



**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

FP3838MT

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 powder producing equipment, previously used in the Eindhoven manufacturing facility, with associated increase in production of 40 tonnes of powders with ~65% lead oxide content. This will increase the maximum annual production of electroceramic materials to approximately 290 tonnes. The new line consists of a weigh scale, 2 ball mills, a filter box drier, 4 drying ovens, a crusher, 2 calciner kilns, a sieving process, an attritor mill, a unimix tank, a wet sieve bag filter, a pearl mill and a spray drier. Powders produced will be stored at the Ruabon site prior to use in the Ruabon process (quality testing) or transport to the Eindhoven facility. Additional abatement of air emissions is required for this equipment. This consists of a solid sintered filter followed by HEPA filter which replaces the current general dust collector (B3). The new emission point is to be located within 15m of previous emission point. Emissions from the spray drier are minimised using a cyclone followed by a wet scrubber. The calcine kiln and drying ovens have inherently low emissions and are unabated.
- ii) Installation of additional small scale production process in the Government Contracts department. Production from this department increased to ~25kg per year of specific powder formulations using oxides of zinc, bismuth, lead and cobalt. Emissions are abated, primarily for health and safety reasons via a dedicated HEPA filter unit.

- iii) There are no changes to the effluent treatment plant which has sufficient capacity to treat the additional loading as a result of the new processes.

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	

End of introductory Note



Variation Notice

Permit number
BY0364IB

Variation Notice number
FP3838MT

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 05 March 2007.

Signed

A rectangular box containing a handwritten signature in black ink that reads "J.I. Morris".

J.I. Morris

Authorised to sign on behalf of the Environment Agency

Date

26 February 2007

SCHEDULE 1 - CONDITIONS TO BE DELETED

1. None

SCHEDULE 2 - CONDITIONS TO BE AMENDED

2. Condition 1.4.1 to be amended to

1.4.1 The Operator shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Agency within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme

Ref	Requirement	Date
1	The Operator shall review the existing pollution prevention measures in place for the drummed waste storage area, having regard to Section 2.2.5 of the Sector Guidance Note S4.03. A written report shall be submitted to the Environment Agency for approval, summarising the review, including any necessary improvements and timescales.	Complete
2	The Operator shall undertake a programme of monitoring of emissions of lead, total particulate matter and volatile organic chemicals to estimate the total release of these substances from the emission points listed in section B2.2.2 of the Application, excluding points B2, B3, B6 and B7. The Operator shall use the following monitoring standards: BS EN 13284-1 for particulate, BS EN 14385 for lead and BS EN 13526:2001 for Total VOCs, unless otherwise agreed in writing by the Agency. The methodology used to estimate the releases, together with an impact assessment of these emissions shall be submitted in writing to the Agency.	Superseded by IC10.
3	The Operator shall provide a written report detailing the status of the improvements identified in Section B9.0.1 of the Application.	31/08/06
4	The Operator shall review the pollution prevention measures in place for the effluent treatment plant, having regard to Section 2.2.2 of the Agency Guidance Note S4.03. The Operator shall provide the Environment Agency with a written copy of the review for approval, which shall include timescales for the implementation of improvements.	30/09/06
5	The Operator shall submit a written report to the Environment Agency for approval, outlining the scope for a noise assessment and any further assessments, having regard to Environment Agency Cross Sector Guidance Note H3 (Part 1 and Part 2). This report shall include those aspects of operation detailed in both the PPC Permit Application and the subsequent Applications for Variation made on 13 March 2006 and 11 October 2006.	31/03/07
6	The Operator shall investigate options for de-watering sludge on-site, having regard to Section 2.6 of the Agency Guidance Note S4.03. A written report summarising the options shall be submitted to the Agency for approval. The report shall include a timescale for the implementation of improvements.	31/10/06
7	The Operator shall investigate options for reusing treated effluent for use in low-grade applications, having regard to Section 2.4.3 of the Agency Guidance Note S4.03. A written report summarising the techniques shall be submitted to the Agency for approval. The report shall include a timescale for the implementation of improvements.	31/10/06
8	The Operator shall investigate the options for the recovery and recycling of waste powder in the process, having regard to Section 2.6 of the Environment Agency Guidance Note S4.03. A written report summarising the techniques identified shall be submitted to the Agency for approval. The report shall include a timescale for the implementation of improvements.	31/12/06

Table 1.4.1: Improvement programme cont

Ref	Requirement	Date
9	The Operator shall undertake a programme of monitoring of emissions of lead, total particulate matter and volatile organic chemicals to quantify the releases of these substances from emission points B6, B7, B13, B22, B23, B24 and B25. The Operator shall use the following monitoring standards: BS EN 13284-1 for particulate, BS EN 14385 for lead and BS EN 13526:2001 for Total VOCs, unless otherwise agreed in writing by the Agency. The methodology used to estimate the releases, together with an impact assessment of the emissions from the Installation as a whole shall be submitted in writing to the Agency.	Superceded by IC10
10	The Operator shall undertake a programme of monitoring of emissions of lead, total particulate matter and volatile organic chemicals and shall use the results of this monitoring to estimate the total release of these substances from the emission points listed in table 2.2.1. The Operator shall use monitoring standards as required by condition 2.10.7. Following completion, the Operator shall submit a report to Agency. This report shall include, but need not be exclusive to, the methodology used to arrive at the estimate and an assessment of the impacts of the emissions.	31/05/07.
11	The Operator shall submit an accident prevention plan in writing to the Agency for approval. The plan shall detail the actions to be taken in the event of a fire at the Installation to minimise emissions to the environment.	30/04/07
12	The Operator shall submit a report detailing the outcome of the investigation into re-routing the emissions from points B22, 23 and 27 internally to the building.	31/05/07
13	The Operator shall conduct commissioning trials and monitoring to confirm that the spray driers from Southampton and Eindhoven are operating as expected and in accordance with Best Available Techniques. The Operator shall submit a report detailing the outcome of these trials 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.	31/05/07

3. 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

4. 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 4 - 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 + O2 firing kiln	Bay 3 kilns
B14	Calcine kiln	Bay 3 kilns
B15	Calcine kiln	Bay 3 kilns
B16	Calcine kiln	Bay 2 kilns
B17	Sinter fire kiln	Bay 3 kilns
B18	Sinter fire 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	Dry Process Spray Dryer	Bay 1, Powder Preparation
B25	2 laboratory kilns and laboratory spray drier	Laboratory
B26	Calcine Kiln and Drying Ovens	Powder Preparation Area
B27	General Dust Collector	External to Building Powder Preparation
B28	Eindhoven Process Spray Dryer	Eindhoven PPD area
B29	Government Contract dust collector	External to Government Contract Department

5. 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 1-3	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	3	Annual	BS EN 13284-1:2002
B28	Lead	0.2	Annual	BS EN 14385
B28	Particulates	3	Annual	BS EN 13284-1:2002

Note 1: See Section 6 for reference conditions

Note 2: These limits shall be reviewed following completion of Improvement Programme item 10.

Note 3: The limits for points B24 and B28 will not apply until completion of Improvement Programme item 13.

6. Amend condition 2.2.2.3 to

2.2.2.1 Emissions to water from the emission point specified in Table 2.2.4 shall only arise from the source specified in that Table.

Table 2.2.4: Emission point to water

Emission Reference description	Point or Source	Receiving Water
W1	Uncontaminated Site surface water drainage	Aberderfyn Brook via drain, as shown in Fig. 11 of Application.

7. 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, B28	Annual	01/01/06
Particulates mg/m ³	B6, B7, B24, B28	Annual	01/01/06
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

8. Amend Schedule 3 – Forms to be used to

Table S3: Reporting Forms

Media / parameter	Form number	Date of form
Air	A1	02/07
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

9. None