

Overview of Proposed Condition Changes to Ministerial Statement 728 & 1069

Prepared for October 2019
Section 46 Review of Conditions

Date October 2019

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1. Background

Alcoa's Wagerup Alumina Refinery (the refinery) is located 120 kilometres (km) south of Perth, 2km north of Yarloop and approximately 7km south of Waroona.

The refinery was originally assessed and approved by the Environmental Protection Authority (EPA) in 1978. Subsequent applications to modify and expand the refinery have been submitted to the EPA since the original assessment. These assessments are detailed in Table 1.

Under existing conditions of Ministerial Statement 728 (MS 728) and Part V licensing provisions of the *Environmental Protection Act 1986* (EP Act), refinery production has been increased in two small increments to 2.85 Million tonnes per annum (Mtpa). This has been done through additional equipment and process enhancements, without the need to commence the third production unit.

Table 1: Wagerup Refinery EPA Assessments

Assessment	Statement number	Approval date
Consultative Environmental Review	N/A	1989
Wagerup Alumina Refinery Expansion	MS 095	1990
Increase in Alumina Production to 3.3 Million Tonnes Per Annum at Wagerup Alumina Refinery, and Associated Bauxite Mining Activities	MS 390	1995
Amend Conditions Applying to the Proposal: Increase in Alumina Production to 3.3 Million Tonnes Per Annum at Wagerup Alumina Refinery, and Associated Bauxite Mining Activities	MS 564	2001
Revised Proposal: Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Million Tonnes Per Annum and Associated Bauxite Mining	MS 728	2006
Amend Conditions Applying to the Proposal: Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Million Tonnes Per Annum and Associated Bauxite Mining	MS 897	2012
Amend Conditions Applying to the Proposal: Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Million Tonnes Per Annum and Associated Bauxite Mining	MS 1069	2017

1.1. Ministerial Statements

- MS 728 issued in 2006 superceded all preceding Ministerial Statements.

- MS 1069, which was issued to extend the time limit for implementation of a project to install a third production unit to increase production to a maximum of 4.7 Mtpa, superceded MS 897.
- The refinery is currently authorised by MS 728 and MS 1069 collectively.

1.2. Objective of proposed condition changes

During the assessment that resulted in MS 728, Alcoa considered a single stage expansion for the refinery to 4.7 Mtpa. The proposal, commonly known as Wagerup 3, consisted of modifications to the existing refinery and installation of new equipment including a third production unit. Ongoing market conditions have not facilitated this approach to production growth and Alcoa is now evaluating the potential to increase refinery production in smaller increments.

Alcoa is seeking to amend existing conditions under MS 728 to reflect incremental production increases, initially up to 3.3 Mtpa. This proposal maintains the intent of the existing conditions and in some cases improves the conditions by providing greater clarity for stakeholders.

In 2018, Alcoa commenced discussions with the EPA regarding this revised approach to refinery growth. Alcoa subsequently requested the initiation of an inquiry by the EPA into changing the conditions of MS 728 to reflect incremental production increases, while maintaining the intent of the original conditions. Alcoa considers this approach optimal for environmental reasons including allowing pollution control measures and air dispersion model validation to occur.

In October 2018, the Minister for Environment wrote to the EPA requesting that an inquiry be initiated into changing the Ministerial Conditions for the refinery. Since then, Alcoa has been engaging with officers of the Department of Water and Environmental Regulation (DWER) to prepare the necessary documentation for the review of the Ministerial Conditions. Alcoa has also engaged in an ongoing stakeholder program to keep the local community and stakeholders informed of the process to change conditions and the evaluation to increase production at the refinery. It should be noted that this evaluation is ongoing and there has been no investment decision by Alcoa.

2. Change to Ministerial Conditions

Under the EP Act, a proposal with the potential for significant impact to the environment requires assessment by the EPA prior to approval by the Minister for Environment.

Once the EPA assessment is complete, the Minister for Environment issues an approval in the form of a 'Ministerial Statement'. Post assessment, a proponent must implement the proposal in accordance with these conditions. If a proponent wishes to amend the implementation conditions it must do this in accordance with section 46 (s.46) of the EP Act using a process called a s.46 Process.

A s.46 Process is focused on modifying implementation conditions.

- Alcoa is not proposing to amend the Wagerup refinery 'proposal' that was assessed by the EPA in 2006.

- A request to amend the Wagerup refinery proposal would be required through different sections of the EP Act (s.45C or s38).

Alcoa has initiated a number of requests to amend ministerial conditions during the life of the Wagerup refinery, these were detailed in Table 1. This s.46 Process aims to maintain the original intentions of the EPA assessment in 2006, which resulted in MS 728.

Alcoa has finalised a supporting document for the s.46 Process, *Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Million Tonnes Per Annum and Associated Bauxite Mining Ministerial Statements 728 and 1069: Request for Section 46 Review of Conditions* (the s.46 Supporting Document). This document was prepared with assistance from external consultants, Strategen-JBS&G. The document outlines Alcoa’s proposed condition modifications. These proposed condition changes are subject to amendment during the s.46 Process.

3. Purpose of This Document

The s.46 Supporting Document has been prepared for the current s.46 Process to meet the requirements of the EPA and its assessment criteria. Given the technical and sometime formulaic nature of this process, Alcoa has prepared this overview document for stakeholders to provide a simplified explanation of the proposed changes to the implementation conditions.

The full s.46 Supporting Document can be accessed at:

www.alcoa.com/australia/Wagerup-S46

4. Approach to Condition Change

The assessment conducted by the EPA in 2006 identified that air quality, odour, noise, water supply, and community health factors should be investigated to ensure that these were acceptable when compared to relevant criteria. On this basis, the conditions of MS 728 were established to ensure that post implementation of the refinery production increase to 4.7 Mtpa, there would be acceptable environmental and community outcomes.

In preparing the current s.46 Supporting Document, Alcoa has ensured that the fundamental principles of the original assessment are maintained. These include:

- Works to ensure there is no overall increase in emissions of Volatile Organic Compounds (VOCs) or odour.
- Preparation of a Detailed Design Report setting out details of emission control measures for the expansion works and subject to Independent Review.
- Air dispersion model validation using latest available data and parameters.
- Verification plan to outline monitoring to confirm emission targets.
- Noise management plan to meet assigned noise levels approved under relevant regulations.

The following section provides a simplified overview of each proposed condition change. Further information on the detail on the proposed condition changes can be found within the s.46 Supporting Document located at www.alcoa.com/australia/Wagerup-S46.

5. Condition Changes

Alcoa is proposing to make changes to Conditions 4, 8, 9, 10, 11 and 12. As part of the proposed changes, amendments to Schedule 1 of MS 728 to reflect the draft conditions, and proposed changes to the Procedures and Notes are also suggested in line with the condition changes.

5.1. Condition 4 – Time Limit Authorisation

Minimal changes are proposed to Condition 4:

- The changes include removal of ‘Third Production Unit’ to “Expansion Works” to reflect smaller production increases that do not necessarily involve construction of a third production unit.
- The time limit to substantially commence any increase in production by 27 September 2022 would remain unchanged.

5.2. Condition 8 – Best Practice Pollution Control Measures

Key elements of Condition 8 include:

- Odour and Volatile Organic Compound (VOC) emission reductions against base emission rates established in 2002-2004.
- Preparation of a detailed design report for the expansion works.
- Refinery design to meet ‘best practice’ emission control.

The overall intent of Condition 8 is to ensure a reduction in VOCs and odour from emission sources at the refinery. The refinery has already significantly reduced VOC and odour emissions since the 2005 assessment.

The changes proposed to Condition 8 for up to 3.3 Mtpa will ensure that there is no overall increase in VOCs or odour at the refinery from the already approved levels.

The proposed changes split the condition into two parts to reflect the incremental growth approach, initially to up to 3.3 Mtpa. This enables emissions reduction measures to be monitored and verified in steps, providing greater transparency.

Condition 8 also requires the preparation of a detailed design report outlining the ‘base emission rates’ and ‘design emission targets’ for the works that will reasonably achieve specified emission reductions for certain refinery emission sources. The ‘base emission rates’ were set in 2006 as part of the revised proposal. Significant work has been undertaken since then to improve the understanding of refinery emissions and hence the proposed condition change is to define the current ‘base emission rates’. This then ensures that the refinery is focussed on targeting emission control based on best available science and knowledge.

In order to ensure we are meeting best practice emission control principles, Alcoa maintains Emission Inventories, which are dynamic documents that need to be reviewed regularly to ensure that they accurately reflect current operating conditions. A 2018 Emissions Inventory has been prepared as part of the S46 process.

For any further phased upgrades to 4.7 Mtpa (which are not currently being considered), Alcoa has recommended the inclusion of a new Condition 8-1A that, would require Alcoa to update the Emissions Inventory to determine the base emission rates and focus on effective VOC and odour controls to ensure there is no overall emission increase from key refinery sources.

The intent of Condition 8 is unchanged.

5.3. Condition 9 – Air Dispersion Model Validation

In the 2006 assessment, the EPA considered the air dispersion modelling undertaken for the assessment was adequate. The intent of Condition 9 was to undertake further data acquisition and investigations to improve and validate the air dispersion model for the Wagerup refinery. Once this work was completed, the model was to be re-run to demonstrate that the ground level concentrations (GLCs) are consistent with those predicted in the 2006 assessment.

The proposed change to Condition 9 includes a new condition to reflect the proposed incremental growth approach, initially to up to 3.3 Mtpa, followed by potential further increases to the approved 4.7 Mtpa. The new condition, Condition 9-1A, will require further works to improve understanding of the air dispersion model for Wagerup for any expansion between 3.3 Mtpa to 4.7 Mtpa.

Other minor changes are proposed to the wording in the Condition to align with the changes to Condition 8 which includes the addition of the new Condition 8-1A.

The intent of Condition 9-1 is unchanged.

5.4. Condition 10 – Operational Performance and Verification

Condition 10 requires the development of a verification program to demonstrate that the refinery would meet emission targets during construction and operation.

The proposed changes to this condition are:

- the timing of the submission of the verification program to prior to commissioning of the Expansion Works, and
- to reflect the phased approach to production increases on achievement of emission reduction targets.

This verification program would be subject to an independent review and would include consultation with key community stakeholders during its development.

The intent of Condition 10 is unchanged.

5.5. Condition 11 – Noise

It is proposed to remove Condition 11 from MS 728 to ensure that there is no duplication between existing Noise Regulation authorisations for the refinery and the Ministerial Statement.

MS 728 was issued prior to the the promulgation of The Environmental Protection (Wagerup Alumina Refinery Noise Emissions) Approval 2012, which is subject to comprehensive conditions, including noise monitoring and also is subject to extensive consultation and Ministerial approval.

Alcoa's application to renew this Approval is currently under review by the DWER. The removal of Condition 11 will not reduce any obligations on Alcoa to meet agreed noise levels.

5.6. Condition 12 – Water Use

It is proposed to remove Condition 12 from MS 728 as water use at the refinery is governed by a comprehensive licensing system regulated through the *Rights in Water and Irrigation Act 1914* (WA). Through this process Alcoa is required to prepare Water Operating Strategies that examine and ensure minimisation and re-use practices are employed by the refinery which are approved by the DWER.

The removal of Condition 12 will not reduce any obligations on Alcoa to manage water resources efficiently and ensure hydrological and hydrogeological resources are managed to protect environmental values.

5.7. Changes to Schedule 1

Minor changes are proposed to Schedule 1 including a change to provide clarity that the approval in MS 728 for alumina production is up to 4.7 Mtpa. The existing Schedule 1 states that alumina production is approximately 4.7 Mtpa. The statement of 'approximately' has some ambiguity regarding the limit and Alcoa believes this change provides greater transparency around appropriate limits in production.

5.8. Changes to Procedures and Notes

Procedures and notes are included in ministerial statements to ensure clarity regarding the intent of what the Minister was seeking when setting conditions associated with approval for a proposal. Alcoa is proposing minor changes to these elements to update the name of the DWER to reflect current status, align with wording around the expansion works, and update to reflect the additional Conditions that are being proposed through the changes.

The intent of the Procedures and Notes remains unchanged.

6. Future Activities

The proposed amendment to certain MS 728 conditions is only an initial step in commencing any refinery upgrade. Once the s.46 Process has been finalised, Alcoa will need to undertake the following activities before it will be able to commence any construction works:

- Finalise air dispersion modelling for the works to 3.3 Mtpa.
- Prepare an Air Quality Verification Plan for the works to 3.3 Mtpa and consult with community stakeholders on this plan.
- Prepare a Detailed Design Report for submission to the Independent Design Review Team on the engineering design details for the works to 3.3 Mtpa.

- Prepare a Works Approval application and consult with community stakeholders on the proposed design.

A number of technical studies on emissions will be undertaken to support the Works Approval application. Alcoa intends to ensure that these studies and their outcomes are communicated to key stakeholders including the community through existing forums such as the Community Consultation Network (CCN). Interested people should contact Tom Buser on 9733 8768 to be kept informed as these activities. The Works Approval process also includes a 21-day consultation period administered by the DWER.