Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

The Cambridge Pet Crematorium

Vetspeed Limited
A505 Main Road
Thriplow Heath
Royston
Hertfordshire
SG8 7RR

Variation Notice Number

ZP3734XX

Permit number

MP3930BE

The Cambridge Pet Crematorium
Permit Number MP3930BE

Introductory note

This introductory note does not form a part of the permit

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.

This variation was issued to reflect the information that was provided by the operator through the reports submitted under pre-operational conditions 1.6.1, 1.6.2 of Variation Notice Number LP3034LN. The commercial operation of the autoclave is permitted by this variation.

A number of additional improvement conditions were included to ensure on-going compliance with the permit conditions.

In addition, updating the permit conditions to the latest variation template was undertaken which required various minor changes to previous permit conditions.

Status Log of the permit		
Detail	Date	Response Date
Application MP3930BE	Received 01/04/2005	
Response to request for incineration procedures and waste handling.	Request dated 04/11/2005	Response dated 21/11/2005
Response to request for waste types received for incineration at installation.	Request dated 18/11/2005	Response dated 21/11/2005
Response to request for information on Specified Waste Management Activities.	Request dated 5/11/2006	Response dated 27/4/2006
Permit determined	20/12/2005	
Variation LP3034LN	17/08/2006	
Variation ZP3734XX	28/04/2008	

Other PPC permits relating to this installation		
Operator	Permit Number	Date of Issue
None	-	-

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Vetspeed Limited	AM9217	27/07/1994	Fully superseded
Vetspeed Limited	EAWML/70219	20/12/1991	Fully superseded

Other existing Licences/Authorisations/Registrations relating to this site		
Holder	Reference Number	Date of issue
Vetspeed Limited	EAWML/70139	18/12/1989

End of Introductory Note

Variation Notice

Permit number
MP3930BE
Variation number
ZP3734XX

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you
Vetspeed Limited ("the operator"),

Whose registered office (or principal office) is

The Cambridge Pet Crematorium
A505 Main Road
Thriplow Heath
Royston
Hertfordshire
SG8 7RR

company registration number 1449974

to operate at
The Cambridge Pet Crematorium
A505 Main Road
Thriplow Heath
Royston
Hertfordshire
SG8 7RR

to the extent set out in schedules A to C of this variation notice .

The notice shall take effect from 28 April 2008.

Signed	Date

Caroline Armit

Authorised to sign on behalf of the Agency

SCHEDULE A – Conditions to be deleted

All conditions and schedules in Variation LP3034LN dated 17 August 2006.

SCHEDULE B – Conditions to be amended

None.

SCHEDULE C – Conditions to be added

1. Management

1.1 General management

1.1.1 The activities shall be managed and operated:

(a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and

(b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accidents that may cause pollution

1.2.1 The operator shall:

(a) maintain and implement an accident management plan;

(b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;

(c) make any appropriate changes to the plan identified by a review.

1.3 Energy efficiency

1.3.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures by a review.

1.4 Efficient use of raw materials

1.4.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any appropriate further measures identified by a review.

1.5 Avoidance, recovery and disposal of wastes produced by the activities

1.5.1. The operator shall:

(a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;

(b) review and record at least every 4 years whether changes to those measures should be made; and

(c) take any further appropriate measures identified by a review.

1.6 Site security

1.6.1. Site security measures shall prevent unauthorised access to the site, as far as practicable.

2. Operations

2.1 Permitted activities

2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.1.2 Where there are wastes on site that are not subject to this permit then wastes subject to the activities authorised under conditional 2.1.1, shall be clearly identified.

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.

2.3.2 No raw materials or fuels listed in schedule 3 table S3.1 shall be used unless they comply with the specifications set out in that table.

2.3.3 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 3 table(s) S3.2a, S3.2b, S3.3, S3.4, S3.5; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

(c) it is only processed in the activity specified in Table S1.1 of Schedule 1.

2.3.4 Records shall be kept of all waste accepted onto the site.

2.3.5 The Operator shall ensure that where waste produced at the Permitted Installation is sent to a waste recovery or disposal facility, the facility in question is provided with the following information, prior to receipt of the waste:

- The nature of the process producing the waste
- The composition of the waste
- The handling requirements of the waste
- The hazard classification associated with the waste
- The waste code of the waste

2.3.6 The Operator shall ensure that where waste produced at the Permitted Installation(s) is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.7 The operator shall incinerate only those hazardous wastes where the throughputs, calorific values and pollutant composition are within the ranges specified in the application.

2.3.8 The operator shall ensure that prior to accepting waste subject to condition 2.3.5 at the site, it has obtained sufficient information about the hazardous wastes to be burned to demonstrate compliance with the characteristics described in condition 2.3.5.

2.3.9 The operator shall take representative samples of all hazardous waste deliveries to the site unless otherwise agreed in writing with Agency and test a representative selection of these samples to verify conformity with the information obtained as required by condition 2.3.6. These samples shall be retained for inspection by the Agency for a period of at least one month after the material is incinerated and results of any analysis made of such samples will be retained for at least two years after the material is incinerated.

2.3.10 Waste shall not be charged, or shall cease to be charged, into the incinerator of Line 2 if:

(a) the combustion chamber temperature is below, or falls below, 850^{o}C (for non-hazardous waste of hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1%), 1100 ^{o}C (for hazardous waste where the content of halogenated organic substances exceeds 1% (as chlorine), or 1000 ^{o}C (where cytotoxic or cytostatic drugs are burned, even if the level of halogenated organic substances (as chlorine) does not exceed 1%), or

(b) the oxygen level is below, or falls below, 6% (wet) by volume; or

(c) any continuous emission limit value in Table Schedule 4 S 4.1(a) is exceeded; or

(d) any continuous emission limit value in Table Schedule 4 S 4.1 is exceeded, other than under abnormal operating conditions ; or

(e) monitoring results required to demonstrate compliance with any continuous emission limit value shall operate at in Table Schedule 4 S 4.1 are unavailable other than under abnormal operating conditions.

2.3.11 The operator shall operate at least one auxiliary burner in Incineration Line 2 at start-up or shut-down or whenever the operating temperature falls below that specified in condition 2.3.10, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.10 is maintained in the combustion chamber, such burner(s) may be fed only with fuels which result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.

2.3.12 The operator shall record the beginning and end of each period of abnormal operation of Incineration Line 2.

2.3.13 During a period of abnormal operation, the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible

2.3.14 Where, during abnormal operation of Incineration Line 2, 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:

(a) continuous measurement shows that an emission exceeds any emission limit value in Table Schedule 4 S 4.1, or continuous emission monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration;

(b) the cumulative duration of abnormal operation periods over one calendar year exceeds 60 hours on an incineration line;

(c) continuous measurement shows that an emission exceeds any emission limit value in Table Schedule 4 S 4.1 (a);

(d) the alternative techniques to demonstrate compliance with the abnormal operation emission limit value(s) for particulates, TOC and / or CO in Table Schedule 4 S 4.1 (a), as detailed in the application or as agreed in writing with the Agency, are unavailable.

2.3.15 The operator shall interpret the end of the period of abnormal operation, of Incineration Line 2 as the earliest of the following:

(a) when the failed equipment is repaired and brought back into normal operation;

(b) when the operator initiates a shut-down of the waste combustion activity, as described in the application;

(c) when a period of 4 hours has elapsed from the start of the abnormal operation;

(d) when, in any calendar year, an aggregated period of 60 hours abnormal operation has been reached for a given incineration line.

2.3.16 Infectious clinical waste must be placed in the furnace of Incineration Line 2 without first being mixed with other categories of waste, using techniques which are no less effective than those described in the application.

2.3.17 Bottom ash and APC residues shall not be mixed

2.3.18 Animal Carcasses and Animal By-Products shall not be charged, or cease to be charged, into the incinerators of Lines 1, 3 or 4 if:

(a) The combustion chamber temperature is below, or falls below, 850 ^{o}C

(b) the oxygen level is below, or falls below, 6% (wet) by volume; or

2.3.19 The Operator shall operate at least one auxiliary burner in Incineration Lines 1, 3 and 4 of the Permitted Installation at start-up or shut-down or whenever the operating temperature falls below that specified in condition 2.3.18, as long as unburned material is present in the combustion chamber. Unless the temperature specified in condition 2.3.18 is maintained in the combustion chamber, such burners may be fed only with fuels that result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.

2.4 Off-site conditions

2.4.1 There are no off-site conditions under this section.

2.5 Improvement programme

2.5.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.

2.5.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.6 Pre-operational conditions

2.6.1 There are no pre-operational conditions in this permit.

2.7 Closure and decommissioning

2.7.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.

2.7.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site to a satisfactory state.

2.7.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.

2.7.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

2.8 Site protection and monitoring programme

2.8.1 The operator shall implement and maintain the site protection and monitoring programme and shall carry out and record a review of it at least every 4 years.

3. Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.1, S4.2 and S4.3 except in abnormal operation, when there shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.1(a), S4.2 and S4.3.

3.1.2 The limits given in schedule 4 shall not be exceeded.

3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with Table schedule 4 S4.5. Additional samples shall be taken and tested and appropriate action taken, whenever:

- disposal or recovery routes change; or
- it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.

3.2 Transfers off-site

3.2.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

3.3 Fugitive emissions of substances

3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.3.2 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.4 Odour

3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake monitoring for the parameters, at the locations and at not less than the frequencies specified in the following tables in schedule 4 to this permit:

(a) point source emissions specified in tables S4.1, S4.2 and S4.3;

(b) process monitoring specified in table S4.4.

3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency. 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. 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.

3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 4 tables S4.1, S4.2 and S4.3 unless otherwise specified in that schedule.

4. Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) the site protection and monitoring programme.

4.1.2 Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.

4.1.3 All records required to be held by this permit shall be held on the site and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the assessment of the impact of the emissions submitted with the application;

(b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;

(c) the annual production /treatment data set out in schedule 5 table S5.2;

(d) the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule;

(e) details of any contamination or decontamination of the site which has occurred; and

(f) the functioning and monitoring of the incineration plant, Line 2, in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Article 12(2) of the Waste Incineration Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the WID.

4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 5 table S5.1;

(b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.4 ; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency

4.2.6 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 1 month of the review or change.

4.3 Notifications

4.3.1 The Agency shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;

(b) the breach of a limit specified in the permit;

(c) any significant adverse environmental effects and

(d) any incident which has led to a period of abnormal operation of incineration plant, as defined in schedule 7.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.

4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:

(a) as soon as practicable prior to the permanent cessation of any of the activities;

(b) cessation of operation of part or all of the activities for a period likely to exceed 1 year; and

(c) resumption of the operation of part or all of the activities after a cessation notified under (b) above.

4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.5 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.

4.3.7 The Agency shall be provided, within 14 days of the operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.

4.3.8 The Agency shall be notified within 14 days of the operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.

4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

(a) any change in the operator's trading name, registered name or registered office address;

(b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); and

(c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.3.10 Where the operator has entered into a climate change agreement with the Government, the Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.3.11 Where the operator has entered into a direct participant agreement in the emissions trading scheme which covers emissions relating to the energy consumption of the activities, the operator shall notify the Agency within one month of:

(a) a decision by the operator to withdraw from or the Secretary of State to terminate that agreement.

(b) a failure to comply with an annual target under that agreement at the end of the trading compliance period.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity and WFD Annex IIA and IIB operations.	Limits of specified activity and waste types
Section 5.3A(1)(a): The disposal of hazardous waste (other than by incineration or landfill) in a facility with a capacity of more than 10 tonnes per day.	Physico-chemical treatment of waste (steam treatment in autoclaves); D9	From receipt and segregation of waste to storage and despatch of treated waste. Includes storage of treatable waste prior to treatment, but excludes storage of non-treatable waste. No waste types shall be processed by the treatment activity other than those specified in Schedule 3 Table S3.2a, and subject to conditions 2.5.1, and 2.6.1, those wastes specified in Schedule 3 Tables S3.2b
Section 5.1A(1)(a): Incineration of hazardous waste in an incineration plant.	This includes the entire incineration plant including all incineration lines, waste reception, storage, on site pre-treatment facilities, waste-fuel and air-supply systems, boiler, facilities for the treatment of exhaust gases, on-site facilities for treatment or storage of residues and waste water, stack, devices and systems for controlling incineration operations; D9	Incineration of non-hazardous WID waste and hazardous clinical WID waste limited to 350 kg/hr in Incineration Line 2.
Directly Associated Activity		
Animal Carcass incineration.	Incineration of WID exempt Animal Carcass only; D15	Incineration of Animal Carcasses in Lines 1, 3 and 4, as approved under the Animal By-Products Regulations 2003.
The disposal, or recovery, of hazardous or non-hazardous waste (other than by incineration or landfill) in a facility of less than 10 tonnes per day.	Storage of hazardous or non-hazardous waste prior to off-site disposal or recovery; D15 / R13	From receipt and segregation of waste storage and dispatch of waste. No waste types shall be stored other than those specified in Schedule 3 Table 3.4 and Table 3.5.
Boiler for Autoclave	Kerosene fired steam raising boiler; Net rated thermal input approximately 1.5MWh	

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 and given in pages 6-80 inclusive of the Application	31/03/2005
Response to Notice	The response to questions 1-22 sent 04/11/2005 and questions 1 and 2 sent 18/11/2005	21/11/2005
Letter	The response provided to pre-operational conditions 1.6.1 and 1.6.2 in Variation LP3034LN	26/03/2008
Letter	The response to email sent 08/04/2008 detailing maximum waste volume throughputs.	21/04/2008

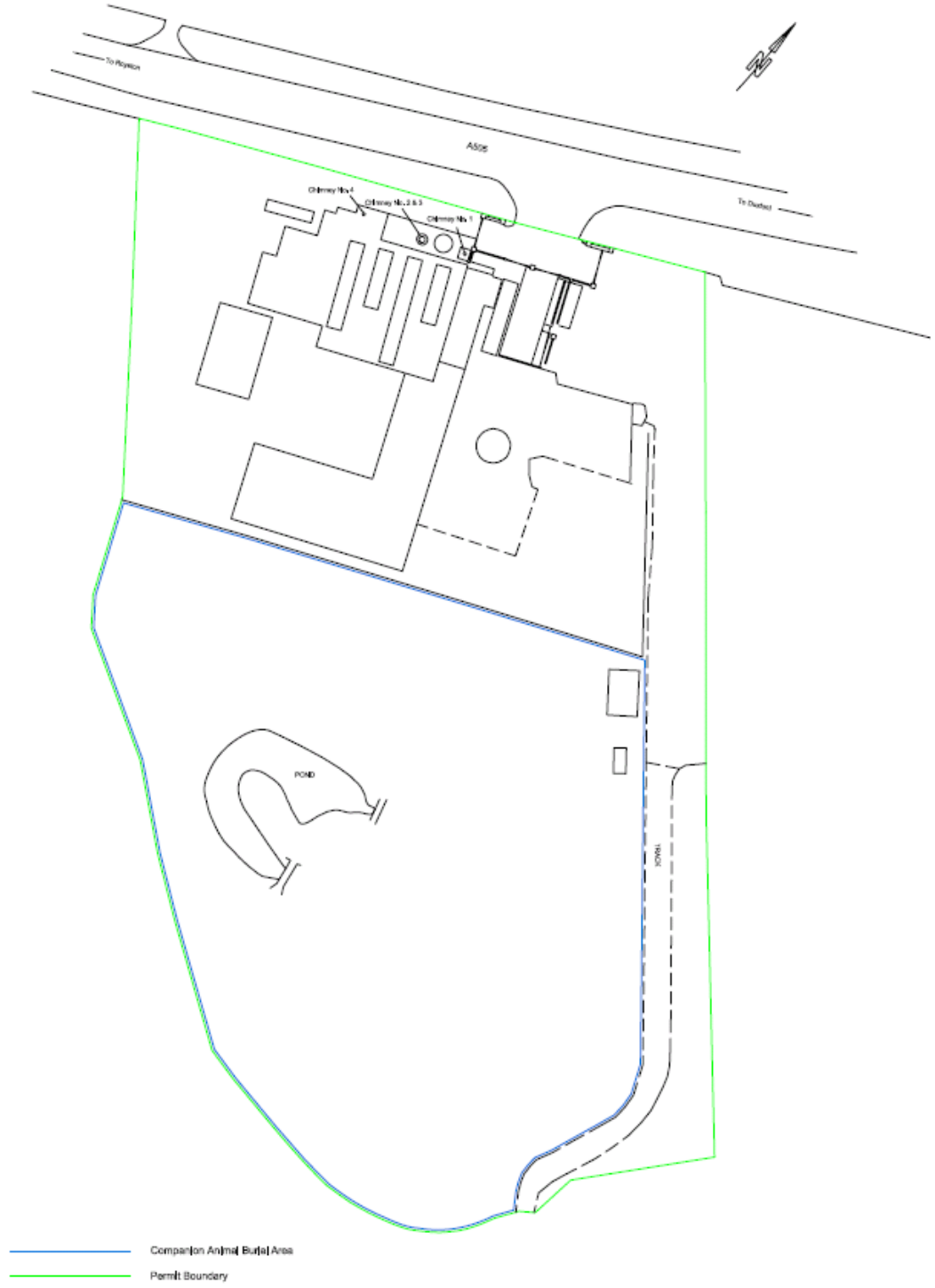
Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall make plant upgrades, as detailed within the operator's application, to ensure that Incineration Line 2 meets the Waste Incineration Directive 2000/76/EC emission limits in Table 2.2.2 that apply from the 28th December 2005.	28/12/2005
IC2	Prior to the completion of the upgrade works on Incineration Line 2, the operator shall inform the Agency.	1 week prior to operation of Incineration Line 2.
IC3	The Operator shall submit a proposal to the Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission points A2, identifying the fractions within the PM_{10}, $PM_{2.5}$ and $PM_{1.0}$ ranges. The proposal shall include a timetable to carry out such tests and produce a report on the results. On receipt of written agreement by the Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Agency a report on the results.	Proposal to be submitted to the Agency by 30/06/2006 Report on size distribution tests to be submitted to the Agency within 2 months of the end of the agreed timetable.
IC4	The Operator shall calibrate and verify the performance of Continuous Emission Monitors for release points and parameters as specified in Table 2.2.2 to BS EN 14181 and submit a summary report to the Environment Agency as evidence of compliance with the requirements of BS EN 14181.	Report to be submitted to the Agency by 28/12/2006.
IC5	The Operator shall provide to the Agency a report on the improvements required to achieve the emission levels of particulate matter to air from A2 which are required from 1/01/08. The report shall propose a plan and timescale for implementation of the improvements and demonstrate how they represent BAT for the Permitted Installation.	Report to be submitted to the Agency by the earlier of 01/01/07 or 6 months before the proposed installation date.
IC6	The operator shall provide to the Agency a report on the improvements required to achieve the benchmark emission levels from emission point A1, A3 that are required by the Agency Sector Guidance Note S5.01. The report shall provide a plan and timescale for implementation of the improvements and demonstrate how they represent BAT for the Permitted Installation. On receipt of written agreement by the Agency on the proposed timetable, the Operator shall carry out the works and submit to the Agency a report on completion.	31/12/06

IC7	The operator shall investigate the improvements required to ensure that WID effluent is incinerated in permitted WID Incineration Lines only. The operator shall submit a detailed report, from the review, that should include, but not limited to; waste effluent segregation, alternative routing of effluent incineration lines and alternative disposal methods. The proposal shall include a timetable to carry out the required works within 12 months of the permit issue. On receipt of written agreement by the Agency to the proposed timetable, the Operator shall carry out the works and submit to the Agency a report on completion.	28/02/06
IC8	The operator shall submit detailed proposals on the improvements to the abatement for Incineration Line 4, as proposed in the operator's application, to meet the emission levels that are required by the Agency Sector Guidance Note S5.01. The proposal shall include a firm timetable of such improvements that are identified. On receipt of written agreement by the Agency on the timetable, the Operator shall carry out the works and submit to the Agency a report on completion.	28/02/06 Report within 1 month of completion.
IC9	The operator shall carry out a review of the Energy Efficiency opportunities as detailed in their application. The operator shall submit a report of the review that shall include improvement proposals and a firm timetable to carry out such improvements. On receipt of written agreement by the Agency to the timetable, the Operator shall carry out the improvements.	30/06/06
IC10	The operator shall complete the improvements to the existing hardstanding and drainage around the installation, as proposed in the operator's application.	30/06/06
IC11	The operator shall install CEMs, as detailed in the operator's application, to meet the monitoring requirements of Table 2.2.2.	27/12/2005
IC12	The operator shall carry out a review of waste management, with regards to municipal, hazardous, clinical and animal waste. The operator shall submit a detailed report, from the review, that should include, but not limited to; waste storage and segregation, effluent minimisation, sampling requirements, waste handling and washdown methods. Reference should be made to the Environment Agency Sector Guidance Notes IPPC S5.01 "Guidance for the Incineration of Waste and Fuel Manufactured from or Including Waste", IPPC S5.06 "Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste" and to the requirements of the Animal By-Products Regulations. The report shall include improvement proposals and a timetable to carry out such improvements. On receipt of written agreement by the Agency to the proposal and the timetable, the Operator shall carry out the improvements.	31/05/06
IC13	The operator shall carry out a review of water use at the installation. The review shall include a detailed consideration of all possible techniques that could be included to reduce potable water consumption at the installation. This should include, but not limited to; recycling of waste effluent from the installation drainage, minimisation of wash down water using alternative methods, segregation of uncontaminated roof and surface water from other discharge streams and scrubber operational improvements. Reference should be made to the Environment Agency Sector Guidance Note IPPC S5.01 "Guidance for the Incineration of Waste and Fuel Manufactured from or Including Waste". The operator shall submit a report of the review that shall include improvement proposals and a timetable to carry out such improvements. On receipt of written agreement by the Agency to the proposed timetable, the Operator shall carry out the improvements and submit to the Agency a report on completion.	31/08/06
IC14	The operator shall investigate further methods to ensure that waste producers, and carriers, adequately segregate waste at the point of production. This should include, but not be limited to; reducing variability of clinical waste by auditing pre-sorting systems at point of production, increased use of bar-coding of all waste types, improved training and systems at installation to ensure correct feeding of appropriate incinerators. The operator shall submit a report of the investigation that shall include improvement proposals and a timetable to carry out such improvements. On receipt of written agreement by the Agency to the proposal and the timetable, the Operator shall carry out the improvements.	31/10/2006

IC15	The Operator shall install Continuous Emission Monitors for particulates and carbon monoxide for emission points A1, A3 and A4 that meet the monitoring methods BS EN BS ISO 9096 and ISO 12039 respectively.	31/12/2006
IC16	Validation Report The operator shall submit a formal validation report for the operation of the autoclave that should follow the relevant requirements described in Section A5-2.10 of the Appendix 6 of the Sector Guidance Note IPPC S5.06.	30/06/2008
IC17	Waste Pre-Acceptance A written waste pre-acceptance procedure shall be submitted to the Agency for approval. The procedure shall take account of the principles specified in section 2.1.1 of Sector Guidance Note IPPC 5.06, Appendix 6. As a minimum the procedure shall: • ensure that only waste suitable for treatment is accepted for treatment at the installation; • provide detail of the waste producer and process that produced the waste; • include the quantity and type of each waste; and • include a reliable audit of the waste, prior to acceptance, at the site that shows that waste has been appropriately segregated and identified. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the Operator from the date of approval by the Agency in writing.	31/10/2008

IC18	Waste Acceptance A written waste acceptance procedure shall be submitted to the Agency for approval. The procedure shall take account of the principles specified in section 2.1.2 of Sector Guidance Note IPPC 5.06, Appendix 6. As a minimum the procedure shall include: • a record of the inspection regime for each load and justification for the selection of this option; • visual inspection before offloading where safety is not compromised. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented from the date of approval by the Agency in writing.	31/10/2008
IC19	VOC Assessment A written assessment of the Volatile Organic Compounds (VOCs) emitted from the autoclave process shall be submitted to the Agency. The written assessment shall include: • a scale drawing showing location of the emission points monitored; • sampling of the emission and comparison against the benchmark values listed in Section 3.11 of the Sector Guidance Note IPPC S5.06, dated December 2004, to assess their significance; • proposal of any necessary modelling of the emission; and • details of how any emissions are to be prevented during the operation of the facility. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the written assessment. The proposals for modelling and emission prevention shall be implemented by the Operator, from the date of approval by the Agency in writing.	31/10/2008
IC20	Justification for Treatment of Non-Hazardous Waste A written justification for the treatment of non-hazardous waste listed in table S3.2b of this permit, shall be submitted to the Agency for approval. As a minimum, the justification shall take into account the principles specified in section 2.1.1 of Sector Guidance Note IPPC 5.06 dated December 2004, and Appendix 6 Sector Guidance Note IPPC S5.06 – Supplementary PPC for Clinical Wastes. The justification should address whether the treatment of each non-hazardous waste listed table S3.2b: - is effective - is an efficient use of energy - impedes waste recovery or recycling - compromises the treatment of any hazardous waste - has an effect on emissions from the activity No wastes specified in Table S3.2b shall be accepted for steam treatment unless the Environment Agency has given prior written approval under this condition.	31/10/2008

Schedule 2 - Site plan



Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	

Table S3.2a Permitted waste types and quantities for steam treatment in autoclaves and subsequent compaction Note 1	
Maximum quantity	34 tonnes per day
Waste code	Description
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 02*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
20 01 99	Other fractions not otherwise specified

Note1 The following wastes are specifically excluded from waste treatment activities from Table S3.2a:

(i) : Any waste containing waste medicines and chemicals, waste contaminated with cytotoxic and cytostatic medicines, anatomical waste (identifiable human or animal tissue arising from healthcare), or Dental amalgam;

(ii) : Sharps boxes containing any of the excluded wastes from (i) and (iii) or Sharps that are contaminated with pharmaceuticals in any quantity (including syringes that are fully discharged, partially discharged or undischarged).

(iii) : Biohazard waste : Any waste known or likely to contain ACDP Hazard Group 4 biological agents; Any waste from a containment level 3 laboratory: and All Microbiological cultures from any source, and, any potentially infected waste from pathology departments and other clinical or research laboratories (Unless autoclaved before leaving the site of production).

Table S3.2b Permitted waste types and quantities for steam treatment in autoclaves and subsequent compaction subject to prior compliance with 2.5.1 and Table S1.3 Ref 20.	
Maximum quantity	34 tonnes per day
Waste code	Description
02 01 04	Waste plastic (except packaging)
02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off site
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 04	Metallic packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 07	Glass packaging
15 01 09	Textile packaging
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
18 01 01	Sharps (except 18 01 03)
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 02 01	Sharps (except 18 02 02)
20 01 01	Paper and cardboard
20 01 02	Glass
20 01 11	Textiles

Table S3.3 Permitted waste types and quantities for on-site disposal in Incineration Units Note 2	
Maximum quantity	850kg per hour
Waste Code	Description
02 01 02	Animal Tissue Waste
02 03 05	Sludges from on-site effluent treatment
02 01 03	Plant-tissue waste
02 01 04	Waste Plastics (except packaging)
02 01 06	Animal Faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off site.
02 02 02	Animal Tissue Waste
02 02 03	Materials unsuitable for consumption or processing
02 03 04	Materials unsuitable for consumption or processing
02 05 01	Materials unsuitable for consumption or processing
02 06 01	Materials unsuitable for consumption or processing
02 07 04	Materials unsuitable for consumption or processing
04 01 01	Materials unsuitable for consumption or processing
20 03 03	Street cleaning residues
Note 2 Incineration of Animal Carcasses in Lines 1, 3 and 4, is limited to wastes approved under the Animal By-Products Regulations 2003	

Table S3.4 Permitted hazardous waste types and quantities for storage and transfer off-site for disposal or recovery	
Maximum quantity	100 Tonnes total of hazardous and non-hazardous waste types.
Waste codes	Description
07 05 11*	Solid Wastes containing dangerous substances
07 05 14*	Solid Wastes other than those mentioned in 07 05 13
09 01 01*	Water-based developer and activator solutions
09 01 02*	Water-based offset plate developer solutions
09 01 03*	Solvent-based developer solutions
09 01 04*	Fixer solutions
09 01 05*	Bleach Solutions and bleach fixer solutions
09 01 06*	Wastes containing silver from on-site treatment of photographic wastes
09 01 13*	Aqueous Liquid Waste from on-site reclamation of solvent other than those mentioned in 09 01 06
15 02 02*	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
16 02 11*	Discarded equipment containing chlorofluorocarbons, HCFC, HFC
16 03 03*	Inorganic wastes containing dangerous substances
16 03 05*	Organic wastes containing dangerous substances
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 06*	Chemicals consisting of or containing dangerous substances
18 01 08*	Cytotoxic and Cytostatic medicines
18 02 02*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 05*	Chemicals consisting of or containing dangerous substances
18 02 07*	Cytotoxic and Cytostatic medicines
20 01 17*	Photochemicals
20 01 19*	Pesticides
20 01 23*	Discarded equipment containing chlorofluorocarbons
20 01 31*	Cytotoxic and Cytostatic medicines

Table S3.5 Permitted non-hazardous waste types and quantities for storage and transfer off-site for disposal or recovery	
Maximum quantity	100 tonnes total of hazardous and non-hazardous waste types.
Waste codes	Description
02 02 02	Animal Tissue Waste
02 02 03	Materials unsuitable for consumption or processing
02 03 04	Materials unsuitable for consumption or processing
02 05 01	Materials unsuitable for consumption or processing
02 06 01	Materials unsuitable for consumption or processing
02 07 04	Materials unsuitable for consumption or processing
04 01 01	Fleshings and lime split wastes
09 01 07	Photographic film and paper containing silver or silver compounds
09 01 08	Photographic film and paper free of silver or silver compounds
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 04	Metallic packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 07	Glass packaging
15 01 09	Textile packaging
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16 03 04	Inorganic Wastes other than those mentioned in 16 03 03
16 03 06	Organic Wastes other than those mentioned in 16 03 05
18 01 01	Sharps (except 18 01 03)
18 01 02	Body parts & Organs including blood bags and blood preserves (except 18 01 03)
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 01 07	Chemicals other than those mentioned in 18 01 06
18 01 09	Medicines other than those mentioned in 18 01 08
18 02 01	Sharps (except 18 02 02)
18 02 03	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 06	Chemicals other than those mentioned in 18 02 05
18 02 08	Medicines other than those mentioned in 18 02 07
20 01 01	Paper and Cardboard
20 01 02	Glass
20 01 11	Textiles
20 01 32	Medicines other than those mentioned in 20 01 31
20 01 39	Plastics
20 01 40	Metals
20 03 03	Street Cleaning Residues

Schedule 4 – Emissions and monitoring

Note

For the purposes of this Schedule, the following interpretations shall apply:

- For the continuous measurement systems fitted to the WID release points defined in Table S4.1 the validated hourly , ½ hourly and daily averages shall be determined from the measured valid ½ hourly average values after having subtracted the value of the 95% confidence interval.
- The 95% confidence interval for carbon monoxide of a single measured result shall be taken to be 10%
- The 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%
- The 95% confidence interval for hydrogen chloride releases of a single measured result shall be taken to be 40%

An invalid ½ hourly average means an ½ hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an ½ hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period (20 minutes). Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid ½ hourly average periods unless agreed in writing.

- Any day, in which more than five ½ hourly average values are invalid shall be invalidated.

Table S4.1 Point source emissions to air except during abnormal operation– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A2	Particulate Matter	Incineration Line 2	30 mg/m^3	½-hr average	Continuous	BS EN 13284-2
			10 mg/m^3	Daily Average	Continuous	BS EN 13284-2
			20 mg/m^3	Minimum 1-hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 13284-1
	Total Organic Carbon (TOC)	Incineration Line 2	20 mg/m^3	½-hr average	Continuous	BS EN 12619
			10 mg/m^3	Daily Average	Continuous	BS EN 12619
			20 mg/m^3	Minimum 1-hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 12619
	Hydrogen Chloride	Incineration Line 2	60 mg/m^3	½-hr average	Continuous	MCERTS certified instruments
			10 mg/m^3	Daily Average	Continuous	MCERTS certified instruments
			30 mg/m^3	Minimum 1-hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 1911
	Carbon Monoxide	Incineration Line 2	100 mg/m^3	½-hr average	Continuous	ISO 12039
			50 mg/m^3	Daily Average	Continuous	ISO 12039
			100 mg/m^3	Minimum 4-hour period, data to be reported as ½ hour averages	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	ISO 12039
	Hydrogen Fluoride	Incineration Line 2	2 mg/m^3	Minimum 1-hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	USEPA Method 26/26A

Table S4.1 Point source emissions to air except during abnormal operation– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A2	Sulphur Dioxide	Incineration Line 2	200 mg/m^3	½-hr average	Continuous	BS 6069-4.4
			50 mg/m^3	Daily Average	Continuous	BS 6069-4.4
			200 mg/m^3	Minimum 4-hour period, data to be reported as ½ averages	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS 6069-4.1
	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Incineration Line 2	400 mg/m^3	Daily Average	Continuous	ISO10849
			400 mg/m^3	Minimum 4-hour period, data to be reported as ½ averages	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	ISO10849
	Cadmium & Thallium and their compounds (Total)	Incineration Line 2	0.05 mg/m^3	Minimum 30 minute, maximum 8 hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 14385
	Mercury and its compounds	Incineration Line 2	0.05 mg/m^3	Minimum 30 minute, maximum 8 hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 13211
	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (Total)	Incineration Line 2	0.05 mg/m^3	Minimum 30 minute, maximum 8 hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 14385
	Dioxins / furans (I-TEQ)	Incineration Line 2	0.1 ng/m^3	Minimum 6 hours, maximum 8 hour period	Quarterly for first 12 months of operation of Line 2 then Bi-annually.	BS EN 1948

Table S4.1 Point source emissions to air except during abnormal operation– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A3, A4	Particulate Matter	Incineration Lines 1, 3 and 4	100 mg/m^3	Minimum 6-hour period	Bi-annual	BS EN 13284-2
	Total Organic Carbon (TOC)	Incineration Lines 1, 3 and 4	20 mg/ m^3	Minimum 6-hour period	Bi-annual	BS EN 12619
	Carbon Monoxide	Incineration Lines 1, 3 and 4	100 mg/m^3	Minimum 6-hour period	Bi-annual	ISO 12039
	Hydrogen Chloride	Incineration Lines 1, 3 and 4	100 mg/m^3	Minimum 6-hour period	Bi-annual	BS EN 1911
	Sulphur Dioxide	Incineration Lines 1, 3 and 4	300 mg/m^3	Minimum 6-hour period	Bi-annual	BS 6069-4.1
	Dioxins / furans (I-TEQ)	Incineration Lines 1, 3 and 4	1 ng/m^3	Minimum 6 hours, maximum 8 hour period	Bi-annual	BS EN 1948
A5	No parameters set	Gas-fired boiler	No limit set	-	-	-
A6	No parameters set	Rotoclave 1	No limit set	-	-	-
A7	No parameters set	Rotoclave 2	No limit set	-	-	-

Table S4.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A2 (Marked as Chimney No. 2 & 3 on site plan Schedule 2)	Particulate Matter	Incineration Line 2	150 mg/m^3	½ -hr average	Continuous	BS EN 13824-2 during abatement plant failure.
	Total Organic Carbon (TOC)	Incineration Line 2	20 mg/m^3	½ -hr average	Continuous	BS EN 12619 during abatement plant failure.
	Carbon monoxide	Incineration Line 2	100 mg/m^3	½ -hr average	Continuous	ISO 12039 during abatement plant failure.

Table S4.2 Point Source emissions to land (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
WL1 (surface water Pump house detailed in drawing perm/05 in application)	-	Site drainage from the roof of the buildings and non-contaminated yard drainage.	-	-	-	-

Table S4.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
No. 1 Effluent Treatment Plant (situated at rear of incineration lines 1, 2, 3 and 4)	-	Scrubber liquor from incineration lines 1, 3 and 4 and potentially contaminated yard water.	-	-	-	-

Table S4.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A1, A2, A3, A4	Temperature	Continuous	As described in the Application	
A2	Pressure	Continuous	As described in the Application	
A1, A2, A3, A4	Oxygen Content	Continuous	As described in the Application	
A1, A3, A4	Particulate Matter	Continuous	BS ISO 9096	
A1, A3, A4	Carbon Monoxide	Continuous	ISO 12039	
A2	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Bi-annual periodic measurement average value over sample period of between 6 and 8 hours	BS EN 1948	
	Dioxin-like PCBs (WHO-TEQ Fish)			
	Dioxin-like PCBs (WHO-TEQ Birds)			
	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 7.			
Rotoclave 1	Microbial Inactivation Monitoring	In accordance with guidance in Appendix 6 Sector Guidance Note IPPC S5.06 – Supplementary PPC for Clinical Wastes or as a agreed in writing with the Agency.		
Rotoclave 2	Microbial Inactivation Monitoring	In accordance with guidance in Appendix 6 Sector Guidance Note IPPC S5.06 – Supplementary PPC for Clinical Wastes or as a agreed in writing with the Agency.		

Table S4.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Bottom Ash Incineration Line 2	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	Quarterly	Sampling and Analysis as per Agency ash sampling protocol.	
Bottom Ash Incineration Line 2	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Quarterly	Sampling and Analysis as per Agency ash sampling protocol.	
APC Residues Incineration Line 2	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	Quarterly	Sampling and Analysis as per Agency ash sampling protocol.	
APC Residues Incineration Line 2	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Before use of a new disposal or recycling route.	Sampling and Analysis as per Agency ash sampling protocol.	

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A2	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Bi-annual periodic measurement average value over sample period of between 6 and 8 hours	BS EN 1948	
	Dioxin-like PCBs (WHO-TEQ Fish)			
	Dioxin-like PCBs (WHO-TEQ Birds)			
	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 7.			
	Dioxins / furans (WHO-TEQ Humans / Mammals)			
	Dioxins / furans (WHO-TEQ Fish)			
	Dioxins / furans (WHO-TEQ Birds)			

Table S4.5 Bottom Ash quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method	Other specifications
Bottom Ash burn-out quality of Incineration Line 2	Total Organic Carbon (TOC)	3%	Quarterly	Sampling and analysis as per Agency ash sampling protocol.	-
Bottom Ash burn-out quality of Incineration Lines 1, 3& 4 composite	Protein	5mg per 100g of dry weight of the ash.	Bi-annual	Sampling and analysis as per Agency ash sampling protocol.	-

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Sulphur dioxide (continuous) mg m^{-3}	A2	Quarterly	01/01/2006
Total Organic Carbon (TOC) (continuous) mg m^{-3}	A2	Quarterly	01/01/2006
Oxides of nitrogen (continuous) mg m^{-3}	A2	Quarterly	01/01/2006
Gaseous chlorides as HCl (continuous) mg m^{-3}	A2	Quarterly	01/01/2006
Particulate Matter (continuous) mg m^{-3}	A1, A2, A3, A4	Quarterly	01/01/2006
Carbon Monoxide (continuous) mg m^{-3}	A1, A2, A3, A4	Quarterly	01/01/2006
Sulphur dioxide (periodic) mg m^{-3}	A1, A2, A3, A4	Every 6 months	01/01/2006
Total Organic Carbon (TOC) (periodic) mg m^{-3}	A1, A2, A3, A4	Every 6 months	01/01/2006
Oxides of nitrogen (periodic) mg m^{-3}	A2	Every 6 months	01/01/2006
Gaseous chlorides as HCl (periodic) mg m^{-3}	A1, A2, A3, A4	Every 6 months	01/01/2006
Particulate Matter (periodic) mg m^{-3}	A1, A2, A3, A4	Every 6 months	01/01/2006
Carbon Monoxide (periodic) mg m^{-3}	A1, A2, A3, A4	Every 6 months	01/01/2006
Cadmium & Thallium and their compounds (total)	A2	Every 6 months	01/01/2006
Mercury and its compounds	A2	Every 6 months	01/01/2006
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds	A2	Every 6 months	01/01/2006
Dioxins / furans (I-TEQ)	A2	Every 6 months	01/01/2006
Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	A2	Every 6 months	01/01/2006

Table S5.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Dioxins / furans (WHO-TEQ Fish)	A2	Every 6 months	01/01/2006
Dioxins / furans (WHO-TEQ Birds)	A2	Every 6 months	01/01/2006
Metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	Bottom Ash Incineration Line 2	Every 6 months	01/01/2006
Total soluble fraction and metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Bottom Ash Incineration Lines 2	Before use of a new disposal or recycling route	01/01/2006
TOC	Bottom Ash Incineration Lines 2	Every 6 months	01/01/2006
Protein	Bottom Ash Incineration Lines 3 and 4	Every 6 months	01/01/2006
Metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	APC Residues Incineration Line 2	Every 6 months	01/01/2006
Total soluble fraction and metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	APC Residues Incineration Line 2	Before use of a new disposal or recycling route	01/01/2006
Water usage	Installation	Every 12 months	01/01/2006
Energy usage	Installation	Every 12 months	01/01/2006
Waste disposal and/or recovery.	Installation	Every 12 months	01/01/2006

Table S5.2: Annual production/treatment	
Parameter	Units
Total Clinical Waste Incinerated	tonnes
Total Non-Hazardous Waste Incinerated	tonnes
Total Animal Carcass Incinerated (WID Exempt)	tonnes
Total Clinical Waste Autoclaved	tonnes

Table S5.3 Performance parameters		
Parameter	Frequency of assessment	Units
Electrical energy Imported to site	Quarterly	KWhrs / tonne of waste treated (dry basis)
Fuel oil consumption	Quarterly	kg/ tonne of waste treated (dry basis)
Mass of Bottom Ash produced	Quarterly	kg/ tonne of waste incinerated (dry basis)
Mass of APC residues produced	Quarterly	kg/ tonne of WID waste incinerated (dry basis)
Mass of off-site disposed effluent produced	Quarterly	kg/ tonne of waste treated (dry basis)
Lime consumption	Quarterly	kg/ tonne of WID waste incinerated (dry basis)
Water consumption	Quarterly	m^3/ tonne of waste treated (dry basis)

Table S5.4 Reporting forms		
Media/parameter	Reporting format	Date of form
A2 Air: Periodic monitored emissions quarterly	Agency Form / MP3930BE/ A2 Quarterly/ Form Dated 1st December 2005	1/12/2005
A2 Air: Periodic monitored emissions biannually	Agency Form/MP3930BE/ A2Bi-annually/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of particulates	Agency Form/MP3930BE/ A2Partcon/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of Hydrogen chloride	Agency Form/MP3930BE/ A2HClcon/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of TOC	Agency Form/MP3930BE/ A2TOCcon/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of Oxides of nitrogen	Agency Form/MP3930BE/ A2Nitrocon/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of Carbon monoxide	Agency Form/MP3930BE/ A2Carcon/ Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of Sulphur dioxide	Agency Form/MP3930BE/ A2Sulphcon/ Form Dated 1st December 2005	1/12/2005
A1 Air: Periodic monitored emissions biannually	Agency Form/MP3930BE/ A1Bi-annually/ Form Dated 1st December 2005	1/12/2005
A3 Air: Periodic monitored emissions biannually	Agency Form/MP3930BE/ A3Bi-annually/ Form Dated 1st December 2005	1/12/2005
A4 Air: Periodic monitored emissions biannually	Agency Form/MP3930BE/ A4Bi-annually/ Form Dated 1st December 2005	1/12/2005
A1,A3,A4 Air: Continuously monitored emissions of particulates	Agency Form/MP3930BE/ A1A3A4Partcon/Form Dated 1st December 2005	1/12/2005
A2 Air: Continuously monitored emissions of Carbon monoxide	Agency Form/MP3930BE/ A1A3A4Carcon/Form Dated 1st December 2005	1/12/2005
Bottom Ash, APC Residues, Other solid residues: Quarterly Composition	Agency Form/MP3930BE/ Ash/ Form Dated 1st December 2005	1/12/2005
Energy	Agency Form/MP3930BE/ EnergyUse/ Form Dated 1st December 2005	1/12/2005
Waste Return	Agency Form/MP3930BE/WasteAnnual/Form Dated 1st December 2005	1/12/2005
Water usage	Agency Form/MP3930BE/ WaterAnnual/ Form Dated 1st December 2005	1/12/2005
Performance indicators	Agency Form/MP3930BE/ KPIAnnual/ Form Dated 1st December 2005	1/12/2005

Schedule 6 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Where the notification is for a period of abnormal operation as required by condition 4.3.1(d), only the information in Part C is required.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Part A

Permit Number	
Name of operator	
Location of installation	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Part C

Permit Number	
Name of operator	
Location of installation	

For multi-line plants, indicate which line(s) was (were) subject to abnormal operation.	
Time at which abnormal operation commenced	
Time at which abnormal operation ceased	
Duration of this incidence of abnormal operation	
Cumulative abnormal operation duration in current year (at end of present incidence)	
Reasons for abnormal operation	
How did the abnormal operation end? (e.g. plant repaired, reaching maximum permitted duration, initiation of shutdown, etc.)	
Where the abnormal operation was caused by the	

failure of the particulate, CO or TOC CEM, attach a copy of the alternate monitoring data which was used to demonstrate compliance with the abnormal operation emission limit values.	

Where abatement plant has failed, give the half-hourly average emissions for pollutants of relevance during the abnormal operation in the rows below

Pollutant	1st ½ hour	2nd ½ hour	3rd ½ hour	4th ½ hour	5th ½ hour	6th ½ hour	7th ½ hour	8th ½ hour

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of VETSPEED LIMITED

Schedule 7 - Interpretation

"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 [other than continuous emission monitors for releases to air of particulates, TOC and/or CO], 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.

"a*ccident*" means an accident that may result in pollution.

"a*nnually*" means once every year.

"*APC residues*" means air pollution control residues

"*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.

"authorised officer" means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

"*bi-annual"* means twice per year with at least five months between tests;

"bottom ash" means ash falling through the grate or transported by the grate

"*CEM*" Continuous emission monitor

"CEN" means Commité 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 day 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.

"emissions to land", includes emissions to groundwater.

"fugitive emission" means an emission to air, water or land from the activities which is not controlled by an emission limit.

"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.

"*incineration line*" means all of the incineration equipment related to a common discharge to air location.

"*infectious clinical waste*" means clinical waste incorporating substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms

"ISO" means International Standards Organisation.

"*land protection guidance*", means Agency guidance "H7 - Guidance on the protection of land under the PPC Regime: application site report and site protection monitoring programme".

"*LOI*" means loss on ignition a technique used to determine the combustible material by heating the ash residue to a high temperature

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"notify without delay" and "notified without delay" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"*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*

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*quarter*" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"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.

"relevant person" and *"relevant conviction"* shall have the meanings given to them in the Environmental Protection Act 1990

"*shutdown*" is any period where the plant is being returned to a non-operational state and there is no waste being burned.

"*site protection and monitoring programme*" means a document which meets the requirements for site protection and monitoring programmes described in the Land Protection Guidance.

"start-up" is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the incinerator to initiate steady-state conditions.

"TOC" means *Total Organic Carbon.* In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC. In respect of Bottom Ash, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

"Waste Incineration Directive" means Directive 2000/76/EC on the incineration of waste (O.J. L 332, 28.12.2000)

"technically competent management" and *"technical competence"* shall have the meanings given to them in the Environmental Protection Act 1990.

"waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England)Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"year" means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

(a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

(b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

(c) in relation to gases from incineration plants other than those burning waste oil, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 11% dry, where hazardous wastes are burned in an incineration or co-

incineration plant and the emissions of pollutants are reduced by gas treatment, standardisation of the gas with respect to oxygen content shall be carried out only if the oxygen concentration measured over the same period exceeds the relevant oxygen content defined in the conditions above. In other cases, the measured emissions shall be standardised only for moisture, pressure and temperature.

For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing.

TEF schemes for dioxins and furans				
Congener	***I-TEF(1990)***	***WHO-TEF (1997/8)***		
		Humans / Mammals	***Fish***	***Birds***
Dioxins				
2,3,7,8-TCDD	*1*	*1*	*1*	*1*
1,2,3,7,8-PeCDD	*0.5*	*1*	*1*	*1*
1,2,3,4,7,8-HxCDD	*0.1*	*0.1*	*0.5*	*0.05*
1,2,3,6,7,8-HxCDD	*0.1*	*0.1*	*0.01*	*0.01*
1,2,3,7,8,9-HxCDD	*0.1*	*0.1*	*0.01*	*0.1*
1,2,3,4,6,7,8-HpCDD	*0.01*	*0.01*	*0.001*	*<0.001*
OCDD	*0.001*	*0.0001*	*-*	*-*
Furans				
2,3,7,8-TCDF	*0.1*	*0.1*	*0.05*	*1*
1,2,3,7,8-PeCDF	*0.05*	*0.05*	*0.05*	*0.1*
2,3,4,7,8-PeCDF	*0.5*	*0.5*	*0.5*	*1*
1,2,3,4,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,7,8,9-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
2,3,4,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,4,6,7,8_HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
1,2,3,4,7,8,9-HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
OCDF	*0.001*	*0.0001*	*0.0001*	*0.0001*

TEF schemes for dioxin-like PCBs			
Congener	***WHO-TEF (1997/8)***		
	Humans / mammals	***Fish***	***Birds***
Non-ortho PCBs			
3,4,4',5-TCB (81)	*0.0001*	*0.0005*	*0.1*
3,3',4,4'-TCB (77)	*0.0001*	*0.0001*	*0.05*
3,3',4,4',5 - PeCB (126)	*0.1*	*0.005*	*0.1*
3,3',4,4',5,5'-HxCB(169)	*0.01*	*0.00005*	*0.001*
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	*0.0001*	*<0.000005*	*0.0001*
2,3,4,4',5-PeCB (114)	*0.0005*	*<0.000005*	*0.0001*
2,3',4,4',5-PeCB (118)	*0.0001*	*<0.000005*	*0.00001*
2',3,4,4',5-PeCB (123)	*0.0001*	*<0.000005*	*0.00001*
2,3,3',4,4',5-HxCB (156)	*0.0005*	*<0.000005*	*0.0001*
2,3,3',4,4',5'-HxCB (157)	*0.0005*	*<0.000005*	*0.0001*
2,3',4,4',5,5'-HxCB (167)	*0.00001*	*<0.000005*	*0.00001*
2,3,3',4,4',5,5'-HpCB (189)	*0.0001*	*<0.000005*	*0.00001*

END OF PERMIT