



## Annual Audit Compliance Report Form

Environmental Protection Act 1986, Part V Division 3

Once completed, please submit this form either via email to [info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au), or to the below postal address:

Department of Water and Environmental Regulation  
Locked Bag 10  
Joondalup DC WA 6919

### Section A – Licence details

Licence number:	L6217/1983/15	Licence file number:	2012/007237-7~2
Licence holder name:	Alcoa of Australia Limited		
Trading as:			
ACN:	004 879 298		
Registered business address:	181-205 Davy Street BOORAGOON WA 6154		
Reporting period:	01 / 01 / 2020 to 31 / 12 / 2020		

### Section B – Statement of compliance with licence conditions

Did you comply with all of your licence conditions during the reporting period?  
(please tick the appropriate box)

- Yes – please complete:
- section C;
  - section D (if required); and
  - sign the declaration in Section F.
- No – please complete:
- section C;
  - section D (if required);
  - section E; and
  - sign the declaration in Section F.

### Section C – Statement of actual production

Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.

Prescribed premises category	Actual production quantity
Category 46 - Bauxite refinery	2,845,888 tonnes of refined alumina
Category 52 – Electric Power Generation	756,592 MWhr or average 86MW of power generated using natural gas
Category 64 – Class II or III putrescible landfill site	1541 Tonnes to Class II landfill
Category 67 – Fuel burning	42790 kg/hr (natural gas with Sulphur content less than or more than 0.25%)

<b>Section D – Statement of actual Part 2 waste discharge quantity</b>	
Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.	
<b>Prescribed premises category</b>	<b>Actual Part 2 waste discharge quantity</b>
Category 46 - Bauxite refinery	5,616,900 tonnes of bauxite residue (tailings)

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A2(a)	Date(s) of non-compliance:	13 November 2019 to 10 February 2020
Details of non-compliance:			
<p>Condition A2(a) requires that Alcoa operates the calciners to a limit of Aggregate Calciner Priority Volatile Organic Compounds (VOC) emissions. For the period 13 November 2019 to 10 February 2020 the Aggregate Calciner Priority VOC Emissions were 7,365 kg as calculated in accordance with Table 18 of Appendix A of the Licence, Alcoa has recorded a 91 kg exceedance of the 7,274 kg limit.</p> <p>The 91 kg exceedance equates to an average of 1 kg per day exceedance for the duration of the reporting period, which is approximately 1.25% above the 90-day reporting period Licence limit.</p>			
What was the actual (or suspected) environmental impact of the non-compliance?			
<p><b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
<p>Alcoa believes there was no potential environmental impact over this period. In 2020 Alcoa completed a Health Risk Assessment (HRA) (Katestone 2020), for the Wagerup Alumina Refinery Expansion to 3.3Mtpa. For both the base case (2.85Mtpa) and the expansion case (3.3Mtpa) compounds assessed in the HRA (including the priority VOCs) were within acceptable limits. This supports the position that no potential environmental impact was caused over this period due to the 91kg exceedance. An exceedance by ~1.25% of the Aggregate Calciner Priority VOC limit over this 90-day period at 2.85Mtpa is predicted to not alter the conclusions of these studies.</p>			
Cause (or suspected cause) of non-compliance:			
<p>The exceedance was due to improved alumina production at the refinery over this period as the Aggregate Calciner Priority VOC calculation directly relates to average daily alumina throughput for each calciner. Production is tracked against the cumulative annual target. It was not recognised by operational personnel at the refinery that the Aggregate Calciner Priority VOC targets could be exceeded during the quarterly breakdown if production was meeting the annual target.</p>			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
<p>Alcoa believes there was no potential environmental consequence as a result of this exceedance. Production planning rates were immediately adjusted to allow for quarterly limits to be achieved. Alcoa’s refinery production planning during 2020 included daily, quarterly and annual targets for calciner throughput and the calculated VOC emissions to prevent recurrence of this event.</p> <p>Alcoa completed consultation with DWER to progress a Licence amendment in 2020 and subsequently received the amendment on 10/11/2020 to remove the quarterly Aggregate Calciner Priority VOC limits and provide a production and Aggregate Calciner Priority VOC increase on the annual limits to better reflect improved alumina production performance.</p> <p>The annual Aggregate Calciner Priority VOC limit permitted for the Licence year is now 30,017kg, and Alcoa will continue to monitor closely the Aggregate Calciner Priority VOC emissions over the next reporting period.</p>			

Section E – Details of non-compliance with licence condition	
Was this non-compliance previously reported to DWER?	
<input checked="" type="checkbox"/> Yes, and	
<input checked="" type="checkbox"/> Reported to DWER verbally	Date: 18/02/2020
<input checked="" type="checkbox"/> Reported to DWER in writing	Date: 18/02/2020

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A2(c)	Date(s) of non-compliance:	10 to 25 November 2020
Details of non-compliance:			
<p>Condition A2(c) in the amended Licence states:</p> <p style="text-align: center;"><i>The licence holder shall have in operation no more than three of the following causticisation tanks at any one time J13; J14; J15; J24 and J25.</i></p> <p>At the time of receipt of the amended licence on 11 November 2020 four causticisation tanks were in operation (J13, J14, J15 and J24).</p> <p>Causticisation tank J25 had already been removed from operation prior to 11 November 2020 as part of routine maintenance requirements. Upon receipt of the amended licence Alcoa immediately accelerated removal of a second tank, causticisation tank J15. which was completed on 25 November 2020.</p>			
What was the actual (or suspected) environmental impact of the non-compliance?			
NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
<p>Alcoa believes there was no potential environmental impact over this period.</p> <p>For the majority of the period between 11 and 25 November 2020 lime was not being added to any of the causticisation tanks referenced in condition A2(c). When lime is not being added to these tanks, emissions are expected to be less than that of normal operation. Even assuming the tank emitted full emissions during this entire period, which is highly unlikely, then the additional emissions from having the fourth tank (J15) in operation for these 14 days would have been minor (estimated to be approximately 0.0003 g/s of Volatile Organic Compounds (VOC) or 0.01% of baseline emissions and 61 OU/s for odour or 0.004% of baseline emissions).</p>			
Cause (or suspected cause) of non-compliance:			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
<p>As of 25 November 2020, Alcoa was in compliance with condition A2(c).</p> <p>In accordance with new licence condition A2(e) Alcoa will be operating the precipitation cooling towers on Upper Dam water supply for a minimum of 141 hours during the winter period of 2021. The estimated maximum potential emissions from having J15 in operation for an additional two weeks is equivalent to 8 hours of Upper Dam water supply with respect to VOCs and odour. To mitigate any potential effects, Alcoa commits to run this water supply for an additional 8 hours during the winter of 2021 with the intent to fully compensate for any potential additional VOC and odour emissions generated by the operation of J15 between 11 and 25 November 2020.</p>			
Was this non-compliance previously reported to DWER?			
<input checked="" type="checkbox"/> Yes, and			
<input type="checkbox"/> Reported to DWER verbally		Date: / /	
<input checked="" type="checkbox"/> Reported to DWER in writing		Date: 05/02/2021	

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	G1 (ii)	Date(s) of non-compliance:	20/1/2020; 22/1/2020; 23/1/2020; 24/1/2020; 20/2/2020; 21/2/2020; 6/3/2020; 20/4/2020; 7/5/2020; 8/5/2020; 18/5/2020; 21/5/2020; 16/6/2020; 8/7/2020; 9/7/2020; 23/7/2020; 11/8/2020; 12/8/2020; 5/10/2020; 7/10/2020; 8/10/2020; 9/10/2020; 12/10/2020; 12/11/2020; 7/12/2020; 8/12/2020
Details of non-compliance: <b>POTENTIAL</b>			
Alcoa contracts an independent stack emission testing company, who are accredited by the National Association of Testing Authorities, Australia ( <b>NATA</b> ), to undertake stack emission monitoring for Alcoa's compliance with the relevant licence conditions.			
After a review initiated by Alcoa, Alcoa identified that the stack emission testing company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence. Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
What was the actual (or suspected) environmental impact of the non-compliance?			
<b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
No environmental impact is known or suspected at this time.			
Cause (or suspected cause) of non-compliance:			
The stack emission monitoring company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence condition.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
Was this non-compliance previously reported to DWER?			
<input checked="" type="checkbox"/> Yes, and			
<input checked="" type="checkbox"/> Reported to DWER verbally		Date: 29/03/2021	
<input type="checkbox"/> Reported to DWER in writing		Date:	

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A22 (a)	Date(s) of non-compliance:	20/1/2020; 20/2/2020; 20/4/2020; 9/7/2020; 5/10/2020
<b>Details of non-compliance: POTENTIAL</b>			
<p>Alcoa contracts an independent stack emission testing company, who are accredited by the National Association of Testing Authorities, Australia (<b>NATA</b>), to undertake stack emission monitoring for Alcoa's compliance with the relevant licence conditions.</p> <p>After a review initiated by Alcoa, Alcoa identified that the stack emission testing company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence. Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.</p>			
<p><b>What was the actual (or suspected) environmental impact of the non-compliance?</b></p> <p><b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
No environmental impact is known or suspected at this time.			
<b>Cause (or suspected cause) of non-compliance:</b>			
The stack emission monitoring company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence condition.			
<b>Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:</b>			
Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
<b>Was this non-compliance previously reported to DWER?</b>			
<input checked="" type="checkbox"/> Yes, and			
<input checked="" type="checkbox"/> Reported to DWER verbally		Date: 29/03/2021	
<input type="checkbox"/> Reported to DWER in writing		Date:	

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A23 (a)	Date(s) of non-compliance:	23/1/2020; 24/1/2020; 7/5/2020; 21/5/2020; 16/6/2020; 8/7/2020; 11/8/2020; 12/8/2020; 7/10/2020; 9/10/2020; 12/11/2020; 7/12/2020; 8/12/2020
Details of non-compliance: <b>POTENTIAL</b>			
<p>Alcoa contracts an independent stack emission testing company, who are accredited by the National Association of Testing Authorities, Australia (<b>NATA</b>), to undertake stack emission monitoring for Alcoa's compliance with the relevant licence conditions.</p> <p>After a review initiated by Alcoa, Alcoa identified that the stack emission testing company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence. Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.</p>			
What was the actual (or suspected) environmental impact of the non-compliance?			
<b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
No environmental impact is known or suspected at this time.			
Cause (or suspected cause) of non-compliance:			
The stack emission monitoring company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence condition.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
Was this non-compliance previously reported to DWER?			
<input checked="" type="checkbox"/> Yes, and			
<input checked="" type="checkbox"/> Reported to DWER verbally		Date: 29/03/2021	
<input type="checkbox"/> Reported to DWER in writing		Date:	



Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A23 (b)	Date(s) of non-compliance:	21/1/2020; 8/5/2020; 16/6/2020; 11/8/2020; 12/8/2020; 12/10/2020
Details of non-compliance: <b>POTENTIAL</b>			
Alcoa contracts an independent stack emission testing company, who are accredited by the National Association of Testing Authorities, Australia ( <b>NATA</b> ), to undertake stack emission monitoring for Alcoa's compliance with the relevant licence conditions.			
After a review initiated by Alcoa, Alcoa identified that the stack emission testing company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence. Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
What was the actual (or suspected) environmental impact of the non-compliance?			
<b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
No environmental impact is known or suspected at this time.			
Cause (or suspected cause) of non-compliance:			
The stack emission monitoring company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence condition.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
Was this non-compliance previously reported to DWER?			
<input checked="" type="checkbox"/> Yes, and			
<input checked="" type="checkbox"/> Reported to DWER verbally		Date: 29/03/2021	
<input type="checkbox"/> Reported to DWER in writing		Date:	

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	A25 (a)	Date(s) of non-compliance:	22/1/2020; 21/2/2020; 6/3/2020; 8/5/2020; 18/5/2020; 23/7/2020; 8/10/2020; 12/10/2020;
Details of non-compliance: <b>POTENTIAL</b>			
Alcoa contracts an independent stack emission testing company, who are accredited by the National Association of Testing Authorities, Australia ( <b>NATA</b> ), to undertake stack emission monitoring for Alcoa's compliance with the relevant licence conditions.			
After a review initiated by Alcoa, Alcoa identified that the stack emission testing company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence. Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
What was the actual (or suspected) environmental impact of the non-compliance?			
<b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
No environmental impact is known or suspected at this time.			
Cause (or suspected cause) of non-compliance:			
The stack emission monitoring company has used its expertise to independently apply procedural modifications to certain elements of the testing methods contained in the licence condition.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
Alcoa is currently reviewing if the procedural modifications to the testing methods meet the requirements for those methods.			
Was this non-compliance previously reported to DWER?			
<input checked="" type="checkbox"/> Yes, and			
<input checked="" type="checkbox"/> Reported to DWER verbally		Date: 29/03/2021	
<input type="checkbox"/> Reported to DWER in writing		Date:	

**Section F – Declaration**

I / We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>1</sup>.

I / We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

Signature <sup>2</sup> :		Signature:	
Name: (print		Name: (printed)	Australia Controller
Position:	Vice President Operations	Position:	30/03/2021
Date:	30/03/2021	Date:	
Seal (if signing under seal):			

<sup>1</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

<sup>2</sup> AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.

### Category 46 - Bauxite Refinery - 2020 Production

#### L6217/1983/15 Condition G2 AACR form Section C supporting information

		JAN 2020	FEB 2020	MAR 2020	APR 2020	MAY 2020	JUN 2020	JUL 2020	AUG 2020	SEPT 2020	OCT 2020	NOV 2020	DEC 2020	TOTAL
Calced tonnes (Weightometer)	Total Tonnes:	238,963	226,205	232,173	235,835	253,884	236,454	244,546	242,355	225,789	222,148	236,003	251,533	2,845,888
	Daily Avg:	7708	7800	7489	7861	8190	7882	7889	7818	7526	7166	7867	8114	7776
Weightometer*	Total Tonnes:	238,963	226,205	232,173	235,835	253,884	236,454	244,546	242,355	225,789	222,148	236,003	251,533	2,845,888
	Daily Avg:	7708	7800	7489	7861	8190	7882	7889	7818	7526	7166	7867	8114	7776

\*Zero values replaced with gas rate data

### Category 52 - Power Generation and Category 67 - Fuel Burning - 2020 Production

#### Licence L6217/1983/15 Condition G2 AACR form Section C supporting information

aggregate power generation	MW	756,592	aggregate powerhouse gas		GJ	19,047,593
average power generation	MW	86	average powerhouse gas*		kg/hr	42,790
	Month total (MW)	Daily average (MW)	Average gas (GJ)	Month	MJ/kg	
Jan-20	2,789	90	Jan-20	1,589,799	Jul-19	50.5
Feb-20	2,593	89	Feb-20	1,498,741	Aug-19	50.2
Mar-20	2,721	88	Mar-20	1,580,522	Sep-19	50.7
Apr-20	2,704	90	Apr-20	1,593,955	Oct-19	50.6
May-20	2,706	87	May-20	1,620,090	Nov-19	50.6
Jun-20	2,806	93	Jun-20	1,577,386	Dec-19	50.5
Jul-20	2,938	94	Jul-20	1,691,428	Jan-20	50.6
Aug-20	2,946	95	Aug-20	1,693,181	Feb-20	50.7
Sep-20	2,632	88	Sep-20	1,583,858	Mar-20	50.6
Oct-20	2,187	70	Oct-20	1,527,048	Apr-20	50.8
Nov-20	2,158	72	Nov-20	1,514,602	May-20	50.8
Dec-20	2,341	75	Dec-20	1,576,982	Jun-20	50.6
			Total	19,047,593	Average 2020	50.7

\*estimate using average gas for 2020 Jul 20 to Dec 20 as gas composition data calculated in tax year for NPI opposed to calendar year.

### Category 64 - Class II Landfill - 2020 Total

#### Licence L6217/1983/15 Condition G2 AACR Section C supporting information

Date	S1(a)(i) class II landfill wastes
Q1 2020	226.41
Q2 2020	237.84
Q3 2020	551.99
Q4 2020	525.28
Total 2020	1541.52

### Part 2 Waste Discharge - 2020 Total

#### Licence L6217/1983/15 Condition G2 AACR Section D supporting information

	BAUXITE Used Dry Tonnes	ALUMINA RECOVERY		RESIDUE				Total Dry Tonnes to Residue
		Total Tonnes	Baux ----- Al2O3	Mud / Bauxite t/t	Sand / Bauxite t/t	Sand to Residue (tonnes)	Mud to Residue (tonnes)	
JAN	842,560	243,433	3.46	0.35	0.24	201,952	291,212	493,163
FEB	741,245	215,369	3.44	0.38	0.18	132,905	278,347	411,252
MAR	774,047	232,795	3.33	0.35	0.21	163,822	271,851	435,673
APR	820,118	237,996	3.45	0.32	0.26	210,601	261,558	472,160
MAY	907,578	252,159	3.60	0.35	0.23	209,872	321,647	531,519
JUN	855,597	241,890	3.54	0.36	0.23	193,183	308,752	501,935
JUL	861,481	253,196	3.40	0.36	0.20	174,265	310,924	485,189
AUG	852,521	253,050	3.37	0.34	0.20	174,454	289,886	464,340
SEP	775,895	232,873	3.33	0.36	0.19	148,662	281,831	430,492
OCT	785,457	233,307	3.37	0.36	0.20	160,233	279,623	439,856
NOV	816,845	236,301	3.46	0.36	0.21	171,639	291,421	463,060
DEC	858,463	249,324	3.44	0.36	0.21	182,919	305,343	488,261
TOTAL	9,891,806	2,881,692	3.43	0.35	0.21	2,124,506	3,492,394	5,616,900