



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Alcoa of Australia Limited

Licence: L6210/1991/10

Registered office: 181-205 Davy Street
Booragoon WA 6154

ACN: 004 879 298

Premises address: North Spur Road
Dwellingup WA 6213

Issue date: Thursday, 5 September 2013

Commencement date: Friday, 13 September 2013

Expiry date: Wednesday, 12 September 2018

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

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A/Senior Licensing Officer

Decision Document authorised by: Danielle Eyre
Manager Licensing (Resources Industries)



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1, 5.1.2 and 5.3.1.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions as a result of this application is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	25,000,000 tonnes per annual period
Application verified	Date: NA	
Application fee paid	Date: NA	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Compliance Certificate received	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	NA	
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

The Huntly Mine Site is a bauxite mine situated in State Forest in the Darling Ranges approximately 80 km south of Perth and 9 km north of Dwellingup township. Alcoa currently operates in the McCoy and Myara regions of Huntly mine. On 27 February 2013 the then Department of Environment Conservation (DEC) issued Alcoa of Australia Limited ('Alcoa') with works approval W5360/2013/1 for the purposes of upgrading the McCoy wastewater treatment system and to construct a new wastewater treatment system at Myara. The McCoy treatment system is for the purposes of treating hydrocarbon contaminated water from the fuel bay, heavy vehicle wash down bay, heavy vehicle workshop, heavy vehicle drying beds and treatment plant sludge drying beds. The new Myara treatment system treats wastewater from the heavy vehicle fuel bay, light vehicle fuel bay, fuel delivery areas, contractor's workshops and contractor's refuelling area. A more detailed description of works is contained with the Environmental Assessment Report (EAR) attached to works approval W5360/2013/1.

This amendment to Licence L6210/1991/10 continues to authorise the processing and beneficiation of metallic or non-metallic ore. As part of this amendment, DER has only re-assessed emissions from wastewater storage ponds through the risk of overtopping. This was on the basis of supplementary justification provided by Alcoa through the proposed amendment comment period. The changes to the conditions of licence as part of this amendment are largely based on the assessment outcomes of Table 2 of the EAR attached to works approval W5360/2013/1 and integration of the new Myara treatment system to monitoring and discharge criteria requirements



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
General Conditions	G2	NSC	<p>The existing condition in part (v) requires: <i>'A table cross referencing the quantity of the wastes generated from the wastewater treatment plant during the reporting year and the total annual volume of treated wastewater discharged from the treatment plant or McCoy Sumps MC1, MC2 and MC3.'</i></p> <p>With the commencement of the new Myara wastewater treatment plant, DER will include reference to Myara Batching Tanks 1, 2 and 3. This condition is part of broader reporting requirements for the annual environmental report.</p>	Works approval W5360/2013/1 and supporting Environmental Assessment Report
Water Pollution Control Conditions	W1	NSC	<p>The existing condition states: <i>'The licence shall treat contaminated or potentially contaminated wastewater prior to discharge to the McCoy Sumps MC1, MC2 and MC3.'</i></p> <p>With the commencement of the new Myara wastewater treatment plant, DER will include reference to Myara Batching Tanks 1, 2 and 3.</p>	Works approval W5360/2013/1 and supporting Environmental Assessment Report
	W2(b)	NSC	<p>The existing condition refers to Table 1 that specifies the wastewater monitoring program. DER has incorporated Myara Batching Tanks 1, 2 and 3 into the existing monitoring program.</p> <p>DER also considered a submission from Alcoa dated 6 March 2015 that requested removal of biannual sampling of chromium, copper and zinc. Alcoa asked that these three parameters be incorporated into the existing monitoring suite (pH, TDS, surfactants, total phosphorus and oil & grease) that sampled prior to discharge unless there has been no addition of treated wastewater to the sumps or batching tanks since the last sampling event. Alcoa stated this is to</p>	Works approval W5360/2013/1 and supporting Environmental Assessment Report



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			allow for occasions when the discharge of waste water does not occur at least biannually. The change does not change the likelihood or consequence of emissions and does not change the overall environmental risk. Alcoa will be required to sample those metals prior to each discharge.	
	W3(a)	NSC	The existing condition refers to discharge criteria for wastewater for McCoy Sumps MC1, MC2 and MC3. Discharges from the Myara Batching Tanks 1, 2 and 3 are to achieve the same discharge limits. Similar to the McCoy treatment process, Myara wastewater is treated and enters one of the three batching tanks which have sampling ports to undertake sampling. Once treated water has been tested and confirmed to meet discharge criteria is discharged to the 190 ML reservoir from where is used for dust suppression on haul roads and fire water. The Myara treatment system was designed and approved in works approval W5360/2013/1 to meet existing discharge criteria and Department of Water (DoW) Water Quality Protection Note 26.	Works approval W5360/2013/1 and supporting Environmental Assessment Report
	W5	OSC	DER intended to put a new condition on the licence requiring Alcoa to maintain a freeboard in wastewater treatment and storage ponds consistent with recommendations in Table 2 of the environmental assessment report attached to works approval W5360/2013/1. Alcoa provide comment on proposed licence amendments and objected to the imposition of a freeboard limit. DER met with Alcoa on 13/03/2015 and requested Alcoa to provide additional information on modelled rainfall events and its operation management and contingencies. DER has re-assessed the environmental risk of pond overtopping events based on the supplementary information from Alcoa. Myara <u>Emission Description</u> <i>Emission:</i> Overflow of contaminated wastewater from the pre-treatment pond during a storm event. The main contaminant in the wastewater is hydrocarbons. Modelling indicates the system can manage the modelled 1 in 50 year 1 hour and 1 in 10 year 24 hour rainfall events with operational management.	Works approval W5360/2013/1 and supporting Environmental Assessment Report

Controls: The system has been designed and modelled to have capacity to deal with 1 in 50 year 1 hour and 1 in 10 year 24 hour rainfall events without topping. Alcoa has operational management to maintain the 300mm freeboard to prevent overtopping from these events. In the unlikely event of overtopping, wastewater is directed via humeceptor in a controlled manner into the water storage reservoir.

Risk Assessment

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

Condition W5 has been included to require Alcoa to manage its ponds to ensure no overtopping occurs and maintain their integrity.

Residual Risk

Consequence: Minor

Likelihood: Rare

Risk Rating: Low



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Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<p>McCoy</p> <p><u>Emission Description</u> <i>Emission:</i> Overflow of contaminated wastewater from the pre-treatment or post-treatment ponds during a storm event. As with Myara's system, the main contaminant is hydrocarbons. Modelling indicates the same modelled events require up to 700mm freeboard to prevent overtopping from the pre-treatment ponds. Overtopping is not expected to occur with operational management of freeboard. <i>Impact:</i> Soil and groundwater contamination. <i>Controls:</i> The system has been designed and modelled to have capacity to deal with 1 in 50 year 1 hour and 1 in 10 year 24 hour rainfall events without topping. The inlet pipe for the pre-treatment ponds is 1m below the overflow point and 300mm below the required freeboard. Alcoa advises it manages the freeboard to below the inlet pipe. The post-treatment ponds are managed as a batching system and water cannot enter the ponds from the catchment area without manual activation of a valve.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition W5 has been included to require Alcoa to manage its ponds to ensure no overtopping occurs.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare</p>	



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			<i>Risk Rating: Low</i>	



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
19/02/2015	Proponent sent a copy of draft instrument and decision document	Alcoa provided comment on the proposed licence amendments. These included: 1. a request to align the AER and AACR reporting dates in conditions G2 and G3 with its Willowdale licence; 2. a request to delete requirement for biannual sampling of chromium, copper and zinc in Table 1 of condition W2(b) and that they be monitored prior to discharge along with all other monitored parameters; and 3. Request to remove proposed condition W5 containing pond freeboard requirements.	1. DER didn't object to the change. The AER and AACR submission date will be amended to 31 March in each year; 2. DER didn't object to the change. Alcoa will still be required to monitor chromium, copper and zinc however, rather than biannually, it will occur as part of sampling other parameters prior to wastewater discharge; and 3. DER didn't agree with the complete removal of condition W5. DER and Alcoa met on 13/3/2015 and thereafter Alcoa submitted supplementary information on freeboard management and overflow contingencies. A modified condition W5 will require Alcoa to ensure there is no overtopping with no numerical freeboard limit. Refer to the decision matrix in Section 4 for DER's risk assessment.



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High