010~~ "Works Approval Application Supporting Information, Pinjarra Alumina Refinery, Residue Storage Area 1 Conversion (to a Residue Drying Area) Project", 12 September 2017.*

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Rockwater, October 2016. <i>Pinjarra Refinery, Review of Groundwater and Surface Water Management from 1 July 2015 to 30 June 2016, Volume I Text and Figures</i> , Report No. 308.0/16/01	Rockwater 2016	DWER records (A1512005)
2	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	N/A	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
3	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.		
4	DER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.		
5	DER, February 2017. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.		
6	Licence L5271/1983/14		
7	Works Approval W4661/2010/1	W4661/2010/1	