



## Permit with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

---

Knostrap Clinical Waste Incinerator  
White Rose Environmental Ltd  
Knostrap Treatment Works  
Knowsthorpe Lane  
Leeds  
LS9 0PJ

Permit number  
XP3838ST

### Contents

<b>Introductory note .....</b>	<b>ii</b>
<b>Permit.....</b>	<b>1</b>
<b>Conditions.....</b>	<b>2</b>
1 General .....	2
2 Operating conditions.....	6
3 Records.....	29
4 Reporting .....	30
5 Notifications .....	32
6 Interpretation .....	29
Schedule 1 - Notification of abnormal emissions .....	39
Schedule 2 - Reporting of monitoring data.....	41
Schedule 3 - Forms to be used .....	38
Schedule 4 - Reporting of performance data .....	39
Schedule 5 - Site Plan.....	<b>Error! Bookmark not defined.</b>
Schedule 6 - List of Permitted Wastes .....	47

## Introductory note

### *This introductory note does not form a part of the Permit*

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No.1973), as amended, ("the PPC Regulations") to operate an installation carrying out activities covered by the description in Section 5.1 A(1) (a) in Part 1 to Schedule 1 of the PPC Regulations, to the extent authorised by the Permit:

*Section 5.1 A(1)(a) - "The incineration of hazardous waste in an incineration plant.*

Aspects of the operation of the installation which are not regulated by conditions of the Permit are subject to the condition implied by Regulation 12(10) of the PPC Regulations, i.e. 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.

In some sections of the Permit conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent and where that is not practicable to reduce emissions. The conditions do not explain what is BAT. In determining BAT, the Operator should pay particular attention to relevant sections of the IPPC Sector guidance, appropriate Horizontal guidance and other relevant guidance.

A non-technical description of the installation is given in the Application, but the main features of the installation are as follows.

The facility is designed to incinerate up to 17000 tonnes of solid waste per annum comprising amongst others clinical waste, controlled drugs, potentially infectious waste and pharmaceutical waste. The plant consists of two streams both rated at 1 tonne per hour solid waste. The two streams operate independently of each other but the two flues discharge through a common stack. The primary chamber utilises a stepped hearth design with mechanical waste loading using a hydraulic lift and tip system. The first hearth is a starved air system to drive off volatile gases, main combustion takes place on the 2<sup>nd</sup> hearth at ~ 1000°C. The 3<sup>rd</sup> hearth is oxygen rich to burn out fixed carbon in the ash. Combustion control is achieved by the provision of the required levels of air and temperature. Flue gases are cooled rapidly to ~135°C before passing through the Flue Gas Treatment system.

Dry hydrated lime and powdered activated carbon are used respectively, to neutralise acid gases and adsorb heavy metals and organic compounds. The treated flue gases are then discharged to atmosphere via a 40m high stack. Continuous Emission Monitors are provided to measure releases from the flue gas treatment (FGT) system. The FGT system is dry and hence no liquid effluents arise from this. The bins used to transport waste are washed in bin washers; wastewater from these is discharged to sewer via an interceptor.

Spent lime from the FGT which contains about 60% unreacted calcium hydroxide and bottom ash from the primary combustion chamber are stored in big bags and covered skips respectively.

Energy is produced in the form of steam from boilers and the heat contained in the steam is used to generate electricity for use by the site.

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] together implement the requirements of the Waste Incineration Directive (Directive (EC 2000/76/EC) on the Incineration of Waste. The Installation regulated under this Permit contains an existing Waste Incineration Installation (as defined in the WI Regulations) in which the incineration of waste in an incineration plant is carried out. Conditions delivering the corresponding requirements of the relevant articles of the Waste Incineration Directive have been incorporated into this Permit.

Note that the Permit requires the submission of certain information to the Agency (see Sections 4 and 5). In addition, the Agency has the power to seek further information at any time under regulation 28 to the PPC Regulations provided that it acts reasonably.

#### **Other PPC Permits relating to this installation**

<b>Permit holder</b>	<b>Permit Number</b>	<b>Date of Issue</b>
Not Applicable		

---

#### **Superseded Licences/Authorisations/Consents relating to this installation**

<b>Holder</b>	<b>Reference Number</b>	<b>Date of Issue</b>
White Rose Environmental Ltd	AM6293	18/08/94

---

Other activities may take place on the site of this installation which are not regulated under this Permit or any other PPC Permit referred to in the Table above.

#### **Other existing Licences/Authorisations/Registrations relating to this site**

<b>Holder</b>	<b>Reference Number</b>	<b>Date of issue</b>
White Rose Environmental Ltd Radioactive Substances Act 1993	AN1076	29/04/94

---

### **Public Registers**

Considerable information relating to Permits including the Application is available on public registers in accordance with the requirements of the PPC Regulations. Certain information may be withheld from public registers where it is commercially confidential or contrary to national security.

### **Variations to the Permit**

This Permit may be varied in the future (by the Agency serving a Variation Notice on the Operator). If the Operator itself wants any of the Conditions of the Permit to be changed, it must submit a formal Application. The Status Log within the Introductory Note to any such Variation Notice will include summary details of this 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 by the Operator. For the application to be successful, the Operator must be able to demonstrate to the Agency 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, an Application to transfer the Permit has to be made jointly by the existing and proposed holders. 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 comply with the conditions of the transferred Permit. If, however, the Permit

authorises the carrying out of a specified waste management activity, the transfer will only be allowed if the proposed holder is also considered to be "a fit and proper person" as required by the PPC Regulations.

### Talking to us

Please quote the Permit Number if you contact the Agency about this Permit.

To give a Notification under Condition 5.1.1, the Operator should use the Incident Hotline telephone number (0800 80 70 60) or any other number notified in writing to the Operator by the Agency for that purpose.

### Status Log

Detail	Date	Response Date
Application XP3838ST	Received 30/03/05	
Response to request for information via Schedule 4 notice (abatement plant, management systems, raw materials, start-up, waste feed intervention, CEMS, combustion conditions, analysis and handling of residues, abatement by-pass, flue gas re-heating and air dispersion modelling)	Request dated 27/05/05	Response dated 02/09/05
Response to request for information via e-mail (surrogate measures)	Request dated 21/11/05	Response dated 06/12/05
Response to request for information via e-mail (firewater containment)	Request dated 23/11/05	Response dated 06/12/05
Response to request for information via e-mail (waste transfer)	Request dated 01/12/05	Response dated 06/12/05
Permit determined	09/12/05	

---

**End of Introductory Note.**

**Permit**

Pollution Prevention and Control  
Regulations 2000



**ENVIRONMENT  
AGENCY**

## Permit

Permit number  
**XP3838ST**

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations (SI 2000 No 1973), hereby authorises

**White Rose Environmental Ltd** ("the Operator"),

Of/ whose Registered Office (or principal place of business) is

**Pannell House  
6 Queen Street  
Leeds  
LS1 2TW**

**Company registration number 4057457**

to operate an Installation at

**Knostrop Clinical Waste Incinerator  
Knostrop Treatment Works  
Knowsthorpe Lane  
Leeds  
LS9 0PJ**

to the extent authorised by and subject to the conditions of this Permit.

Signed

Date

--	--

David Tartelin

Authorised to sign on behalf of the Agency

# Conditions

## 1 General

### 1.1 Permitted Activities

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 - Permitted Activities**

<b>Activity listed in Schedule 1 of the PPC Regulations or Directly- Associated Activity</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
Section 5.1A(1)(a) : The Incineration of hazardous waste in an incineration plant	Incineration of Clinical Waste	Incineration of clinical waste as specified in table 2.1.2. Receipt and storage of clinical waste. Incineration of clinical waste including heat recovery, electricity generation, flue gas cleaning, monitoring systems, including handling, storage, recycling and despatch of waste materials arising.
Directly Associated Activity	Operation of binwashing equipment	Washing of bins using dilute detergent and rinsing using water. Release of wash waters to sewer.
Directly Associated Activity	Operation of Sharpsmart and washsmart units	Emptying and washing of reusable sharps units as described in the application including release of wash waters to sewer.

### 1.2 Site

1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in green on the Site Plan at Schedule 5 to this Permit.

### 1.3 Overarching Management Condition

1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

### 1.4 Improvement Programme

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

**Table 1.4.1: Improvement programme**

Reference	Requirement	Date
1	The Operator shall undertake and report a H1 assessment of the impact of releases from one of the incineration lines during an abatement by-pass. Where measured emissions are not available, calculated emissions will be used. The basis and assumptions applied for all calculations shall be explained in the report. Where emissions are not demonstrated to be insignificant, the Operator will undertake dispersion modelling of releases using an appropriate and robust model. The Operator shall submit to the Agency a report on the findings of the assessment	30 <sup>th</sup> June 2006
2	The Operator shall design and implement an additional interlock on the waste charging system serving the incinerators to prevent feeding of waste bins containing cytotoxic/cytostatic wastes during periods where the secondary combustion chamber is at a temperature of less than 1000 °C.	31 <sup>st</sup> January 2007
3(a)	The Operator shall submit a report outlining proposals for reducing the operation of the abatement bypass system to no more than once per year as detailed in Sector Guidance Note IPPC S5.01 Issue 1 July 2004, Section 2.1.5. The report shall: <ul style="list-style-type: none"><li>• Examine the revision of incinerator operating procedures to reduce the operation of the bypass due to sustained pressure in the primary chamber, low water, high temperature and high pressure conditions in the boiler and high temperature at the baghouse inlet;</li><li>• Investigate alternative operating procedures that do not require the operation of the bypass in the event of power dips and failures;</li><li>• Include a timetable to carry out any improvements identified.</li></ul>	31 <sup>st</sup> May 2006

3(b)	On receipt of written agreement by the Agency to the proposals and the timetable required by Improvement Condition 3(a), the Operator shall carry out the improvements.	To the timescale indicated in the agreed timetable
4(a)	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 A1 and A2 identifying the fractions within the PM <sub>10</sub> , PM <sub>2.5</sub> and PM <sub>1.0</sub> ranges. The proposal shall include a timetable to carry out such tests and produce a report on the results.	31 <sup>st</sup> May 2006
4(b)	On receipt of written agreement by the Agency to the proposal and the timetable required by Improvement Condition 4(a), the Operator shall carry out the tests and submit to the Agency a report on the results.	Within 2 months of the end of the agreed timetable.
5(a)	The Operator shall undertake an assessment of the subsurface structures and their potential to cause fugitive emissions to surface water and ground water. The Operator shall undertake a condition survey of those subsurface structures identified as having potential to cause fugitive emissions. The Operator shall submit a written report, including an impact assessment, to the Agency. The report shall include proposals and a timetable for the implementation of any improvements identified.	30 <sup>th</sup> September 2006
5(b)	On receipt of written agreement by the Agency to the proposals and the timetable required by Improvement Condition 5(a), the Operator shall carry out the improvements.	To the timescale indicated in the agreed timetable
6	The Operator shall prepare and implement a formal Accident Management Plan (the Plan) with due regard to Section 2.8 of Sector Guidance Note S5.01 Issue 1, July 2004. The Plan shall identify all the hazards, assess the risks, and identify the techniques necessary to reduce the risks. The Operator shall incorporate all procedures associated with the Plan into the site working procedures.	30 <sup>th</sup> June 2006
7	The operator shall calibrate and verify the performance of all Continuous Emissions Monitoring Systems for the release points and parameters as specified in Table 2.2.2 to BS EN 14181 and submit a written summary report to the Environment Agency as evidence of compliance with the requirements of BS EN 14181.	27 <sup>th</sup> December 2006
8	The Operator shall submit an Energy Efficiency Plan, having due regard to Sector Guidance Note S5.01 Issue 1 July 2004, Section 2.7, in particular item 5 of Section 2.7.2.	30 <sup>th</sup> June 2006
9	The Operator shall install permanent means of isolating the drainage system to prevent offsite release of contaminated water.	30 <sup>th</sup> July 2006
10	The Operator shall submit a formal Site Closure Plan, having due regard to Section 2.11 of Sector Guidance Note S5.01 Issue 1, July 2004.	31 <sup>st</sup> August 2006

- 1.4.2 Where the Operator fails to comply with any requirement by the date specified in Table 1.4.1 the Operator shall send written notification of such failure to the Agency within 14 days of such date.

## **1.5 Minor Operational Changes**

- 1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification "unless otherwise agreed in writing" is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application and the Site Protection and Monitoring Programme, as the case may be shall be deemed to be amended.

## **1.6 Pre-Operational Conditions**

- 1.6.1 There are no pre-operational conditions

## **1.7 Off-site Conditions**

- 1.7.1 There are no off-site conditions

## 2 Operating conditions

### 2.1 In-Process Controls

2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

**Table 2.1.1: Operating techniques**

Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 given in section 1, 2.1, 2.2, 2.7, 2.10 of the Application excluding: <ul style="list-style-type: none"> <li>statement on derogations and exemptions 3(b) 75% feed during CEMs disturbances including beyond 4 hrs abnormal operation.</li> </ul>	30/03/05
Response dated 02/09/05 to request for information by Schedule 4 Notice Request dated 27/05/05	Reponses to: Question 1 detailing abatement equipment, Question 3 detailing management techniques, Question 4 detailing expected emissions, Question 5 detailing incoming waste specification, Question 6 detailing start-up procedures, Question 7 regarding waste feed cessation, Question 9 regarding furnace design, Question 11 regarding residue transfer and storage	04/09/05
Response to request for further information dated 21/11/05	Response to question regarding surrogate techniques for use during abnormal operation caused by CEMs failure.	07/12/05
Response to request for further information dated 23/11/05	Response to question regarding firewater containment.	07/12/05
Response to request for further information dated 01/12/05	Response to question regarding transfer of waste in the event of incinerator shutdown	07/12/05

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 submitted under condition 4.1.8 of this Permit or as otherwise agreed in writing by the Agency.

2.1.3 Only the wastes specified in Schedule 6 shall be incinerated in the Permitted Installation subject to the limitations and in quantities not exceeding those specified for the waste types specified in Table 2.1.2.

**Table 2.1.2: Permitted Waste Types**

Waste type	Limitations	Maximum throughput
Clinical waste	Excluding dental amalgam	17000 tonnes per annum
Specified pharmaceutical wastes	As identified in Schedule 6	1700 tonnes per annum (10% of throughput)
Specified municipal and separately collected wastes	As identified in Schedule 6	1700 tonnes per annum (10% of throughput)
Waste packaging	As identified in Schedule 6	850 tonnes per annum (5% of throughput)
Mixed confidential/contaminated wastes	As identified in Schedule 6	850 tonnes per annum (5% of throughput)
Biologically contaminated soils	As identified in Schedule 6	850 tonnes per annum (5% of throughput)
Mixed agricultural / food wastes	As identified in Schedule 6	850 tonnes per annum (5% of throughput)

Note 1: total quantity of waste incinerated shall not exceed 17000 tonnes per annum

2.1.4 The Operator shall incinerate only those hazardous wastes where the throughputs, calorific values and pollutant composition are within the ranges specified in the Application.

- 2.1.5 The Operator shall ensure that prior to accepting waste subject to condition 2.1.4 at the Permitted Installation, it has obtained sufficient information about the hazardous wastes to be burned to demonstrate compliance with the characteristics described in condition 2.1.4.
- 2.1.6 The Operator shall take representative samples of all hazardous waste deliveries to the Permitted Installation 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 2.1.5. These samples shall be retained for inspection by the Agency for a period of at least one month after the material is incinerated.
- 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 for non-hazardous waste or hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1%, 1000°C where cytotoxic or cytostatic drugs are burned; or
  - the oxygen level at the secondary chamber outlet is below, or falls below, 6% (wet) by volume; or
  - any continuous emission limit value in Table 2.2.2(a) is exceeded; or
  - any continuous emission limit value in Table 2.2.2 is exceeded, other than under abnormal operating conditions ; or
  - monitoring results required to demonstrate compliance with any continuous emission limit value in Table 2.2.2 are unavailable other than under abnormal operating conditions.
- 2.1.8 The Operator shall operate at least one auxiliary burner in each line of the Permitted Installation at start-up or shut-down or whenever the operating temperature falls below that specified in condition 2.1.7, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.1.7 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.
- 2.1.9 The Operator shall record the beginning and end of each period of abnormal operation.
- 2.1.10 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.
- 2.1.11 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, 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 (a);

- the alternative techniques to demonstrate compliance with the abnormal operation emission limit value(s) in Table 2.2.2 (a), as detailed in the Application or as agreed in writing with the Agency, are unavailable.
- 2.1.12 The Operator shall interpret the end of the period of abnormal operation as the earliest of the following:
- when the failed equipment is repaired and brought back into normal operation;
  - when the Operator initiates a shut-down of the waste combustion activity, as described in the Application;
  - when a period of 4 hours has elapsed from the start of the abnormal operation;
  - when, in any calendar year, an aggregated period of 60 hours abnormal operation has been reached for a given incineration line.
- 2.1.13 Infectious clinical waste must be placed in the furnace without first being mixed with other categories of waste, using techniques which are no less effective than those described in the Application.

## 2.2 Emissions

### 2.2.1 Emissions to Air, (including heat, but excluding Odour, Noise or Vibration) from Specified Points

2.2.1.1 This Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.

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	Incinerator Stream 1	Point A1 on site plan in Schedule 5
A2	Incinerator Stream 2	Point A2 on site plan in Schedule 5

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

<b>Table 2.2.2 : Emission limits to air and monitoring during normal operation</b>				
<b>Emission point reference</b>	<b>Parameter</b>	<b>Limit (including Reference Period)<sup>1</sup></b>	<b>Monitoring frequency</b>	<b>Monitoring method</b>
A1, A2	Particulate matter	30 mg/m <sup>3</sup> ½-hr average	Continuous measurement	BS EN 13284-2 <sup>6 8</sup>
A1, A2	Particulate matter	10 mg/m <sup>3</sup> daily average	Continuous measurement	BS EN 13284-2 <sup>6 8</sup>
A1, A2	Particulate matter	20 mg/m <sup>3</sup> periodic over minimum 1-hour period	Bi-annual	BS EN 13284-1
A1, A2	Total Organic Carbon (TOC)	20 mg/m <sup>3</sup> ½-hr average	Continuous measurement	BS EN 12619 <sup>6 8</sup>
A1, A2	Total Organic Carbon (TOC)	10 mg/m <sup>3</sup> daily average	Continuous measurement	BS EN 12619 <sup>6 8</sup>
A1, A2	Total Organic Carbon (TOC)	20 mg/m <sup>3</sup> periodic over minimum 1-hour period	Bi-annual	BS EN 12619
A1, A2	Hydrogen chloride	60 mg/m <sup>3</sup> ½-hr average	Continuous measurement	MCERTS certified instruments <sup>7 9</sup>
A1, A2	Hydrogen chloride	10 mg/m <sup>3</sup>	Continuous measurement	MCERTS certified

**Table 2.2.2 : Emission limits to air and monitoring during normal operation**

Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
		daily average		instruments <sup>7,9</sup>
A1, A2	Hydrogen chloride	30 mg/m <sup>3</sup> periodic over minimum 1-hour period	Bi-annual	BS EN 1911
A1, A2	Hydrogen fluoride	2 mg/m <sup>3</sup> periodic over minimum 1-hour period	Bi-annual	USEPA Method 26/26A
A1, A2	Carbon monoxide	100 mg/m <sup>3</sup> 1/2-hr average	Continuous measurement	ISO 12039 <sup>4,8</sup>
A1, A2	Carbon monoxide	50 mg/m <sup>3</sup> daily average	Continuous measurement	ISO 12039 <sup>4,8</sup>
A1, A2	Carbon monoxide	100 mg/m <sup>3</sup> periodic over minimum 4 hour period, data to be reported as 1/2-hour averages	Bi-annual	ISO 12039
A1, A2	Sulphur dioxide	200 mg/m <sup>3</sup> 1/2-hr average	Continuous measurement	BS 6069-4.4 <sup>5,8</sup>
A1, A2	Sulphur dioxide	50 mg/m <sup>3</sup> daily average	Continuous measurement	BS 6069-4.4 <sup>5,8</sup>

**Table 2.2.2 : Emission limits to air and monitoring during normal operation**

Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
A1, A2	Sulphur dioxide	200 mg/m <sup>3</sup> periodic over minimum 4 hour period, data to be reported as ½ hour averages	Bi-annual	BS 6069-4.1
A1, A2	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	350 mg/m <sup>3</sup> ½-hour average	Continuous measurement	ISO 10849 <sup>5 8</sup>
A1, A2	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	350 mg/m <sup>3</sup> daily average	Continuous measurement	ISO 10849 <sup>5 8</sup>
A1, A2	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	350 mg/m <sup>3</sup> periodic over minimum 4 hour period, data to be reported as ½ hour averages	Bi-annual	ISO 10849 or BS ISO 11564
A1, A2	Cadmium & thallium and their compounds (total) <sup>2</sup>	0.05 mg/m <sup>3</sup> periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 14385

<b>Table 2.2.2 : Emission limits to air and monitoring during normal operation</b>				
<b>Emission point reference</b>	<b>Parameter</b>	<b>Limit (including Reference Period)<sup>1</sup></b>	<b>Monitoring frequency</b>	<b>Monitoring method</b>
A1, A2	Mercury and its compounds <sup>2</sup>	0.05 mg/m <sup>3</sup> periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 13211
A1, A2	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total) <sup>2</sup>	0.5 mg/m <sup>3</sup> periodic over minimum 30 minute, maximum 8 hour period	Bi-annual	BS EN 14385
A1, A2	Dioxins / furans (I-TEQ)	0.1 ng/m <sup>3</sup> periodic over minimum 6 hours, maximum 8 hour period <sup>3</sup>	Bi-annual	BS EN 1948

Note 1: See Section 6 for reference conditions

Note 2: 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 3: 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 4: 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) 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 5: As Note 4, except that the value of the confidence interval is 20% in place of 10%.

Note 6: As Note 4, except that the value of the confidence interval is 30% in place of 10%.

Note 7: As Note 4, except that the value of the confidence interval is 40% in place of 10%.

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

Note 9: The certification range for MCERTS equipment should be 1.5 times the daily emission limit value. The CEM shall also be able to measure instantaneous values over the ranges that 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.

**Table 2.2.2 (a) : Emission limits to air and monitoring during abnormal operating conditions**

Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
A1, A2	Particulate matter	150 mg/m <sup>3</sup> 1/2-hr average	Continuous measurement	BS EN 13824-2 <sup>4,2</sup> during abatement plant failure
A1, A2	Total Organic Carbon (TOC)	20 mg/m <sup>3</sup> 1/2-hr average	Continuous measurement	BS EN 12619 <sup>4,2</sup> during abatement plant or alternative surrogate as specified in the Application during failure of the continuous emission monitor
A1, A2	Carbon monoxide	100 mg/m <sup>3</sup> 1/2-hr average	Continuous measurement	ISO 12039 <sup>4,3</sup> during abatement plant failure or alternative surrogate as specified in the Application during failure of the continuous emission monitor

Note 1: See Section 6 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.

#### **2.2.1.4 No condition applies.**

### **2.2.2 Emissions to water (other than groundwater), including heat, from specified points**

2.2.2.1 This Part 2.2.2 of this Permit shall not apply to releases of odour, noise or vibration or to releases to groundwater.

2.2.2.2 Conditions 2.2.2.3 - 2.2.2.6 shall not apply to emissions to sewer.

2.2.2.3 No emission from the Permitted Installation shall be made to water.

2.2.2.4 No condition applies.

2.2.2.5 No condition applies.

2.2.2.6 No condition applies.

#### **Emissions to sewer**

2.2.2.7 Emissions to sewer from the emission points in Table 2.2.7 shall only arise from the source(s) specified in that Table. There are no other specific controls imposed upon emissions to water in Part 2.2.2 of this Permit.

**Table 2.2.7 Emission points to sewer**

<b>Emission point reference or description</b>	<b>Source</b>	<b>Sewer</b>
S1 as illustrated on the site plan in Schedule 5	Release from incinerator including bin washing and boiler blow-down, surface water from incinerator building via interceptor	Yorkshire Water Services Ltd
S2 as illustrated on the site plan in Schedule 5	Service centre including release from wash smart system	Yorkshire Water Services Ltd

2.2.2.8 No Condition applies.

2.2.2.9 No condition applies

2.2.2.10 No condition applies

### **2.2.3 Emissions to groundwater**

2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall use BAT to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, .

### **2.2.4 Fugitive emissions of substances to air**

2.2.4.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation in particular from:

- storage areas
- buildings
- pipes, valves and other transfer systems
- open surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

### **2.2.5 Fugitive emissions of substances to water and sewer**

2.2.5.1 Subject to condition 2.2.5.2 below, the Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than Groundwater) and sewer from the Permitted Installation in particular from:

- all structures under or over ground
- surfacing
- bunding
- storage areas

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5.2 There shall be no release to water that would cause a breach of an EQS established by the UK Government to implement the Dangerous Substances Directive 76/464/EEC.

## 2.2.6 Odour

2.2.6.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

- limiting the use of odorous materials
- restricting odorous activities
- controlling the storage conditions of odorous materials
- controlling processing parameters to minimise the generation of odour
- optimising the performance of abatement systems
- timely monitoring, inspection and maintenance
- employing, where appropriate, an approved odour management plan

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.6.2 No condition applies.

2.2.6.3 No condition applies.

## 2.2.7 Emissions to Land

2.2.7.1 This Part 2.2.7 of this Permit shall not apply to emissions to groundwater.

2.2.7.2 No emission from the Permitted Installation shall be made to land.

2.2.7.3 No condition applies.

## 2.2.8 Other technical measures

2.2.8.1 Where other technical measures of control are used to supplement or replace emission limit values in accordance with Regulation 12(8) of the PPC Regulations, the Operator shall comply with the requirements specified in Table 2.2.11.

**Table 2.2.11: Equivalent parameters and technical measures**

Parameter or measure	Requirement or description of measure, and frequency if relevant
Bottom ash burn-out quality	The Permitted Installation must be operated to ensure that the bottom ash shall have a total organic carbon (TOC) content less than 3%, or a loss on ignition of less than 5% of the dry weight of the ash.

## **2.3 Management**

2.3.1 A copy of this Permit and those parts of the Application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

### ***Training***

2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties.

2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

### ***Maintenance***

2.3.5 All plant and equipment used in operating the Permitted Installation, the failure of which could lead to an adverse impact on the environment, shall be maintained in good operating condition.

2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:

2.3.6.1 a written or electronic maintenance programme; and

2.3.6.2 records of its maintenance.

### ***Incidents and Complaints***

2.3.7 The Operator shall maintain and implement written procedures for:

2.3.7.1 taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits; and

2.3.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and

2.3.7.3 ensuring that detailed records are made of all such actions and investigations.

2.3.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

2.3.9 *No condition applies.*

## **2.4 Efficient use of raw materials**

### **2.4.1 The Operator shall -**

- 2.4.1.1 maintain the raw materials table or description submitted in response to Section 2.4 of the Application and in particular consider on a periodic basis whether there are suitable alternative materials to reduce environmental impact;
- 2.4.1.2 carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter; and
- 2.4.1.3 ensure that incoming water use is directly measured and recorded.

## **2.5 Waste Storage and Handling**

- 2.5.1 The Operator shall design, maintain and operate all facilities for the storage and handling of waste on the Permitted Installation such that there are no releases to water or land during normal operation and that emissions to air and the risk of accidental release to water or land are minimised.
- 2.5.2 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of litter from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

## **2.6 Waste recovery or disposal**

- 2.6.1 Waste produced at the Permitted Installation shall be:
  - 2.6.1.1 recovered to no lesser extent than described in the Application; and
  - 2.6.1.2 where not recovered, disposed of while avoiding or reducing any impacts on the environment provided always that this is not done in any way that would have a greater effect on the environment than that described in the Application.
- 2.6.2 The Operator shall maintain the waste recovery or disposal table or description submitted in response to Section 2.6 of the Application and in particular review the available options for waste recovery and disposal for the purposes of complying with condition 2.6.1 above.

- 2.6.3 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.
- 2.6.4 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin and delivery date of any waste that is received for disposal or recovery at the Permitted Installation.
- 2.6.5 Bottom ash and hazardous APC residues or fly ash shall not be mixed.
- 2.6.6 Wastes produced at the Permitted Installation shall, as a minimum, be sampled and analysed in accordance with Table 2.6.1. 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.

**Table 2.6.1 : Emission limits and monitoring frequency for solid residues**

Emission point reference	Substance	Limit (including Reference Period)	Monitoring frequency	Monitoring method
Bottom Ash	TOC or LOI <sup>1</sup>	3% (for TOC) or 5% (for LOI)	Monthly	Agency ash sampling protocol.
Bottom Ash	Protein		When Specified	Risk Materials have been incinerated.

Note 1: Operator to confirm in writing to the Agency the substance to be monitored prior to undertaking first test..

## 2.7 Energy Efficiency

- 2.7.1 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information required by condition 4.1.2.
- 2.7.2 The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.
- 2.7.3 The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note as from time to time amended. Energy efficiency shall be secured in particular by:
- ensuring that the appropriate operating and maintenance systems are in place;
  - ensuring that all plant is adequately insulated to minimise energy loss or gain;

- ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
- employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
- where building services constitute more than 5% of the total energy consumption of the Installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and
- maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.

## **2.8 Accident prevention and control**

2.8.1 The Operator shall maintain and implement when necessary the accident management plan submitted or described in response to Section 2.8 of the Application. The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Agency notified of the results of the review within 2 months of its completion.

## **2.9 Noise and Vibration**

2.9.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:

- equipment maintenance, eg. of fans, pumps, motors, conveyors and mobile plant;
- use and maintenance of appropriate attenuation, eg. silencers, barriers, enclosures;
- timing and location of noisy activities and vehicle movements;
- periodic checking of noise emissions, either qualitatively or quantitatively; and
- maintenance of building fabric,

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.9.2 No condition applies.

2.9.3 No condition applies.

## 2.10 On-site Monitoring

- 2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 2.2.2 and 2.2.2a unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions
- 2.10.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Tables 2.2.2 and 2.2.2a, 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.
- 2.10.3 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Tables 2.2.2 and 2.2.2a, the Operator shall perform an Annual Surveillance Test (AST) at least annually, as specified within BS EN 14181.
- 2.10.4 The Operator shall carry out environmental or other specified substance monitoring to the frequencies and methods described in Table 2.10.1

**Table 2.10.1 : Other monitoring requirements**

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
A1, A2	temperature	continuous	As described in the Application	
A1, A2	pressure	continuous	As described in the Application	
A1, A2	oxygen content	continuous	As described in the Application	
A1, A2	water vapour content	continuous	As described in the Application	
A1, A2	Dioxin-like PCBs (WHO-TEQ <sup>1</sup> Humans / Mammals)	Bi-annual periodic measurement, average value over sample	To be determined utilising sampling and analytical techniques	

**Table 2.10.1 : Other monitoring requirements**

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
		period of between 6 and 8 hours.	developed for dioxins/furans (BS EN 1948)	
A1, A2	Dioxin-like PCBs (WHO-TEQ <sup>1</sup> Fish)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)	
A1, A2	Dioxin-like PCBs (WHO-TEQ <sup>1</sup> Birds)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)	
A1, A2	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in condition 6.1.1	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	Procedure shall use BS ISO 11338-1 and BS-ISO 11338-2.	
A1, A2	Dioxins / furans (WHO-TEQ <sup>1</sup> Humans / Mammals)	Bi-annual periodic measurement, average value over sample period of between 6	To be determined utilising sampling and analytical techniques developed for dioxins/furans	

**Table 2.10.1 : Other monitoring requirements**

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
		and 8 hours.	(BS EN 1948)	
A1, A2	Dioxins / furans (WHO-TEQ <sub>Fish</sub> ) <sup>1</sup>	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)	
A1, A2	Dioxins / furans (WHO-TEQ <sub>Birds</sub> ) <sup>1</sup>	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)	
Bottom Ash	Metals (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	Total soluble fraction and metals	Before use of a new disposal or	Sampling and analysis as per Agency	

**Table 2.10.1 : Other monitoring requirements**

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
	(Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	recycling route	ash sampling protocol.	
Spent lime	Metals (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.	
Spent lime	Total soluble fraction and metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper,	Before use of a new disposal or recycling route	Sampling and analysis as per Agency ash sampling protocol.	

**Table 2.10.1 : Other monitoring requirements**

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method	Other specifications
	Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions			
Close to the Secondary Combustion Chamber inner wall at the mid point and outlet as described in the Application	Temperature (° C)	Continuous	Traceable to National Standards	

Note 1: The 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.

- 2.10.5 The Operator shall carry out monitoring of the process variables listed in Table 2.10.1 to the frequencies and methods described in that Table.
- 2.10.6 No condition applies.
- 2.10.7 The Operator shall notify the Agency at least 14 days in advance of undertaking monitoring and/ or spot sampling, where such notification has been requested in writing by the Agency.
- 2.10.8 The Operator shall maintain records of all monitoring taken or carried out (this includes 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.

- 2.10.9 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 2.10.4 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. 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.
- 2.10.10 There shall be provided:
- 2.10.10.1 safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, unless otherwise specified in that Schedule; and
  - 2.10.10.2 safe means of access to other sampling/monitoring points when required by the Agency.
- 2.10.11. The Operator shall carry out the on-going monitoring identified in the Site Protection and Monitoring Programme submitted under condition 4.1.8, unless otherwise agreed in writing by the Agency.
- 2.10.12. No condition applied.

## **2.11 Closure and Decommissioning**

- 2.11.1 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:-
- 2.11.1.1 attention to the design of new plant or equipment;
  - 2.11.1.2 the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out; and
  - 2.11.1.3 the maintenance of a site closure plan to demonstrate that the Installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.
- 2.11.2 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 4 years.
- 2.11.3 The site closure plan shall be implemented on final cessation or decommissioning of the Permitted activities or part thereof.
- 2.11.4 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan.

## **2.12 Multiple Operator installations**

2.12.1 This is not a multi-Operator installation

## **2.13 Transfer to effluent treatment plant**

2.13.1 No transfers to effluent treatment plant are controlled under this Permit.

2.13.2 No condition applies.

### 3 Records

- 3.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
- 3.1.1 be made available for inspection by the Agency at any reasonable time;
  - 3.1.2 be supplied to the Agency on demand and without charge;
  - 3.1.3 be legible;
  - 3.1.4 be made as soon as reasonably practicable;
  - 3.1.5 indicate any amendments which have been made and shall include the original record wherever possible;
  - 3.1.6 be retained at the Permitted Installation, or other location agreed by the Agency in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing; and
  - 3.1.7 where they concern the condition of the site of the Installation or are related to the implementation of the Site Protection and Monitoring Programme, be kept at the Permitted Installation, or other location agreed by the Agency in writing, until all parts of the Permit have been surrendered.

## 4 Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out in accordance with the conditions of this Permit, as follows:-
  - 4.1.2.1 in respect of the parameters and emission points specified in Table S2 to Schedule 2;
  - 4.1.2.2 for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
  - 4.1.2.3 giving the information from such results and assessments as may be required by the forms specified in those Tables; and
  - 4.1.2.4 to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall submit to the Agency a report on the performance of the Permitted Installation over the previous year, by 31 January each year, providing the information listed in Tables S4.1 and S4.2 of Schedule 4, assessed at any frequency specified therein, and using the form specified in Table S3 to Schedule 3.
- 4.1.4 The Operator shall submit an annual performance report on the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency by the 31st January each year. The report shall, as a minimum requirement, give an account of the running of the process and the emissions into air and water compared with the emission standards in the Waste Incineration Directive, as required by Article 12(2) of the Waste Incineration Directive. The first report shall be submitted by the 31st January 2007.
- 4.1.5 The Operator shall review fugitive emissions, having regard to the application of Best Available Techniques, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them within 3 months of the end of such period.
- 4.1.6 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.

- 4.1.7 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the Installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
- 4.1.8 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. The Operator shall implement and maintain the Site Protection and Monitoring Programme (SPMP) submitted under this condition, and shall carry out regular reviews of it at a minimum frequency of every 2 years. The results of such reviews and any changes made to the SPMP shall be reported to the Agency within 1 month of the review or change.
- 4.1.9 No condition applies

## 5 Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- 5.1.1.1 the detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;
  - 5.1.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant pollution;
  - 5.1.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution;
  - 5.1.1.4 any accident which has caused, is causing or has the potential to cause significant pollution;
  - 5.1.1.5 any incident which has led to a period of abnormal operation of incineration or co-incineration plant, as defined in section 6.1.1; and
  - 5.1.1.6 each operation of the abatement bypass when waste is feeding. The report shall include the reasons for operation of the bypass, and the measures taken to prevent recurrence.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1, by sending:-
- 5.1.2.1 for notifications under conditions 5.1.1.1 – 5.1.1.4, the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
  - 5.1.2.2 for notifications under conditions 5.1.1.1 – 5.1.1.4, the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
  - 5.1.2.3 for notifications under condition 5.1.1.5, the information listed in Part C of Schedule 1 as soon as practicable thereafter;
- and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable prior to any of the following:-
- 5.1.3.1 permanent cessation of the operation of part or all of the Permitted Installation;
  - 5.1.3.2 cessation of operation of part or all of the Permitted Installation for a period likely to exceed 1 year; and
  - 5.1.3.3 resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 5.1.3.2.
- 5.1.4 The Operator shall notify the Agency, as soon as reasonably practicable, of any information concerning the state of the Site which adds to that provided to the Agency as part of the Application or to that in the Site Protection and Monitoring Programme submitted under condition 4.1.8 of this Permit.

- 5.1.5 The Operator shall notify the following matters to the Agency in writing within 14 days of their occurrence:-
- 5.1.5.1 where the Operator is a registered company:-
- any change in the Operator's trading name, registered name or registered office address;
  - 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)
  - any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up;
- 5.1.5.2 where the Operator is a corporate body other than a registered company:
- any change in the Operator's name or address;
  - any steps taken with a view to the dissolution of the Operator.
- 5.1.5.3 In any other case: -
- the death of any of the named Operators (where the Operator consists of more than one named individual);
  - any change in the Operator's name(s) or address(es);
  - any steps taken with a view to the Operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership;
- 5.1.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Agency within one month of:-
- 5.1.6.1 a decision by the Secretary of State not to re-certify that Agreement.
- 5.1.6.2 a decision by either the Operator or the Secretary of State to terminate that agreement.
- 5.1.6.3 any subsequent decision by the Secretary of State to re-certify such an Agreement.
- 5.1.7 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:-
- 5.1.7.1 a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement.
- 5.1.7.2 a failure to comply with an annual target under that Agreement at the end of the trading compliance period.

## 6 Interpretation

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

*“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.*

*“Annual release” means the total release during any calendar year commencing 1 January*

*“APC residues” means air pollution control residues*

*“Application” means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations and any other information formally accepted by the Agency as being part of the Application. Responses to the request for information dated 27/05/05 were received on 02/09/05 (main submission). Responses to the requests for information dated 21 & 23/11/05 and 01/12/05 were received on 07/12/05.*

*“background concentration” means such concentration of that substance as is 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;*

*“Bottom Ash” means ash from the third hearth of the primary chamber which has been through the ash box system and has been deposited in the ash skip as described in the application;*

“BOD” means “Biochemical Oxygen Demand”, which means biochemical oxygen demand measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea.”

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

“Commissioning” relates to the period after construction has been completed or when a modification has been made to the plant or the raw materials when the Permitted Installation process is being tested and modified to operate according to its design;

“Controlled waters” shall have the same meaning as in Part III of the Water Resources Act 1991;

“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.

“ELV” means emission limit value.

“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, 2.2.2.5, 2.2.2.8 or 2.2.2.9 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.

“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 the version of the Agency guidance note “H7 - Guidance on the Protection of Land under the PPC Regime: Application Site Report and Site Protection and Monitoring Programme”, including its appended templates for data reporting, which is current at the time of issue of the Permit.

“ $L_{Aeq,T}$ ” 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.

“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.

“*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.

“*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.

“*PM<sub>10</sub>, PM<sub>2.5</sub>, PM<sub>1.0</sub>*,” mean respectively those particulates which have mean particle diameters of 10, 2.5 and 1.0 microns (µm)

“*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.

“*Sewer*” means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

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

“*Staff*” includes employees, directors or other officers of the Operator, and any other person under the Operator’s direct or indirect control, including contractors.

“*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 in sufficient quantity to cover the primary hearth and to initiate steady-state conditions as described in the Application.

“*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)

“*Waste oil*” has the same meaning as in Directive 75/439/EEC

“*WHO*” means the World Health Organisation

“*Year*” means calendar year ending 31 December.

- 6.1.2 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.
- 6.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-
- 6.1.3.1 in relation to gases 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 (including waste oil), 6% dry for solid fuels; and/or
- 6.1.3.2 in relation to gases 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
- 6.1.3.3 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.
- 6.1.3.4 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 conditions 6.1.3.1 – 6.1.3.3 above. In other cases, the measured emissions shall be standardised only for moisture, pressure and temperature.
- 6.1.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.
- 6.1.5 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.

<b>TEF schemes for dioxins and furans</b>				
<b>Congener</b>	<b>I-TEF(1990)</b>	<b>WHO-TEF (1997/8)</b>		
		<b>Humans / Mammals</b>	<b>Fish</b>	<b>Birds</b>
<b>Dioxins</b>				
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	-	-
<b>Furans</b>				

<i>2,3,7,8-TCDF</i>	<i>0.1</i>	<i>0.1</i>	<i>0.05</i>	<i>1</i>
<i>1,2,3,7,8-PeCDF</i>	<i>0.05</i>	<i>0.05</i>	<i>0.05</i>	<i>0.1</i>
<i>2,3,4,7,8-PeCDF</i>	<i>0.5</i>	<i>0.5</i>	<i>0.5</i>	<i>1</i>
<i>1,2,3,4,7,8-HxCDF</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>
<i>1,2,3,7,8,9-HxCDF</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>
<i>1,2,3,6,7,8-HxCDF</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>
<i>2,3,4,6,7,8-HxCDF</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>
<i>1,2,3,4,6,7,8_HpCDF</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>
<i>1,2,3,4,7,8,9-HpCDF</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>
<i>OCDF</i>	<i>0.001</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>

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

## Schedule 1 - Notification of abnormal emissions (Including abnormal operations)

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

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.

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	
Location of the emission	
Time and date of the emission	

Substance(s) emitted	Media	Best estimate of the quantity or the rate of emission	Time during which the emission took place
	e.g. air		
	e.g. groundwater		

Measures taken, or intended to be taken, to stop the emission	
---	--

### Part B

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 or harm 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	1 <sup>st</sup> ½ hour	2 <sup>nd</sup> ½ hour	3 <sup>rd</sup> ½ hour	4 <sup>th</sup> ½ hour	5 <sup>th</sup> ½ hour	6 <sup>th</sup> ½ hour	7 <sup>th</sup> ½ hour	8 <sup>th</sup> ½ hour

Name*	
Post	
Signature	
Date	

\* authorised to sign on behalf of White Rose Environmental Ltd

## Schedule 2 - Reporting of monitoring data

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

<b>Table S2: Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission point</b>	<b>Reporting period</b>	<b>Period begins</b>
Sulphur dioxide mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Sulphur dioxide mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Total Organic Carbon (TOC) mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Total Organic Carbon (TOC) mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Oxides of nitrogen mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Oxides of nitrogen mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Gaseous chlorides as Hydrogen Chloride mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Gaseous chlorides as Hydrogen Chloride mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Gaseous fluorides as Hydrogen Fluoride mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Particulate Matter mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Particulate Matter mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Carbon Monoxide mg m <sup>-3</sup> continuous emissions monitoring data	A1 & A2	Monthly	01/01/2006
Carbon Monoxide mg m <sup>-3</sup> periodic monitoring data	A1 & A2	Every 6 months	01/01/2006
Cadmium & Thallium and their compounds (total) mg m <sup>-3</sup>	A1 & A2	Every 6 months	01/01/2006
Mercury and its compounds mg m <sup>-3</sup>	A1 & A2	Every 6 months	01/01/2006
Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel and Vanadium and their compounds (total) mg m <sup>-3</sup>	A1 & A2	Every 6 months	01/01/2006
Dioxins / furans (I-TEQ) ng m <sup>-3</sup>	A1 & A2	Every 6	01/01/2006

**Table S2: Reporting of monitoring data**

Parameter	Emission point	Reporting period	Period begins
		months.	
Dioxin-like PCBs (WHO-TEQ Humans / Mammals) ng m <sup>-3</sup>	A1 & A2	Every 6 months.	01/01/2006
Dioxin-like PCBs (WHO-TEQ Fish) ng m <sup>-3</sup>	A1 & A2	Every 6 months.	01/01/2006
Dioxin-like PCBs (WHO-TEQ Birds) ng m <sup>-3</sup>	A1 & A2	Every 6 months.	01/01/2006
Poly-cyclic aromatic hydrocarbons (PAHs) ng m <sup>-3</sup>	A1 & A2	Every 6 months.	01/01/2006
Temperature	A1 & A2	As requested by Agency site inspector.	01/01/2006
Pressure	A1 & A2	As requested by Agency site inspector.	01/01/2006
Oxygen content	A1 & A2	As requested by Agency site inspector.	01/01/2006
Water vapour content (unless gas is dried before analysis of emissions)	A1 & A2	As requested by Agency site inspector.	01/01/2006
Furnace Chamber Temperature	Line 1 & Line 2 Exit to secondary chambers	As requested by Agency site inspector.	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 Line 1 and 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 Line 1 and Line 2	Before use of a new disposal or recycling route	01/01/2006
TOC or LOI (as approved in writing by Environment Agency see table 2.6.1)	Bottom Ash Line 1 and Line 2	Monthly	01/01/2006
Metals (Cadmium, Thallium, Mercury, Lead,	Spent lime	Every 6	01/01/2006

**Table S2: Reporting of monitoring data**

<b>Parameter</b>	<b>Emission point</b>	<b>Reporting period</b>	<b>Period begins</b>
Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	Line 1 and Line 2	months.	
Total soluble fraction and metals (Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Spent lime Line 1 and 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
Performance indicators as set out in Schedule 4	Installation	Every 12 months	01/01/2006

## Schedule 3 - Forms to be used

<b>Table S3: Reporting Forms</b>		
<b>Media or parameter</b>	<b>Form Number</b>	<b>Date of Form</b>
Air: Periodic monitored emissions biannually	Agency Form / XP3838ST / A1 / Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of particulates	Agency Form / XP3838ST / A2/ Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of TOC	Agency Form / XP3838ST / A3 / Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of Gaseous chlorides as Hydrogen Chloride	Agency Form / XP3838ST / A4 / Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of Carbon monoxide	Agency Form / XP3838ST / A5 / Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of Sulphur dioxide	Agency Form / XP3838ST / A6 / Form dated 9th December 2005	9th December 2005
Air: Continuously monitored emissions of Oxides of nitrogen	Agency Form / XP3838ST / A7 / Form dated 9th December 2005	9th December 2005
Bottom Ash, Spent Lime: Composition	Agency Form / XP3838ST / Ash1 / Form dated 9th December 2005	9th December 2005
Bottom Ash, Spent Lime: Solubility	Agency Form / XP3838ST / Ash2 / Form dated 9th December 2005	9th December 2005
Energy	Agency Form / XP3838ST / E1 / Form dated 9th December 2005	9th December 2005
Waste Return	Agency Form / XP3838ST / R1 / Form dated 9th December 2005	9th December 2005
Water usage	Agency Form / XP3838ST / WU1 / Form dated 9th December 2005	9th December 2005

Performance indicators	Agency Form / XP3838ST / PI1 / Form dated 9th December 2005	9th December 2005
------------------------	---	-------------------

## Schedule 4 - Reporting of performance data

Data required to be recorded and reported by Condition 4.1.3. The data should be assessed at the frequency given and reported annually to the Agency.

<b>Table S4.1: Annual Production/Treatment</b>	
Total Clinical Waste Incinerated	tonnes
Total Hazardous Waste Incinerated	tonnes
Total Cytotoxic and Cytostatic Waste Incinerated	tonnes
Electrical Energy generated and used on installation	KWhrs

<b>Table S4.2: Performance parameters</b>		
Parameter	Frequency assessment	of Performance indicator
Electrical energy Imported to site	Quarterly	KWhrs / tonne of waste incinerated
Gas Consumption	Quarterly	m <sup>3</sup> /tonne of waste incinerated
Mass of Bottom Ash produced	Quarterly	kg/ tonne of waste incinerated
Mass of APC residues produced	Quarterly	kg/ tonne of waste incinerated
Activated Carbon consumption	Quarterly	kg/ tonne of waste incinerated
Lime consumption	Quarterly	kg/ tonne of waste incinerated
Water consumption	Quarterly	m <sup>3</sup> / tonne of waste incinerated

## Schedule 6 - List of Permitted Wastes

Permitted Waste Types		
Description (treatment type)	European Waste Catalogue Number (where available) or other specification	Waste type as defined in Table 2.1.2
Identifiable human tissue, blood, animal carcasses and tissue from veterinary centres, hospitals or laboratories. Soiled surgical dressings, swabs and other similar soiled waste. Other waste materials, for example from infectious disease cases, excluding any in HSAC groups B-E. <b>(HSAC Group A or equivalent)<sup>1</sup></b>	<b>18 01 02</b> - body parts and organs including blood bags and blood preserves (except 18 01 03) <b>18 01 03*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections <b>18 01 04</b> – wastes whose collection and disposal is not subject to special requirements in order to prevent infection <b>18 02 02*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections <b>18 02 03</b> – waste whose collection and disposal is not subject to special requirements in order to prevent infection	Clinical waste
Discarded syringe needles, cartridges, broken glass and any other contaminated disposable sharp instruments or items. <b>(HSAC Group B or equivalent)<sup>1</sup></b>	<b>18 01 01</b> - sharps (except 18 01 03) <b>18 01 03*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections <b>18 02 01</b> - sharps (except 18 02 02) <b>18 02 02*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections <b>18 01 08*</b> - cytotoxic and cytostatic medicines <b>18 01 09</b> - medicines other than those mentioned in 18 01 08 <b>18 02 07*</b> - cytotoxic and cytostatic medicines <b>18 02 08</b> - - medicines other than those mentioned in 18 02 07 <b>20 01 99</b> - other fractions not otherwise specified	Clinical waste
Municipal sharps collection		Specified municipal and separately collected wastes

<p>Microbiological cultures and potentially infected waste from pathology departments and other clinical or research laboratories including contaminated HEPA filters  <b>(HSAC Group C or equivalent)<sup>1</sup></b></p>	<p><b>18 01 03*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections  <b>18 02 02*</b> - wastes whose collection and disposal is subject to special requirements in order to prevent infections</p>	<p>Clinical waste</p>
<p>Autoclaved microbiological waste from pathology laboratories</p>	<p><b>19 02 09*</b> - solid combustible wastes containing dangerous substances  <b>19 02 10</b> - combustible wastes other than those mentioned in 19 02 08 and 19 02 09  <b>19 02 99</b> - wastes not otherwise specified</p>	<p>Clinical waste</p>
<p>Drugs or other pharmaceutical products  <b>(HSAC Group D or equivalent)<sup>1</sup></b></p>	<p><b>18 01 08*</b> – cytotoxic and cytostatic medicines  <b>18 01 09</b> – medicines other than those mentioned in 18 01 08  <b>18 02 07*</b> – cytotoxic and cytostatic medicines  <b>18 02 08</b> – medicines other than those mentioned in 18 02 07  <b>18 01 06*</b> - chemicals consisting of or containing dangerous substances  <b>18 01 07</b> - chemicals other than those mentioned in 18 01 06  <b>18 02 05*</b> - chemicals consisting of or containing dangerous substances  <b>18 02 06</b> - chemicals other than those mentioned in 18 02 05</p>	<p>Clinical waste</p>
<p>Medicines collected from domestic households</p>	<p><b>20 01 31*</b> – cytotoxic and cytostatic medicines  <b>20 01 32</b> – medicines other than those mentioned in 20 01 31</p>	<p>Specified municipal and separately collected wastes</p>
<p>Items used to dispose of urine, faeces and other bodily secretions or excretions which do not fall within Group A (or equivalent). This includes used disposable bed pans or bed pan liners, incontinence pads, stoma bags, and urine containers  <b>(HSAC Group E or equivalent)<sup>1</sup></b></p>	<p><b>18 01 04</b> – wastes whose collection and disposal is not subject to special requirements in order to prevent infection  <b>18 02 03</b> – waste whose collection and disposal is not subject to special requirements in order to prevent infection</p>	<p>Clinical waste</p>
<p>Genetically modified waste</p>	<p><b>02 01 02</b> -animal tissue waste  <b>02 01 03</b> -plant tissue</p>	<p>Mixed agricultural / food wastes</p>

Impounded/condemned foodstuffs	<b>02 02 02</b> – animal tissue waste <b>02 02 03</b> – material unsuitable for consumption or processing <b>02 02 99</b> – wastes not otherwise specified <b>02 03 04</b> – materials unsuitable for consumption or processing <b>02 03 99</b> – wastes not otherwise specified <b>02 05 01</b> - materials unsuitable for consumption or processing <b>02 05 99</b> - wastes not otherwise specified <b>02 06 01</b> – materials unsuitable for consumption or processing <b>02 06 99</b> - wastes not otherwise specified	Mixed agricultural / food wastes
Out of date and/or out of specification drugs	<b>07 05 13*</b> - solid wastes containing dangerous substances <b>07 05 14</b> - solid wastes other than those mentioned in 07 05 13 <b>07 05 99</b> - wastes not otherwise specified	Specified pharmaceutical wastes
Discarded packaging associated with permitted wastes	<b>15 01 01</b> - paper and cardboard packaging <b>15 01 02</b> - plastic packaging <b>15 01 05</b> - composite packaging <b>15 01 06</b> - mixed packaging <b>15 01 09</b> - textile packaging <b>15 01 10*</b> - packaging containing residues of or contaminated by dangerous substances	Waste packaging
Scene of crime/accident materials	<b>16 01 21*</b> - hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14	Mixed confidential/contaminated wastes
Confidential material (paper/electronic)	<b>16 02 14</b> – discarded equipment other than those mentioned in 16 02 09 to 16 02 12	Mixed confidential/contaminated wastes
Biologically contaminated equipment	<b>16 02 13*</b> - discarded equipment containing hazardous components <b>16 02 15*</b> - hazardous components removed from discarded equipment <b>16 02 16</b> - components removed from discarded equipment other than those mentioned in 16 02 15	Mixed confidential/contaminated wastes

Biologically contaminated soils	<b>17 01 06*</b> -mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances <b>17 02 04*</b> -glass, plastic and wood containing or contaminated with dangerous substances <b>17 05 03</b> -soil and stones containing dangerous substances	Biologically contaminated soils
Drugs related litter /confiscated drugs	<b>20 01 99</b> other fractions not specified	Specified municipal and separately collected wastes
Animal faeces collected from parks/gardens	<b>20 02 01</b> biodegradable waste	Specified municipal and separately collected wastes

---

Any waste authorised under the Radioactive Substances Act 1993

Note

- Reference to the HSAC Groups A -E means Health Services Advisory Committee recommendations for sub-division of waste as described in the Safe Disposal of Clinical Waste (HSE 1999)  
 Reference to 'or equivalent' means waste segregated and described in any other manner that meets the factual description of the HSAC references.

END OF PERMIT