



# Alcoa of Australia Limited—Wagerup Alumina Refinery

## Purpose

The purpose of this fact sheet is to clarify the Department of Environment Regulation's (DER) core function and role in regulating emissions and discharges from Alcoa's Wagerup Alumina Refinery ('the Wagerup refinery') and to ensure that stakeholders' other issues regarding the Wagerup refinery are directed appropriately.

## Introduction

In Western Australia, Alcoa of Australia Limited (Alcoa) operates two bauxite mines, three alumina refineries and a cogeneration plant: the Willowdale Bauxite Mine, the Huntly Bauxite Mine, the Kwinana Alumina Refinery, the Pinjarra Alumina Refinery, the Wagerup Cogeneration Plant and the Wagerup Refinery. The Pinjarra Cogeneration Plant is regulated under Alcoa's Pinjarra Alumina Refinery licence.

DER's role is to regulate the emissions and discharges from these premises and compliance with conditions of the licences.

The Wagerup Refinery is located in the Shire of Waroona approximately 120 kilometres south of Perth, Western Australia. The nearest townships to the refinery are Hamel (located approximately three kilometres north of the refinery) and Yarloop (located approximately two-and-a-half kilometres south of the refinery).

The Wagerup refinery has been, and continues to be, subject to community interest regarding the use and zoning of land around the refinery and the impact of emissions and discharges on public health and the environment.

## DER roles and responsibilities

DER operates under the provisions of Part V, Division 3 of the *Environmental Protection Act 1986* (EP Act) for the assessment and approval of emissions and discharges from prescribed premises as listed in Schedule 1 of the *Environmental Protection Regulations 1987*. Licences granted under Part V, Division 3 of the EP Act are subject to conditions relating to the prevention, control, abatement or mitigation of pollution or environmental harm.

DER assesses emissions and discharges from industrial processes and imposes conditions on licences it grants. Through the assessment and approval process, DER seeks input from the public, other government agencies such as the Department of Health (DoH), and other stakeholders.

DER's roles and responsibilities in regulating all of Alcoa's Part V licensed premises are as follows:

- assessment of emissions and discharges;
- granting or refusing to grant licences and works approvals under Part V, Division 3 of the EP Act and the periodic review of these decisions;
- noise regulation, including oversight of the *Environmental Protection (Wagerup Alumina Refinery Noise Emissions) Approval 2012*;
- ensuring compliance with the provisions of the EP Act and *Contaminated Sites Act 2003*;
- enforcement of environmental legislation administered by DER, including licence conditions, in accordance with DER's *Enforcement and Prosecution Policy 2013*; and
- investigation of regulatory complaints in

accordance with DER's *Regulatory Function Complaints Policy 2013*.

## Regulatory background

Alcoa holds six prescribed premises licences under Part V Division 3 of the EP Act. Alcoa operates the Wagerup refinery in accordance with Licence L6217/1983. The Wagerup refinery was first licensed in 1983. The Wagerup refinery has had a number of subsequent licences since that time, including a number of licence amendments. A copy of the current licence can be obtained from DER's website at [Licences and works approvals](#). Alcoa also holds a Noise Regulation 17 approval allowing the noise emissions from the refinery to exceed the assigned levels in the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

Two statutory assessments and decisions are relevant to DER's current regulatory approach and are described below.

### Licences and works approvals—2012 onwards

On 3 August 2012, Alcoa's then licence (L6217/1983/14) for the Wagerup refinery was amended to allow Alcoa to increase production at the refinery by 50,000 tonnes per annum, from 2.6 million tonnes per annum to 2.65 million tonnes per annum. Alcoa also indicated that it intends to seek an increase in production at the refinery to 2.8 million tonnes per annum in the future.

To offset increased production up to 2.8 million tonnes per annum, the licence included two improvement conditions that required Alcoa to submit a works approval application by 31 January 2013 for a volatile organic compound (VOC) reduction project. Alcoa complied with this requirement and DER granted works approval W5391/2013/1 on 5 June 2013. The project is to achieve a reduction of Aggregate Calciner Priority (ACP) VOC emissions that equates to at least

one-and-a-half times the amount of ACP VOC emissions attributed to the proposed production increase from 2.6 to 2.8 million tonnes of alumina per annum. The requirement to reduce ACP VOC emissions was introduced to ensure stakeholders were not subject to increased emissions from the proposed future production increase.

As Alcoa was granted works approval W5391/2013/1 for the VOC reduction project, the improvement conditions were removed from a new licence (L6217/1983/15) granted on 8 November 2013. DER was notified of the successful project commissioning on 21 March 2015 which verified the intended reduction in emissions. The licence continues to require monitoring of ACP VOC emissions.

Any proposed future increase in annual production beyond 2.65 million tonnes per annum will be assessed through an application to amend Alcoa's licence and the assessment will consider, but not be limited to, the outcomes of the completed VOC reduction project.

The production increase described above is not linked to Alcoa's proposed expansion of its Wagerup refinery to a maximum production of 4.7 million tonnes per annum ('Wagerup Unit 3 expansion'), which was approved by the Minister for Environment in Ministerial Statement 728 under Part IV of the EP Act. The Wagerup Unit 3 expansion proposal is currently on hold.

### Noise Regulation 17 approval

Alcoa was granted an approval to allow the emission of noise to exceed or vary from the prescribed standard by the Minister for Environment under Regulation 17 of the Noise Regulations in June 2012. Appeals against this approval were determined in December 2013 and the noise amendment approval was gazetted in December 2013. The approval is valid for two years from its issue, at which time Alcoa will be required to apply for a new approval. Copies of the noise approval and amended noise approval can be accessed from the State Law Publisher website:

- [Noise Regulation 17 approval](#); and
- [Amended Noise Regulation 17 approval](#).

The amended Noise Approval allows a variation in assigned noise limits and includes requirements that Alcoa establishes a noise monitoring program to monitor compliance and implements a plan to provide noise insulation for dwellings on noise-affected land. The Noise Approval also requires the submission of a noise amelioration plan that includes a land management plan setting out the procedures for the purchase by Alcoa of land with noise-affected dwellings, and for the noise insulation program.

## Key issues

There are a number of issues regarding the Wagerup refinery that are subject to community interest, specifically public health, the use and zoning of land around the facility, stakeholder management and the impact of emissions and discharges to the environment. In order to ensure the community's interest and complaints are addressed appropriately, DER has outlined its position below.

### Public health complaints

DER's roles and responsibilities specific to the Wagerup refinery extend to assessment of current and/or predicted ground level emissions concentrations against short-term and long-term health exposure limits or guidelines.

This assessment occurs on receipt of a works approval or licence amendment application which will result in an alteration of emissions and discharges. As indicated above, advice from the DoH informs the assessment process.

DER investigates complaints relating to potential breaches of environmental legislation administered by DER, including the EP Act, with respect to conditions contained within the Part V licences for the Wagerup refinery.

The current and potential future (i.e. proposed

Wagerup Unit 3 expansion) health impacts associated with Wagerup refinery's emissions and discharges have been reviewed. Such reviews include the 2004 Parliamentary Inquiry and the Environmental Protection Authority Assessment of the Wagerup Unit 3 expansion proposal, which was approved by the then Minister for Environment in 2006 in Ministerial Statement 728.

The review of potential health impacts was summarised in the Minister for Environment's appeal determination relative to the Ministerial Statement 728 approval. It was determined that current emissions, and those predicted for the Wagerup Unit 3 expansion proposal, are generally well below nationally and internationally defined health impact-based standards and guidelines.

From the information currently available, the review found there is no recognisable causal link between the refinery emissions and health issues. The then Minister for Environment has noted, however, that periodic short-term ground level concentrations may contribute to health symptoms in some individuals with sensitivities to chemicals.

*All claims of public health impacts from unspecified emissions from the Wagerup refinery should be directed to the DoH.*

### Zoning of land surrounding the Wagerup refinery

The matters of zoning and land use around the Wagerup refinery (including the establishment of buffer zones) are dealt with primarily by land use planning agencies including the shires of Waroona and Harvey, Department of Planning and Western Australian Planning Commission. The Department of State Development is responsible for ensuring all Alcoa's Western Australian operations, including the Wagerup refinery, operate in accordance with the *Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978*.

DER provides formal advice to the above agencies for the Wagerup Refinery, to inform

land use planning matters. DER's role is advisory only and it does not make determinations on these matters.

*All queries and enquires relating to land use planning matters should be directed to the Department of Planning South West Region (Bunbury) or the shires of Waroona and Harvey.*

### **Stakeholder consultation**

DER undertakes community consultation as part of the regulatory assessment process, which includes notifying registered stakeholders of new applications for licence renewals, transfers, and issued or amended statutory instruments (i.e. works approvals and licences). DER also advertises the information in the public notices section of the Monday edition of *The West Australian* newspaper and on its public website.

DER also participates in community consultation as another method meeting its obligations in relation to consultation. Community consultation with groups typically occurs for complex or contentious matters, or where there is wide public interest, and is usually coordinated by the licensee/applicant.

Alcoa undertakes community consultation for the Wagerup refinery through its Wagerup Community Consultative Network (CCN). The CCN was established in 2000 and has a defined charter and terms of reference. Meetings of the group are open to all interested parties.

The CCN enables the presentation of various reports, including technical reports and monitoring data, and provides a forum for the community to discuss any issues regarding the Wagerup refinery. Such issues can relate to health, land management, refinery emissions, technical projects and social issues. The CCN can also invite independent, technical experts as required by the group.

The CCN contains sub-groups which focus on specific tasks and projects such as the Long-Term Residue Management Strategy and the Environmental Improvement Plan group.

DER will continue to keep stakeholders and local community groups informed of opportunities to make submissions or have input on regulatory assessment processes and related matters through its normal consultation procedures (i.e. individual stakeholder, newspaper and website notification).

DER will also continue to participate in the CCN and associated sub-groups to address matters relevant to DER's regulatory role.

DER will engage in any other community consultation it considers necessary and appropriate to discharge its responsibilities for its regulatory role.

As identified in DER's Regulatory Function Complaints Policy, the Department will also advise complainants of the outcome of their regulatory complaints.

*An enquiries referral matrix has been provided at Table 1 to enable stakeholders to direct their issues regarding the Wagerup refinery accordingly.*

## More information

For further advice on the information in this fact sheet or related matters, or to provide feedback, please contact DER on +61 8 6467 5000.

This document is available in alternative formats and languages on request.

## Related documents

Additional publications about the Wagerup refinery are available online from <http://www.der.wa.gov.au/your-environment/air/203-air-quality-publications> or can be requested by phoning 6467 5000.

## Legislation

This document is provided for guidance only. It should not be relied upon to address every aspect of the relevant legislation. Please refer to the State Law Publisher (SLP) for copies of the relevant legislation, available electronically from the SLP website at [www.slp.wa.gov.au](http://www.slp.wa.gov.au).

**Table 1. Enquiries Referral Matrix**

Issues relating to Alcoa's Wagerup refinery	Responsible Agency
<b>Emissions and discharges</b>	
Discharges, e.g. water discharge beyond premises boundary	DER – complaints/incidents Pollution Watch Hotline 1300 784 782 or <a href="mailto:pollutionwatch@der.wa.gov.au">pollutionwatch@der.wa.gov.au</a>
Point source air emissions, i.e. from stacks (including impacts)	DER – general enquiries Tel. (08) 6467 5000 Email <a href="mailto:industry.regulation@der.wa.gov.au">industry.regulation@der.wa.gov.au</a>
Fugitive air emissions from the refinery or residue area, e.g. odour, dust (including impacts)	
Alleged breaches of conditions of licence	
Emissions from the Wagerup Unit 3 expansion proposal	OEPA Tel. (08) 6145 0800 Email <a href="mailto:info@epa.wa.gov.au">info@epa.wa.gov.au</a>
<b>Health</b>	
Assessment and compliance of proposals and general refinery emissions/discharges against health standards	DER and DoH advice where required DER – general enquiries tel. (08) 6467 5000 DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a>
Complaints reporting health impacts	DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a>
Public health studies/research i.e. cancer statistical research	DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a> Alcoa tel. 1800 331 106
Studies/research on refinery emissions/discharges including their ambient and health impact or risk	DER, Alcoa and DoH advice where required DER – general enquiries tel. (08) 6467 5000 Alcoa tel. 0404 800 135 DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a>
Enquiries or concerns on historical government recommendations for health studies, health surveys, health services, health funding and health forums etc.	DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a>
Health matters regarding the Wagerup Unit 3 expansion proposal, including Health Risk Assessment	OEPA tel.(08) 6145 0800 or <a href="mailto:info@epa.wa.gov.au">info@epa.wa.gov.au</a> DoH tel. (08) 9222 4222 or <a href="mailto:ehinto@health.wa.gov.au">ehinto@health.wa.gov.au</a>
<b>Noise</b>	
General refinery noise assessment and compliance	DER – complaints/incidents Pollution Watch Hotline 1300 784 782 or <a href="mailto:pollutionwatch@der.wa.gov.au">pollutionwatch@der.wa.gov.au</a>
Refinery noise complaints	
Environmental Protection (Wagerup Alumina Refinery Noise Emissions) Approval 2012 – Noise amelioration, Land Management Plan (including property purchase schemes)	Alcoa tel. 1800 331 106
Environmental Protection (Wagerup Alumina Refinery Noise Emissions) Approval 2012 - Compliance	DER – general enquiries tel. (08) 6467 5000
Other non-Alcoa sources of noise	SoW or SoH SoW tel. (08) 9733 7800 SoH tel. (08) 9729 0300
<b>Land Use Planning</b>	
Property Purchase Program – Area A and B	Alcoa tel. (08) 9557 4087
Land use and zoning matters (including enquiries relating to the establishment of buffer zones)	SoW, SoH and DoP SoW tel. (08) 9733 7800 SoH tel. (08) 9729 0300 DoP (South West Region) tel. (08) 9791 0577

Other issues	
Statutory appeals including general enquiries, lodgement, and access to appeal decisions	OAC Tel. (08) 6467 5190 Email <a href="mailto:admin@appealsconvenor.wa.gov.au">admin@appealsconvenor.wa.gov.au</a> Website <a href="http://www.appealsconvenor.wa.gov.au">www.appealsconvenor.wa.gov.au</a>
Wagerup Unit 3 expansion proposal including Ministerial Statement 1215 and OEPA Bulletin 1215	OEPA Tel. (08) 6145 0800 Email <a href="mailto:info@epa.wa.gov.au">info@epa.wa.gov.au</a>
Enquiries relating to Alcoa's State Agreement obligations pursuant to the <i>Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978</i>	DSD Tel. (08) 9222 0555

LEGEND	Contact telephone number
DER = Department of Environment Regulation	(08) 6467 5000
DoH = Department of Health	(08) 9222 4222
SoW = Shire of Waroona	(08) 9733 7800
SoH = Shire of Harvey	(08) 9729 0300
DoP = Department of Planning	(08) 9791 0577
CSIRO = Commonwealth Scientific and Industrial Research Organisation	1300 363 400
Alcoa = Alcoa of Australia Limited, Wagerup refinery	1800 331 106
OEPA = Office of Environmental Protection Authority	(08) 6145 0800
DSD = Department of State Development	(08) 9222 0555
OAC = Office of the Appeals Convenor	(08) 6467 5190