



**ENVIRONMENT
AGENCY**

Variation Notice with introductory note

Pollution Prevention and Control Regulations 2000

**Warwick International Limited
Dock Road
Mostyn
Holywell
Flintshire
CH8 9HE**

Variation Notice number

AP3338MA

Permit number

BU2357

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.

This variation notice has been issued in response to an application by Warwick International Ltd to permit the production of up to 10,000 tonnes per year of sodium acetate trihydrate salt, a crystalline solid. The production process involves the re-use of acetic acid recovered from TAED manufacture on site.

The batch reaction, involving the reaction of acetic acid with sodium hydroxide, is carried out in Plant 3 and the solids processing steps are carried out in Plant 4. Emissions to air of acetic acid vapours and particulate fume are minimised by the use of a wet scrubber plant. Emissions to water, including reactor distillate and scrubber plant liquor are treated at the effluent treatment plant before controlled discharge to the Dee Estuary. The characteristics of the discharged effluent remain unchanged.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
[NONE RELEVANT]		

Superseded Licenses/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
Warwick International Ltd	AK6365	28/02/94
	[IPC Authorisation, as varied]	

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 for permit BU2357	Received 29/08/03	Duly made 16/09/03
Request to extend determination	Request dated 22/12/03	Request accepted 05/01/04
Response to request for information	Request dated 10/03/04	Response dated 14/04/04
Permit BU2357	Issued 14/05/04	Permit for operation of Installation under PPC Regime
Application for Variation AP3634SJ	Received 18/03/05	Duly made 18/03/05
Response to Schedule 7 Notice.	Schedule 7 dated 15/06/05	Response dated 28/07/05
Response to request for further information	Request dated 30/11/05	Response dated 12/12/05
Variation AP3634SJ	Issued 16/12/2005	Variation issued to comply with the Waste Incineration (England and Wales) Regulations 2002 (SI 2002 No. 2980) (The WI Regulations) and the Pollution Prevention and Control (Waste Incineration Directive) (England and Wales) Direction 2002
Application for Variation KP3937LZ	Received 04/08/05	Duly made 04/08/05
Additional Information in support of application KP3937LZ	Received 06/11/06	Criteria for fuel switching and commitment to restrict period of gas oil firing
Variation KP3937LZ	Issued 21/11/06	Variation to permit use of gas oil as stand-by fuel when the use of gas is not under economically viable conditions.
Application for Variation AP3338MA	Received 03/11/06	Duly made 03/11/06
Variation PP3831MU	Issued 22/01/07	Variation to establish a revised compliance date for completion of improvement programme reference 1.4.1.8 - performance validation of the continuous emissions monitoring systems
Additional Information in support of application AP3338MA	Received 05/02/07	Options appraisal for air emissions abatement and proposals regarding air emissions monitoring.
Variation AP3338MA	Issued 01/03/07	Variation to permit production of sodium acetate trihydrate

End of introductory Note



Variation Notice

Permit number (**The Permit**)
BU2357

Variation Notice number
AP3338MA

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 14/05/04 (as varied) and held by

Warwick International Ltd ("the Operator"),

whose Registered Office is
Dock Road
Mostyn
Holywell
Flintshire
CH8 9HE

Company registration number **2386927**

which relates to the operation of an Installation at
Dock Road
Mostyn
Holywell
Flintshire
CH8 9HE

to the extent set out in Schedules A to C of this Variation Notice.

This Notice shall take effect from 1/03/2007 at 00.01 hours.

Signed

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

J I Morris, Regulatory Team Leader (PIR/RSR)
Authorised to sign on behalf of the Environment Agency

Date

A rectangular box containing a handwritten date in black ink that reads "28-2-2007".

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Warwick International Limited
Schedules to Variation Notice AP3338MA

SCHEDULE A-CONDITIONS TO BE DELETED

1. Condition 2.10.10 shall be deleted. [cf. Variation AP3436SJ]

[2.10.10 The Operator shall, within 6 months of the issue of this Permit, in accordance with and using the format given in the Land Protection Guidance:

2.10.10.1 - collect the site reference data identified in the Site Protection and Monitoring Programme submitted under condition 4.1.7, and

2.10.10.2 - report that site reference data to the Agency,
 - unless otherwise agreed in writing by the Agency.]

2. Condition 4.1.7 shall be deleted. [cf. Permit BU2357]

[4.1.7 The Operator shall, within two months of the date of this permit, submit a detailed Site Protection and Monitoring Programme, in accordance with and using the appropriate template format given in the Land Protection Guidance]

3. Conditions 2.2.1.4; 2.2.1.4.1; 2.2.1.4.2; 2.2.1.4.3 and 2.2.1.5 shall be deleted.

[cf. Permit BU2357 – these permit conditions have been superseded by relevant conditions in Variation Notice AP3436SJ]

SCHEDULE B-CONDITIONS TO BE AMENDED

1. Condition 1.1.1 shall be amended to:

1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 4.1 A(1)(a)(iv) : Producing organic chemicals	Producing organic compounds containing nitrogen, (amines)	Receipt of raw materials to despatch of finished product, including internal recycling of raw materials.
Section 4.2 A(1)(a)(iv) : Producing inorganic chemicals	Producing inorganic salts (sodium acetate trihydrate)	Receipt of raw materials to despatch of finished product, including internal recycling of raw materials.
Section 5.1 A(1)(a) : Incineration of hazardous waste	On-site incineration of process wastes with the recovery of heat	Incineration of distillation residues arising during the on-site production of tetra acetyl ethylene diamine (TAED).
Section 5.3 A(1)(c)(ii) : Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico-chemical treatment	Treatment and storage of process effluent and site surface water drainage	pH adjustment and storage of process effluent arising during the on-site production of tetra acetyl ethylene diamine (TAED).
Directly Associated Activity	Combustion of natural gas to raise steam and heat thermal transfer fluids	Gas oil combustion: limited to periods specified in the permit for use as a stand-by fuel, for periods of natural gas interruption and for scheduled test firing of the back up facility

2. Condition 2.1.1 shall be amended 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 the Permit.

Table 2.1.1: Operating techniques		
Description	Parts	Date Received
Application for Permit BU2357	The response to information requirements B2.1 and B2.2 given in pages 16-47 of section 2.1, page 47-70 of section 2.2 and Appendix 9 of the Application	29/08/04
Application for variation AP3634SJ	The response to information requirements C2.1, C2.2, C2.7 and C2.10 given in pages 14-30 of Section 2.1, pages 29-30 of Section 2.2, page 39 of section 2.7, page 42-44 and 50 of section 2.10 of the Application for Variation, and accompanying report Appendix 3 as referenced in these parts of the Application.	18/03/05
Response to Schedule 7 Notice (re Application for variation AP3634SJ)	The response to information requirements 1-4, 6 and 9 of the Notice.	28/07/05
Additional Information (re Application for variation AP3634SJ)	All regarding solid waste arisings, continuous monitoring and emission limits	12/12/2005
Application for variation KP3937LZ	The response to information requirements C2.1, 2.2 and C2.3 in section 3.2.4 and section 4 of Application for Variation document reference FSA 06 PJB	04/08/06
Additional Information (re Application for variation KP3937LZ)	Letter dated 03/11/06	06/11/06
Application for Variation AP3338MA	Application under covering letter dated 03/11/06	03/11/06
Additional Information in support of application AP3338MA	Letter dated 01/02/07	05/02/07

3. Condition 2.1.2 shall be amended to:

2.1.2 The Permitted Installation shall, subject to the other conditions of this Permit, be operated using the techniques and in the manner described in the Site Protection and Monitoring Programme (SPMP), or as otherwise agreed in writing by the Agency.

4. Condition 2.1.7 shall be amended to:

2.1.7 Waste shall not be charged, or shall cease to be charged, into the incinerator if:

- the combustion chamber temperature is below or falls below 850°C; or
- the oxygen level is or falls below 6% (wet) by volume; or
- any continuous emission limit value in Table 2.2.2(b) is exceeded; or
- any continuous emission limit value in Table 2.2.2(a) is exceeded, other than under the abnormal operating conditions; or
- monitoring results required to demonstrate compliance with any continuous emission limit value in Table 2.2.2(a) are unavailable other than during a period of abnormal operation.

5. Condition 2.1.11 shall be amended to:

2.1.11 Where, during abnormal operation, any of the following situations arise, the Operator shall, as soon as is practicable, cease the burning of waste until normal operation can be restored:

- continuous measurement shows that an emission exceeds any emission limit value in Table 2.2.2(a), or continuous emission monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration;
- the cumulative duration of abnormal operation periods over one calendar year exceeds 60 hours on an incineration line;
- continuous measurement shows that an emission exceeds any emission limit value in Table 2.2.2 (b);
- the alternative techniques to demonstrate compliance with the abnormal operation emission limit value(s) in Table 2.2.2 (b), as detailed in the Application or as agreed in writing with the Agency, are unavailable.

6. Condition 2.2.1.2 shall be amended to:

2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the source(s) specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point
A1	Tank Farm 1 vent	3 metre high stack
A2	Plant 5 caustic scrubber vent	15 metre high stack
A3	Plant 6 caustic scrubber vent	15 metre high stack
A4	Tank Farm 2 vent	3 metre high stack
A5	Filter Dryer plant 2 scrubber vent	26 metre high stack
A6	Silo 1-4 scrubber vent	19 metre high stack
A7	Silo 5-9 scrubber vent	21 metre high stack
A8	EDA bulk storage scrubber vent	12.9 metre high stack
A9a	Granulation 2 system filter vent (white)	16.5 metre high stack
A9b	Granulation 2 system filter vent (coloured)	9.5 metre high stack
A10	Granulation 3 system filter vent	19 metre high stack
A11	Granulation 4 system filter vent	16.5 metre high stack
A12	Warehouse 1 (25 kg bagger unit dust extraction)	2.7 metre high stack
A13	Warehouse 2 (25 kg bagger unit dust extraction)	2.7 metre high stack
A14	Distillation residue incinerator	30 metre high stack
A16	Boiler 103	30 metre high stack
A17	Boiler 201	30 metre high stack
A18	Boiler 202	30 metre high stack
A19	Boiler 301	30 metre high stack
A20	Continuous DAED plant scrubber vent	26 metre high stack
A21	Continuous DAED HT fluid heater	27 metre high stack
A22	Continuous DAED 2 plant scrubber vent	26 metre high stack
A23	Continuous DAED storage tanks scrubber vent	26 metre high stack
A24	Plant 3 scrubber vent (sodium acetate process)	9.1 metre high stack

7. Condition 2.2.1.3 shall be amended to:

2.2.1.3 The limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2 shall not be exceeded. The limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2(a) shall not be exceeded except during a period of abnormal operation. During a period of abnormal operation, the limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2(b) shall not be exceeded.

Table 2.2.2 : Emission limits to air and monitoring [other than the incinerator plant]				
Emission point reference	Parameter	Limit (including Reference Period)^{Note 1}	Monitoring frequency	Monitoring method
A2, A3, A5, A6, A7, A20, A22, A23, A24	Acetic acid and anhydride (as Acetic acid)	50 mg m ⁻³ (hourly average)	Quarterly	Spot sample - see Note 2
A9a, A9b, A10, A11, A12, A13	Particulate matter	No visible release	-	-
A16, A17, A18, A19, A21	Oxides of nitrogen (as NO ₂)	170 mg m ⁻³ (hourly average)	Annual	Spot sample - see Note 2
A16, A17, A18, A19, A21	Carbon monoxide	70 mg m ⁻³ (hourly average)	Annual	Spot sample - see Note 2

Table 2.2.2(a) : Incinerator Plant (A14) - Emission limits to air and monitoring (normal operation)				
Emission point reference	Parameter	Limit (including Reference Period)^{Note 1}	Monitoring frequency	Monitoring method
A14	Particulate matter	30 mg m ⁻³ ½-hr average	Continuous measurement	BS EN 13284-2 – see Notes 8 & 7
A14	Particulate matter	10 mg m ⁻³ daily average	Continuous measurement	BS EN 13284-2 – see Notes 8 & 7
A14	Total Organic Carbon (TOC)	20 mg m ⁻³ ½-hr average	Continuous measurement	BS EN 12619 – see Notes 8 & 7
A14	Total Organic Carbon (TOC)	10 mg m ⁻³ daily average	Continuous measurement	BS EN 12619 – see Notes 8 & 7
A14	Hydrogen chloride	10 mg m ⁻³ periodic over minimum 1-hour period	Bi-annual	BS EN 1911
A14	Hydrogen fluoride	1 mg m ⁻³ periodic over minimum 1-hour period	Bi-annual	USEPA Method 26/26A
A14	Carbon monoxide	100 mg m ⁻³ ½-hr average	Continuous measurement	ISO 12039 – see Notes 8 & 5
A14	Carbon monoxide	50 mg m ⁻³ daily average	Continuous measurement	ISO 12039 – see Notes 8 & 5
A14	Sulphur dioxide	50 mg m ⁻³	Bi-annual	BS 6069-4.1

Table 2.2.2(a) : Incinerator Plant (A14) - Emission limits to air and monitoring (normal operation)

Emission point reference	Parameter	Limit (including Reference Period) ^{Note 1}	Monitoring frequency	Monitoring method
		periodic over minimum 4 hour period, data to be reported as ½ hour averages		
A14	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg m ⁻³ daily average	Continuous measurement	ISO 10849 – see Notes 8 & 6
A14	Cadmium & thallium and their compounds (total) – see Note 3	0.05 mg m ⁻³ periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 14385
A14	Mercury and its compounds – See Note 3	0.05 mg m ⁻³ periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 13211
A14	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total) – see Note 3	0.5 mg m ⁻³ periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 14385
A14	Dioxins / furans (I-TEQ)	0.1 ng m ⁻³ periodic over minimum 6 hours, maximum 8 hour period – see Note 4	Bi-annual	BS EN 1948

Note 1: See Condition 6.1.3 [Variation Notice AP3436SJ] for reference conditions

Note 2. Monitoring methods shall use standards in the following order of priority, unless equivalent methods have been agreed with the Environment Agency in writing:

- . Comité Européen de Normalisation (CEN)
- . British Standards Institution (BSI)
- . International Standardisation Organisation (ISO)
- . United States Environmental Protection Agency (US EPA)
- . American Society for Testing and Materials (ASTM)
- . Deutsches Institut für Normung (DIN)
- . Verein Deutscher Ingenieure (VDI)
- . Association Française de Normalisation (AFNOR)

Note 3: Metals include gaseous, vapour and solid phases as well as their compounds (expressed as the metal or the sum of the metals as specified). Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V mean antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium respectively.

Note 4: The I-TEQ sum of the equivalence factors to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum; and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

Note 5: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 10%. Valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods if no waste is being incinerated) from the measured values after having subtracted this value of the confidence interval (10%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete half-hour period, the half-hourly average shall nonetheless be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. (The number of half-hourly averages so validated shall not exceed 5 (per day). Daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value will be considered valid if no more than five half-hourly average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 6: As Note 5, except that the value of the confidence interval is 20% in place of 10%.

Note 7: As Note 5, except that the value of the confidence interval is 30% in place of 10%.

Note 8: MCERTS certification to the appropriate ranges and determinands is a demonstration of compliance to the applicable standards.

Table 2.2.2(b) : Incinerator Plant (A14) - Emission limits to air and monitoring during abnormal operating conditions

Emission point reference	Parameter	Limit (including Reference Period) ^{Note 1}	Monitoring frequency	Monitoring method
A14	Particulate matter	150 mg m ⁻³ ½-hr average	Continuous measurement	BS EN 13824-2 – see Notes 2 & 4 during abatement plant failure or during failure of the continuous emission monitor
A14	Total Organic Carbon (TOC)	20 mg m ⁻³ ½-hr average	Continuous measurement	BS EN 12619 – see Notes 2 & 4 during abatement plant failure or by continuous monitoring of carbon monoxide during failure of the continuous emission monitor
A14	Carbon monoxide	100 mg m ⁻³ ½-hr average	Continuous measurement	ISO 12039 – see Notes 3 & 4 during abatement plant failure or by continuous monitoring of combustion chamber temperature and exhaust gas oxygen levels during failure of the continuous emission monitor

Note 1: See Condition 6.1.3 [Variation Notice AP3436SJ] for reference conditions

Note 2: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 30%. Valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods if no waste is being incinerated) from the measured values after having subtracted this value of the confidence interval (30%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete half-hour period, the half-hourly average shall nonetheless be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. (The number of half-hourly averages so validated shall not exceed 5 per day).

Note 3: As Note 2, except that the value of the confidence interval is 10% in place of 30%.

Note 4: MCERTS certification to the appropriate ranges and determinands is a demonstration of compliance to the applicable standards.

8. Condition 2.2.1.6 shall be amended to:

2.2.1.6 Total emissions to air in any year of a substance listed in Table 2.2.3 should not exceed the relevant limit in that Table.

Table 2.2.3 Annual limits

Substance	Limit – kg
Acetic acid (from release points A1-A7, A20, A22, A23, A24)	15,000
Oxides of nitrogen (from release points A14, A16-19, A21)	40,000

9. Condition 2.10.7 shall be amended to:

2.10.7 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 of this Permit and the environmental or other monitoring specified in condition 2.10.2 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in Table 2.2.2(a). The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.

10. Condition 2.10.9 shall be amended to:

2.10.9 The operator shall implement and maintain the Site Protection and Monitoring Programme (SPMP) and shall carry out and record a review of it at least every 4 years.

11. Condition 2.10.11 shall be amended to:

2.10.11 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Tables 2.2.2(a) and 2.2.2(b), the Operator shall perform a QAL2 test as specified in BS EN 14181 at least every three years and when there are significant changes to either the process, the fuel used or to the CEMs themselves.

12. Condition 2.10.12 shall be amended to:

2.10.12 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Tables 2.2.2(a) and 2.2.2(b), the Operator shall perform an Annual Surveillance Test (AST) at least annually, as specified within BS EN 14181.

13. Condition 4.1.8 shall be amended to:

4.1.8 The results of reviews under condition 2.10.9 and any changes made to the Site Protection and Monitoring Programme (SPMP) shall be reported to the Agency, in accordance with the Land Protection Guidance, within 1 month of the review or change.

14. Condition 4.1.2 and Condition 4.1.3 are amended in so far as they refer to a revised Table S2 to Schedule 2 and Table S3 to Schedule 3 of the permit (below):

Schedule 2 - Reporting of monitoring data

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

Table S2: Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Oxides of nitrogen mg m ⁻³	A16, A17, A18, A19, A21	Every 12 months	1 January each year
Oxides of nitrogen mg m ⁻³	A14	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year
Oxides of nitrogen (annual mass) kg	A14, A16-19, A21	Every 12 months	1 January each year
Carbon monoxide mg m ⁻³	A16, A17, A18, A19, A21	Every 12 months	1 January each year
Carbon monoxide mg m ⁻³	A14	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year
Acetic acid and anhydride (as Acetic acid) mg m ⁻³	A2, A3, A5, A6, A7, A20, A22, A23, A24	Every 12 months	1 January each year
Acetic acid (annual mass) kg	A1-A7, A20, A22, A23, A24	Every 12 months	1 January each year
VOCs as Total Organic Carbon (TOC) mg m ⁻³	A14	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year
Particulate matter mg m ⁻³	A14	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year
Cadmium + thallium and their compounds (in total) mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year
Mercury and its compounds (in total) mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year
Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V and their compounds (in total) mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year
Dioxins/furans (I-TEQ) ng m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins	
Sulphur dioxide mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year	
Hydrogen Chloride mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year	
Hydrogen Fluoride mg m ⁻³	A14	Every 6 months	1 January and 1 July respectively each year	
Dioxin-like PCBs (WHO-TEQ Humans/Mammals)	A14	Every 6 months	1 January and 1 July respectively each year	
Dioxin-like PCBs (WHO-TEQ Fish)	A14	Every 6 months	1 January and 1 July respectively each year	
Dioxin-like PCBs (WHO-TEQ Birds)	A14	Every 6 months	1 January and 1 July respectively each year	
Polycyclic aromatic hydrocarbons (PAHs)	A14	Every 6 months	1 January and 1 July respectively each year	
Chemical oxygen demand mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Chemical oxygen demand kg/day	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Chemical oxygen demand (annual mass) kg	W1	Every 12 months	1 January each year	Reported on Form PI1
Biochemical oxygen demand mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Suspended solids mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Ammoniacal Nitrogen mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Total hydrocarbon oil mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Halogenated organic compounds (total as AOX) mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Total cyanides (as HCN) mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Copper mg l ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
pH	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Daily discharge volume m ³	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Tidal period discharge volume m ³	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Rate of discharge l s ⁻¹	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Effluent temperature °C	W1	Every 3 months	1 January, 1 April, 1 July and 1 October respectively each year	
Water usage	-	Every 12 months	1 January each year	
Energy usage	-	Every 12 months	1 January each year	
Waste disposal and/or recovery.	-	Every 12 months	1 January each year	
Metals (Cadmium, Thallium, Mercury, Lead, Chromium, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furan and dioxin-like PCBs	Solid Residues (Fly Ash)	Every 6 months	1 January and 1 July respectively each year	

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins
Total soluble fraction and metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Solid Residues (Fly Ash)	Before use of a new disposal or recycling route	-

Schedule 3 – Forms to be used

Table S3: Reporting Forms

Media or parameter	Form Number	Date of Form
Air (TAED & Sodium Acetate processes)	A1	February 2007
Air (Combustion processes)	A2	December 2005
Air (Incinerator Periodic Monitoring)	A3	December 2005
Air (Incinerator CEM Particulates)	A4	December 2005
Air (Incinerator CEM TOC)	A5	December 2005
Air (Incinerator CEM Carbon Monoxide)	A6	December 2005
Air (Incinerator CEM Oxides of Nitrogen)	A7	December 2005
Air (annual mass releases)	A8	February 2007
Water (excluding sewer)	W1	December 2005
Energy	E1	December 2005
Waste return	R1	December 2005
Water usage	WU1	December 2005
Performance indicators	PI1	December 2005
Solid Residues (Fly Ash) Composition	Ash 1	December 2005
Solid Residues (Fly Ash) solubility	Ash 2	December 2005

15. Condition 6.1.1 shall be amended to:

6.1.1 In this Permit, the following expressions shall have the following meanings:-

“Application” means the application for this Permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations

“Abatement equipment” means that equipment dedicated to the removal of polluting substances from releases from the Installation to air or water media

“Abnormal operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the concentrations in the discharges into air and the purified waste water of the regulated substances may exceed the normal emission limit values

“background concentration” means such concentration of that substance as present in:

- water supplied to the site; or
- where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation on to the site

“BAT” means best available techniques means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.”. In addition, Schedule 2 of the PPC Regulations has effect in relation to the determination of BAT

“Bi-annual” means twice per year with at least five months between tests

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

“Daily Average” for releases of substances to air means the average of half-hourly averages over a calendar day during normal operation. Where any of abnormal operation, start-up or shut-down occur during the 24 hour period in such a way that there are less than 43 half-hourly averages recorded during normal operation, no daily average shall be recorded for that day

“Dioxin and Furans” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans

“ELV” means emission limit value

“Incineration Line” means all of the incineration equipment related to a common discharge to air location

“ISO” means International Standards Organisation

“Fugitive emission” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3, 2.2.2.4, or 2.2.2.5, of this Permit.

“Groundwater” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil

“Land Protection Guidance” means Agency guidance “H7 - *Guidance on the Protection of Land under the PPC Regime: Application Site Report and Site Protection and Monitoring Programme*”

“ $L_{Aeq,T}$ ” means the equivalent continuous A-weighted sound pressure level in dB determined over time period, T

“ $L_{A90,T}$ ” means the A-weighted sound pressure level in dB exceeded for 90% of the time period, T

“ L_{AFmax} ” means the maximum A weighted sound level measurement in dB measured with a fast time weighting

“ $mg\ m^{-3}$ ” means milligrammes per cubic metre

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

"Monitoring" includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys

"PAH" means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene

"PCB" means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in condition 6.1.5

"PM₁₀, PM_{2.5}, PM_{1.0}," mean respectively those particulates which have mean particle diameters of 10, 2.5 and 1.0 microns (µm)

"Permitted Installation" means the activities and the limits to those activities described in Table 1.1.1 of this Permit

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 (as amended) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit

"Quarterly" for reporting/sampling means after/during each 3-month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date

"Shutdown" is any period where the incinerator is being returned to a non-operational state and there is no waste being burned as described in the Application for Variation

"Start-up" is any period, where the incinerator has been non-operational, after igniting the auxiliary burner until waste has been fed to the incinerator to initiate steady-state conditions as described in the Application for Variation.

"Sewer" means sewer within the meaning of section 219(1) of the Water Industry Act 1991

"Site Protection and Monitoring Programme" means the system described under the *Land Protection Guidance*, used to demonstrate effective pollution prevention measures are in place designed to protect the land at the site of the installation

"Staff" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors

"TOC" means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC

"Waste oil" has the same meaning as in Directive 75/439/EEC

"Waste Incineration Directive" means Directive 2000/76/EC on the incineration of waste.

"WHO" means the World Health Organisation

"Year" means calendar year ending 31 December

SCHEDULE C-CONDITIONS TO BE ADDED

1. No Conditions are added.

*****END OF VARIATION NOTICE*****