



**ENVIRONMENT
AGENCY**

Variation Notice with introductory note

Pollution Prevention and Control Regulations 2000

HOLYHEAD ALUMINIUM SMELTER

**Anglesey Aluminium
Metal Limited,
Penrhos Works,
P.O. Box 4,
Holyhead,
Anglesey,
LL65 2UJ.**

Variation Notice number

JP3532SB

Permit number

BL1100

Introductory note

This introductory note does not form a part of the Variation Notice.

The following Notice is issued under Regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a Permit issued under the Regulations to operate an installation.

The Notice comprises Schedule 1 containing conditions to be deleted, Schedule 2 conditions to be amended and Schedule 3 conditions to be added. The Notice is subject to the express conditions set out in Schedules 1 to 3.

The Permit, as amended by this Variation Notice, contains conditions which have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Brief description of the changes introduced by this variation notice.

The main purpose of the activities at the installation is the production of aluminium metal from alumina. Carbon anodes for use in the electrolysis cells are also produced at the installation from coke and pitch. The changes introduced by this variation notice are to emission limit values, with short term reductions of many limits and improvement conditions requiring the installation to meet indicative BAT for emissions from the Carbon Bake Plant by October 2007.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
N/A	None	N/A

Superseded Licences/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
Anglesey Aluminium Metal Limited	IPC Authorisation AS6799 / BD7456	27/11/95
Anglesey Aluminium Metal Limited	IPC Authorisation AT1865 / BD7464	27/11/95

Talking to us

If you contact the Agency about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1 of the Permit.

Confidentiality

The Permit/Variation requires the Operator to provide information to the Agency. The Agency will place the information onto the public registers in accordance with the requirements of the PPC Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to the Agency to have such information withheld from the register as provided in the PPC Regulations. To enable the Agency to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of the Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application BL1100	Received 27/12/01	
Response to Schedule 4 Part1 Notice	Notice dated 15/04/02	Response received 24/06/02
Supplementary Information	Received 02/09/02	Amended earlier Schedule 4 Part 1 Notice Responses
Response to Schedule 4 Part1 Notice	Notice dated 03/05/02	Response received 02/09/02
Supplementary Information	Received 05/11/02	Amended earlier Schedule 4 Part 1 Notice Responses
Permit BL1100	Determined 30/05/03	
Application for variation	Received 25/04/05	
Variation JP3532SB	Determined 29 th June 2005	

End of introductory Note

Variation Notice

Pollution Prevention and Control
(England and Wales) Regulations 2000



**ENVIRONMENT
AGENCY**

Variation Notice

Permit number (The Permit)

BL1100

Variation Notice number

JP3532SB

The Environment Agency in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I. 2000 No. 1973) (as amended), hereby varies the Permit issued on 30/05/2003 and held by you
Anglesey Aluminium Metal Limited ("the Operator"),

whose Registered Office (or Principal Office) is

6 St James's Square
London
SW1Y 4LD

Company registration number 909645

which relates to the operation of an Installation at

Penrhos Works

PO Box 4

Holyhead

Anglesey

LL652UJ

to the extent set out in Schedules 1 to 3 of this Variation Notice.

This Notice shall take effect from 30th June 2005 at 00.01 hours.

Ms J Adamson

Authorised to sign on behalf of the Environment Agency

Date

29th June 2005

SCHEDULE 1 - CONDITIONS TO BE DELETED

1. None

SCHEDULE 2 - CONDITIONS TO BE AMENDED

2. Condition 2.3.1 to be amended to

2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Environment Agency.

Table 2.3.1: Operating Techniques		
Description	Parts	Date Received
Application	The response to question 2.3 given in section B2.3 of the application	27/12/01
Response to Schedule 4 Part 1 Notice	Response to questions 26-28, 30-35, 38-48, 50, 52-55, 57	24/06/02
Supplementary Information	Items 28,29,36,37,56	02/09/02
Supplementary Information	Items 47,49,53	05/11/02
Application for variation	document Variation AAM 1	25/04/05

3. Condition 2.10.1 to be amended to

2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Environment Agency.

Table 2.10.1: Monitoring		
Description	Parts	Date Received
Application	The response to question 2.10 given in section B2.10 of the application	27/12/01
Response to Schedule 4 Part 1 Notice	Response to questions 89-92, 94-96, 98-113	02/09/02
Supplementary information	Items 90,92,93,97	05/11/02
Application for variation	document Variation AAM 1	25/04/05

4. Condition 6.1.2 to be amended to

6.1.2 The limits for emissions to air for the parameters and emission points set out in Tables 6.1.2 and 6.1.3 shall not be exceeded.

Table 6.1.2: Emission limits into air – Pot room roofs, Pot room West End and Fume treatment

Parameters	Emission Point					
	41A21	41A22	41A23	41A24	42A1	41A26
Gaseous Fluorides (as HF), kg/day	65	65	65	65	65	
Continuous laser monitoring						
Gaseous Fluorides (as HF), kg/week.			360		380	
Frequency of monitoring			weekly continuous samples		weekly continuous samples	
Total Fluorides (as F), kg/week			480		420	
Frequency of monitoring			weekly continuous samples		weekly continuous samples	
Total particulate matter, kg/day			100		100	10
Frequency of monitoring			monthly continuous samples		monthly continuous samples	Annual. Minimum 4 hour sample

	41A21, 22,23,24 and 42A1 taken together 12-month moving mean figures		
Gaseous Fluorides (as HF), kg/t aluminium smelted	0.55		
Total Fluorides (as F), kg/t aluminium smelted	0.7		
Total particulate matter, kg/t aluminium smelted	1.2		

Table 6.1.3: Emission limits into air – Green Carbon and Carbon bake plant

Parameters	Emission point	
	31A4	33A1
Gaseous Fluorides (as HF), kg/day		300
Continuous laser monitoring		
Total Fluorides (as F), kg/week		1700
Frequency of monitoring		continuous weekly samples (gaseous fluorides), weekly (particulate fluorides)
Total Particulate matter, mg/m ³ kg/day	10	400
Frequency of monitoring	quarterly extractive and continuous alarmed monitor	weekly extractive and continuous opacity meter
Benzo-a Pyrene, mg/m ³	0.1	0.4
Frequency of monitoring	6 monthly	6 monthly
Polycyclic aromatic hydrocarbons, PAH [OSPAR 11], in total, mg/m ³		3
Polycyclic aromatic hydrocarbons PAH [EPA 16].		
Frequency of monitoring	6 monthly	6 monthly

12 month moving mean figures		
Total Fluorides (as F), kg/t aluminium smelted		0.6
Total Particulate matter, kg/t aluminium smelted		1

5. Condition 6.1.4 to be amended to:

6.1.4 Where an annual mass limit for a substance is stated in Table 6.1.4, the aggregate emissions of such substance from the Permitted Installation into air shall not exceed that limit in any period of twelve successive calendar months.

Table 6.1.4 Annual mass limits	
Substance	Limit
Sulphur Dioxide kg/t aluminium smelted	18
Polycyclic aromatic hydrocarbons (PAH [EPA 16] in total, t	5 (limit to apply from 31 st December 2008)
Total Particulate matter, kg/t aluminium (smelted)	4
Total Fluorides (as F), kg/t aluminium (smelted)	1 (limit to apply from 31 st December 2008)

6. Table S2 in Schedule 2 of the Permit to be amended to:

Table S2: Reporting of monitoring data				
Parameter	Units	Emission point	Reporting period	Period begins
Gaseous fluoride by laser monitoring, as HF	kg/day and kg/week	41A21-41A24, 42A1, 33A1	Quarterly	1 July 2003
Gaseous fluoride by extractive monitoring, as HF	kg/day and kg/week	41A23, 42A1	Quarterly	1 July 2003
Total fluoride by extractive monitoring, as F	kg/day and kg/week	41A23, 42A1, 33A1	Quarterly	1 July 2003
Gaseous fluoride (as HF)	12-monthly rolling means, kg/t of Al smelted	41A21-24 & 42A1 taken together	Quarterly	1 July 2003
Particulate fluoride (as HF)	12-monthly rolling means, kg/t of Al smelted	41A21-24 & 42A1 taken together	Quarterly	1 July 2003
Total fluoride (as F)	12-monthly rolling means, kg/t of Al smelted	41A21-24 & 42A1 taken together, 33A1	Quarterly	1 July 2003
Sulphur dioxide	12-monthly rolling means, kg/t of Al smelted	41A21-24, 42A1 & 33A1 taken together	Quarterly	1 July 2003
Total particulate matter	Monthly mean kg/day	41A23, 42A1, 33A1 41A26	Quarterly Annually	1 July 2003
Total particulate matter	mg/m ³	41A26, 31A4	Annually, Quarterly	1 July 2003
Total particulate matter	kg/quarter And 12-monthly rolling means, kg/t of Al smelted	41A21-24, 41A26, 42A1, 31A4, 33A1, and all other release points in total	Quarterly (41A26 Annually)	1 July 2003
Particulate Fluoride	kg/quarter	41A26, All release points in total, other than 41A21-24, 41A26, 42A1, 31A4, and 33A1.	Annually, Quarterly	1 July 2003
Total PAH [EPA 16] Total PAH [OSPAR11] and Benzo-a-Pyrene	mg/m ³	31A4, 33A1	six monthly	1 July 2003

Table S2: Reporting of monitoring data – continued

Parameter	Units	Emission point	Reporting period	Period begins
Total particulate matter	kg	All to air	Annual	1 July 2003
Total particulate fluoride (as F)	kg	All to air	Annual	1 July 2003
Total oxides of nitrogen as NO ₂	kg	All to air	Annual	1 July 2003
Carbon monoxide	kg	All to air	Annual	1 July 2003
Gaseous fluoride (as HF)	kg	All to air	Annual	1 July 2003
Total fluoride as F	kg	All to air	Annual	1 July 2003
Total fluorocarbons	kg	All to air	Annual	1 July 2003
Total PAH [EPA 16]	kg	All to air	Annual	1 July 2003
Total PAH [Borneff 6]	kg	All to air	Annual	1 July 2003
Benzo-a-pyrene	kg	All to air	Annual	1 July 2003
Carbon dioxide	t	All to air	Annual	1 July 2003
Total oxides of sulphur as SO ₂	t	All to air	Annual	1 July 2003
Flow	l/s	53W1, 53W2	Quarterly	1 July 2003
Flow	m ³ /day	53W1, 53W2	Quarterly	1 July 2003
Fluoride	mg/l	53W1, 53W3	Quarterly	1 July 2003
Total PAH [EPA 16]	mg/l	53W1, 53W3	Quarterly	1 July 2003
Suspended solids	mg/l	53W1 - 53W3	Quarterly	1 July 2003
pH	-	53W1 - 53W3	Quarterly	1 July 2003
pH minimum	-	53W1 - 53W3	Quarterly	1 July 2003
Total hydrocarbon oil	mg/l	53W1, 53W3	Quarterly	1 July 2003
Biochemical oxygen demand	mg/l	53W2	Quarterly	1 July 2003
Total fluoride (as F)	kg	All to water	Annual	1 July 2003
Total PAH [EPA 16]	kg	All to water	Annual	1 July 2003
Total PAH [Borneff 6]	kg	All to water	Annual	1 July 2003
Fluoride deposition / ambient air concentration	µgcm ⁻² /week µg/m ³	At sites as detailed in application	Every 6 months	1 July 2003
Fluoride in herbage	mg/kg		Every 6 mths	1 July 2003
Fume collection efficiency	%	based on monitoring 41A23	Quarterly	June 2005
Fume treatment efficiency	%	based on monitoring 41A23	Quarterly	June 2005

7. Table S3 of Schedule 3 of the Permit to be amended to:

Table S3: Reporting forms		
Medium / Parameter	Form Number	Date of Form
Air	A1,A2,A3,A4,A5,A6	28/06/05
Water	W1,W2,W3	28/06/05
Energy	E1	28/06/05
Waste return	R1	28/06/05
Water Use Return	R2	28/06/05
Out-plant monitoring return	M1	28/06/05
Performance Indicators	P1,P2	28/06/05
Release summaries	S1,S2	28/06/05

SCHEDULE 3 - CONDITIONS TO BE ADDED

8. Add condition 4.1.9

4.1.9 The operator shall produce a report quarterly on the efficiency of fume capture from the reduction cells, and shall send a copy of each such report to the Agency. The report shall contain, as a minimum, the information specified in the form listed in Schedule 3.

9. Add to condition 9.1.1 Improvement Programme Requirements

Reference	Requirement	Date
9.31	The operator shall provide details to the Environment Agency in writing of how he intends to achieve an emission level, from all emission points taken together, consistent with the BAT level of 1kg total Fluoride (as F) per tonne of aluminium smelted	31 st March 2006
9.32	The operator shall implement proposals to achieve total plant emissions of 1kg total Fluoride (as F) per tonne of aluminium smelted, as finally approved by the Environment Agency.	30 th October 2007
9.33	The operator shall provide details to the Environment Agency in writing of how he intends to meet emission levels of 0.1mg/m ³ Benzo-a-Pyrene from the Carbon Bake plant.	31 st March 2006
9.34	The operator shall implement proposals to achieve emissions of 0.1mg/m ³ Benzo-a-Pyrene from the Carbon Bake plant, as finally approved by the Environment Agency.	30 th October 2007
9.35	The operator shall provide details to the Environment Agency in writing of how he intends to meet emission levels of 5mg/m ³ Particulate from the Carbon Bake Plant.	31 st March 2006
9.36	The operator shall implement proposals to achieve Particulate emissions of 5mg/m ³ from the Carbon Bake Plant, as finally approved by the Environment Agency.	30 th October 2007
9.37	The operator shall carry out a study into the feasibility of continuous monitoring of Fluoride, (as HF), in the inlet to the Fume Treatment Plant serving potline 2A. A report of the findings shall be provided to the Environment Agency in writing, along with a timetable for the implementation of the most suitable monitoring technique.	30 th November 2005
9.38	The operator shall carry out a study of the efficiency of the dust abatement equipment on emission point 41A26 the "West End Dust Collector", and provide a report to the Environment Agency in writing. A timetable for improvement works shall also be provided, if any are found to be necessary to maintain total particulate emissions below 20mg/m ³ from this point.	31 st May 2006
9.39	The operator shall carry out a review of the fate of Sulphur within the process making use of emissions monitoring data and mass balance calculations. A report of the findings shall be provided in writing to the Environment Agency.	31 st June 2006

End of Variation Notice.