



**ENVIRONMENT
AGENCY**

Variation Notice with introductory note

Pollution Prevention and Control Regulations 2000

Ruabon Electroceramics

**Morgan Electro Ceramics Limited
Vauxhall Industrial Estate
Ruabon
Wrexham
LL14 6HY**

Variation Notice number

QP3232UM

Permit number

BY0364IB

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.

The changes introduced by this Variation are as follows:

- i) Installation of additional iso-static press to press 20t per annum of powders previously processed at the Eindhoven manufacturing facility. Dust emissions arising during filling of the moulds will be extracted to emission point B7. This material will then be sinter fired.
- ii) Installation of additional mechanical press to press 5t per annum of spray dried powders previously processed at the Eindhoven manufacturing facility. Dust emissions arising during filling of the press will be extracted to emission point B7. This material will then be pre-fired (binder burn-out) and sinter fired.
- iii) A new pre-fire, or 'burn-out' kiln will be installed for treatment of 5t of mechanically pressed powder previously processed at the Eindhoven manufacturing facility. Emissions are extracted to emission point B14.
- iv) A new oxygen kiln will be installed to enable sinter-firing of both the 20t of isopressed powder and 5t of dry pressed powder. Emissions are extracted to emission point B14.
- v) A new small oxygen sinter fire kiln for lab testing of components will also be installed. As this is an O₂ kiln this will be located within the main plant kiln area. Emissions are extracted to emission point B26.
- vi) There is no additional loading of the effluent treatment plant.

- vii) Other minor changes have been made since the last Variation. These are a new external waste storage area, rerouting of emissions from kiln KF4 from B16 to B18, removal of B16 as lead based materials are no longer used in this kiln and therefore this kiln is no longer part of the Installation.
- viii) The Installation boundary has been altered to encompass the changes that have occurred since Permit issue regarding exterior storage of waste.

The main purpose of the activity at the installation is:-

Morgan Electro Ceramics Limited operates two PPC installations at their site in Ruabon, Wrexham. These are (i) a 'Part A(1)' Installation (regulated by the Environment Agency) and (ii) a 'Part B' Installation (regulated by the local authority). This permit relates to the Part A Installation, and allows the Operator to manufacture electroceramic materials. The Part B activity involves solvent cleaning in the production of electroceramic components for various electronic and electrical devices.

The manufacture of electroceramic materials is relevant under Part A(1) of Schedule 1 of the PPC Regulations due to the use of lead, gallium and antimony in manufacture of the electroceramic materials. The process includes receipt and storage of raw materials including lead oxide, antimony trioxide and gallium oxide, preparation of powder, powder milling, drying, calcine firing, spray drying and blending, powder pressing, binder burn-out, sinter firing, cleaning of equipment, and waste storage. Associated activities include laboratory and process support activities and effluent treatment. Maximum annual production of electroceramic materials is in the region of 250 tonnes. Releases are made to air (particulates including lead), to sewer (from effluent treatment plant to Five Fords Sewage Treatment Works) and to a controlled water. The release to the latter is uncontaminated surface water drainage via a drainage ditch to Aberderfyn Brook. Releases to air are via 21 stacks, of which 4 give rise to the majority of the air emissions. These 4 release points are abated.

The nearest Site of Special Scientific Interest (SSSI) is Nant-y-Belan and Prynella Woods, which is at a distance of 4.3 km from the Installation. There are a further 7 SSSI's within a distance of 10km. There are two Special Area of Conservation within 10 km of the site, one at 113 m (Johnstown Newt Sites) and one at 4.3 km (Berwyn a Mynyddoedd De Clwyd/Berwyn and South C1). Despite the close proximity of these sites, the Agency has concluded that the operation has no adverse effect on any Natura 2000 sites and is not considered to have an adverse effect on any important ecological sites.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
Not Applicable		

Superseded Licenses/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
IPC Authorisation (as varied)	AO0164LMN/999	30/11/94

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 BY0364IIB	Received 03/12/04	
Request to extend determination	Requested 18/04/05	Request accepted 11/05/05
Request for information	Requested 28/04/05	Response dated 17/08/05
Permit issued	31/08/05	
Application for variation	Received 13/03/2006	
Request for information	Requested 12/05/2006	Response dated 30/05/2006 and 03/07/2006
Request to extend determination	Requested 21/06/2006	Request accepted 27/06/2006
Request to extend determination	Requested 11/07/2006	Request accepted 11/07/2006
Supplementary information	Received 18/07/2006	
Variation NP3338LX	Determined 18/07/2006	
Application for Variation	Received 11/10/2006	
Request for information	Requested 22/12/2006	Responses received 22/01/2007 and 01/02/2007
Variation FP3838MT	Determined 26/02/2007	
Application for Variation	Received 13 June 2007	
Supplementary Information	Received 22 August 2007	
Variation QP3232UM	Determined 23 August 2007	

End of introductory Note

Variation Notice

Pollution Prevention and Control
(England and Wales) Regulations 2000



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Permit number

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QP3232UM

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 31/08/2005 and held by you.

Morgan Electro Ceramics Limited ("the Operator"),

whose Registered Office is

Bursledon Road

Thornhill

Southampton

Hampshire

SO19 7TG

Company registration number **112286**

which relates to the operation of an Installation at

Vauxhall Industrial Estate

Ruabon

Wrexham

LL14 6HY

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

This Notice shall take effect from 23 August 2007.

Signed

A handwritten signature in black ink, appearing to read 'A. Weedy', enclosed in a rectangular box.

A. Weedy

Authorised to sign on behalf of the Environment Agency

Date

23 August 2007

SCHEDULE 1 - CONDITIONS TO BE DELETED

1. None

SCHEDULE 2 - CONDITIONS TO BE AMENDED

2. Amend condition 2.1.1 to

- 2.1.1 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 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1. Operating techniques

Description	Parts	Date received
Application	The response to questions 2.1 given in Section 4 of the application (In-process controls) and 2.2 given in Section 5 of the application (Emissions control and abatement).	03/12/04
Application for Variation	The response given in sections C2.1 (In-process controls) and C2.2 (Emissions control and abatement) of the Application for Variation.	13/03/2006
Resubmission of Schedule 7 response in response to letter dated June 27 2006 requesting further clarification of original response made May 30 2006.	The response to questions 1 to 6 of the Schedule (pages 1 – 27) and the response to question 10 of the letter.	03/07/2006
Supplementary information provided by the Operator.	Points 1, 5 and 6	18/07/2006
Application for Variation	The response given in sections C2.1 (In-process controls), C2.2 (Emissions control and abatement) and C2.10 (Emissions monitoring) of the Application for Variation.	11/10/2006
Schedule 7 response	The response to questions 2, 5, 6, 8, 9 and 11-23 of the Schedule	22/01/2007
Additional information provided by the Operator.	The response to points, iv and v of the letter dated January 24 2007 requesting clarification of Schedule 7 response.	01/02/2007
Application for Variation	The response given in sections C2.1 (In-process controls), C2.2 (Emissions control and abatement) and C2.10 (Emissions monitoring) of the Application for Variation (excluding pg 42 and the response regarding point B24/28).	13 June 2007
Supplementary Information sent by Operator.	The information on pages 2-3 (emission hours), 41-42 (mould filling and spray drier change), 45 (binder use) of the response.	22 August 2007

3. Amend condition 2.2.1.2 to

2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the sources specified in that Table.

Table 2.2.1 : Emission points to air

Emission reference description	point or Source	Location of emission point (as per Drawing PPC 05, Issue 7 - Permit Variation Proposal)
B1	Calcine Kiln – PZT material	PZT preparation enclosure - Bay 1
B4	Calcine kiln – Flue No. 1	Powder Preparation Production Area - Bay 1
B5	Calcine kiln – Flue No. 2	Powder Preparation Production Area - Bay 1
B6	Wet Process Spray Dryer	Bay 1, Powder Preparation
B7	Press area dust collector	External to building
B8	Binder burn-off oven	Bay 3 kilns
B9	Binder burn-off oven	Bay 2 kilns
B10	Binder burn-off oven	Bay 3 kilns
B11	Sinter fire kiln	Bay 2 kilns
B12	Sinter fire kiln	Bay 2 kilns
B13	Sinter fire kiln + O ₂ firing kiln	Bay 3 kilns
B14	Calcine kiln + Gemco Pre-fire kiln + Elino O ₂ sinter kiln	Bay 3 kilns
B15	Calcine kiln	Bay 3 kilns
B17	Sinter fire kiln	Bay 3 kilns
B18	Sinter fire kiln + KF4 Calcine kiln	Bay 2 kilns
B22	Lead dust collector for 'wet process'.	External to Bay 1, Powder Preparation
B23	Lead dust collector for bead mill and 'dry process'.	External to Bay 1, Powder Preparation
B24	Spray Dryer – see note 1	Bay 1, Powder Preparation
B25	2 laboratory kilns and laboratory spray drier	Laboratory
B26	Calcine Kiln, Drying Ovens and Linn 1300 O ₂ sinter kiln	Powder Preparation Area
B27	General Dust Collector	External to Building Powder Preparation
B29	Government Contract dust collector	External to Government Contract Department

Note 1: Drier will change from 'Southampton' drier to 'Eindhoven' drier as per timescales identified on page 20 of the supplementary information.

Amend condition 2.2.1.3 to

2.2.1.3 The limits for emissions to air for the parameters and emission points set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2 : Emission limits to air and monitoring

Emission point reference	Parameter	Limit (including reference period) in mg m⁻³ See Notes 1-2	Monitoring frequency	Monitoring method.
B6	Lead	0.2	Annual	BS EN 14385
B6	Particulates	3	Annual	BS EN 13284-1:2002
B7	Lead	0.2	Annual	BS EN 14385
B7	Particulates	2	Annual	BS EN 13284-1:2002
B24	Lead	0.2	Annual	BS EN 14385
B24	Particulates	2	Annual	BS EN 13284-1:2002

Note 1: See Section 6 for reference conditions

Note 2: The limit for point B24 will not apply until the Eindhoven spray drier is put into use.

4. Amend Schedule 2 – Reporting of Monitoring Data to

Parameters for which reports shall be made, in accordance with conditions 4.1.2 and 4.1.3 of this Permit, are listed below.

Table S2: Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Lead mg/m ³	B6, B7, B24	Annual	01/01/07
Particulates mg/m ³	B6, B7, B24	Annual	01/01/07
Lead mg/l	S1	6 Months	01/07/05
Zinc mg/l	S1	6 Months	01/07/05
Water usage	Permitted Installation	Annual	01/01/05
Energy usage	Permitted Installation	Annual	01/01/05
Waste disposal and recovery	Permitted Installation	Annual	01/01/05

5. Amend Schedule 3 – Forms to be used to

Table S3: Reporting Forms		
Media / parameter	Form number	Date of form
Air	A1	08/07
Sewer	S1	02/07
Energy	E1	02/07
Waste disposal and recovery	R1	02/07
Water usage	WU1	02/07
Performance indicators	PI1	02/07

SCHEDULE 3 - CONDITIONS TO BE ADDED

7. The following Improvement Programme items to be added to Table 1.4.1

Table 1.4.1: Improvement programme		
Ref	Requirement	Date
14	The Operator shall install pressure differential monitoring to the abatement unit serving emission point B7.	30 November 2007
15	The Operator shall conduct commissioning trials and monitoring to demonstrate that the new equipment is operating as expected and in accordance with Best Available Techniques. Monitoring of emission points B7, B14, B26, B18 and B24 shall include, but need not be exclusive to, lead (vapour and particulate), particulate matter and Total Volatile Organic Compounds (as Carbon). The Operator shall use monitoring standards as required by condition 2.10.7. The Operator shall submit a report detailing the outcome of the commissioning trials and monitoring to the Agency. The report shall include, but not be exclusive to, the results of the monitoring, and any measures required to optimise these units.	31 December 2007
16	The Operator shall carry out an investigation into surrogate measures that could be employed to demonstrate correct operation of the scrubbers used to abate emissions from the Ruabon and Eindhoven spray driers. Following completion, the Operator shall submit a report to Agency detailing the assessment and proposals for any measures identified.	31 March 2008
17	The Operator shall carry out a review of unabated emissions of lead (vapour and particulate), particulate matter and volatile organic compounds (as carbon) from the Installation and identify emission points that are priorities for control. Following completion, the Operator shall submit a report to Agency detailing the assessment and proposals for any improvements identified.	30 April 2008.
18	The Operator shall complete a BAT assessment of the abatement employed for the Ruabon and Eindhoven spray driers and shall report the outcome of this assessment to Agency. This shall include, but need not be exclusive to, assessment of emissions of lead (vapour and particulate), particulate matter and volatile organic compounds (as carbon) emissions. Where monitoring is employed, monitoring standards as required by condition 2.10.7. Following completion, the Operator shall submit a report to the Agency detailing the assessment and containing proposals with timescales for any improvements identified.	30 June 2008
19	The operator shall complete a BAT assessment of the emission control measures employed for the priority emission points that are identified by the outcome of improvement programme item 17.	30 September 2008.