

# ENVIRONMENTAL PERMIT

Ref. EP2008/10



**HARTLEPOOL**  
**BOROUGH COUNCIL**

**Pollution  
Prevention and Control  
Act 1999**

**Environmental  
Permitting  
(England & Wales)  
Regulations 2010 (as  
amended)**

**Hartlepool Crematorium,  
Stranton Grange Cemetery,  
Tanfield Road,  
Hartlepool  
TS25 5DD**



**Pollution Prevention and Control Act 1999  
THE ENVIRONMENTAL PERMITTING (England & Wales) REGULATIONS  
2010 (As Amended)**

**Permit Reference No. EP2008/10**

**Contents**

<b>Section</b>	<b>Page</b>
<b>1. Introductory Note and Description of Permitted Installation</b>	<b>3</b>
<b>2. Permit Conditions</b>	<b>10</b>
<b>3. Location of Permitted Installation, Site Plan &amp; Process Flow Diagram</b>	<b>38</b>
<b>4. Explanatory Memorandum including Appeals Procedure.</b>	<b>43</b>





# **Section One**

## **Introductory Note & Description of Permitted Installation**



**Pollution Prevention & Control Act 1999  
 Environmental Permitting (England & Wales) Regulation 2010**

**Permit Ref No. EP2008/10**

**Introductory Note**

<b>Permit Holder:</b>	<b>The Green Spaces Development Officer</b>
	Hartlepool Crematorium, Stranton Grange Cemetery, Tanfield Road, Hartlepool TS25 5DD
<b>Registered Address of Company:</b>	Hartlepool Borough Council Civic Centre, Hartlepool. TS24 8AY

<b>Provenance</b>	<b>Date</b>
Authorisation issued (EPA 90)	22 <sup>nd</sup> September 1992
Permit issued (LAPC)	31 <sup>st</sup> March 2004
Env. Permit 'deemed' application	6 <sup>th</sup> April 2008
Env. Permit issued (LAPPC)	
Permit Varied	30 <sup>th</sup> April 2010
Permit Varied	18 <sup>th</sup> March 2014

**The Green Spaces Development Officer is hereby permitted by Hartlepool Borough Council to carry on the cremation of human remains in accordance with the following conditions under The Environmental Permitting Regulations (England and Wales) 2010 (As amended), as described below and within the installation boundary as marked red on the attached plan reference EP2008/10/A and in accordance with the conditions detailed in Section 2 of this Permit.**

Signed.....  ..... Date..... 18/03/2014 .....

**Director of Public Health.**



## Process Description

The cremation of human cadavers and coffins using two Diamond SH4 cremators with natural gas as a primary fuel.

The plant is for the sole purpose of carrying out the cremation of human cadavers and coffins in accordance with existing statutory requirements and codes of practice. The cremator and the abatement system are PLC controlled to ensure consistent efficient operation and have inbuilt corrective response programming to maintain control of all aspects of the operating conditions within to achieve a safe, clean and efficient cremation process. Before a coffin is charged the cremator is preheated to the required operating temperatures - the main precondition being that the secondary combustion zone maintains a minimum temperature of 800°C throughout the cremation process.

Once achieved the coffin is charged into the main combustion chamber and cremation, under controlled conditions, takes place over a typical average time of 75 to 100 minutes – some cremations may take in excess of these times. On completion of the cremation cycle and in accordance with existing codes of practise, the cremated remains are manually raked from the main combustion chamber into a lower section of the cremator for refinement and cooling.

Crematoria are prescribed for Local Authority Pollution Control, under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) Number 675.

The coffin may only be made of certain materials, the main prohibition being on materials containing PVC (Poly Vinyl Chloride) including many plastics which may lead to the production of highly toxic Dioxins and Furans. One of two [J. G Shelton & Co Diamond SH-4, *natural* gas fired cremators are used to cremate the body. The cremators consist of a 2.34m<sup>3</sup> primary combustion and 4.43m<sup>3</sup> secondary chamber. The secondary chamber is designed to hold the (mainly gaseous) products of combustion from the primary chamber, before being discharged into the associated exhaust gas cleaning (abatement) system, or released via a 11.25 m vertical vent that exits through the roof of the cremation building.

The secondary combustion chamber is designed to destroy any dioxins that may form or have been incompletely destroyed in the primary chamber. Dioxin monitoring is reactive, time consuming and costly and so reliance is placed on complete combustion. Continuous monitoring at the outlet from the secondary chamber provide readings displayed on the cremator and in the control room indicating the percentage of Oxygen, and concentration of Carbon Monoxide. Servomex 4900 analysers are employed for this task. An ETR Unidata Model Zeta monitor system continuously records the concentration of particulate matter discharged post abatement system: dioxins can form on particles of soot, which are themselves indicators of incomplete combustion. Type K Thermocouples [3 per cremator] record the temperature within both chambers, whilst the secondary chamber is designed to be able to hold all products of combustion from the primary chamber for a minimum of 2 seconds under optimum loading, at 850°C. All monitors are connected to visible alarms which are set to trigger at the following levels



- Oxygen (<6%)
- Carbon Monoxide (>100 mg/m<sup>3</sup>)
- Secondary Inlet & Outlet temperatures: <800<sup>0</sup>C (<850<sup>0</sup>C for non-abated operation)
- Particulates: >20mg/m<sup>3</sup>

The results are continuously recorded by a computer which can store the data for later retrieval and calculate running averages.

Once per year, representative isokinetic samples are taken at a designated sample point on the filter discharge duct in accordance with BS/M. These "manual extractive" samples are taken to check that emissions of particulates, Carbon Monoxide, Total Volatile Organic Compounds, Hydrogen Chloride and Mercury are within acceptable limits.

An interlock prevents a coffin from being placed within either of the cremators where the secondary chamber temperature is below 800<sup>0</sup>C (or below 850<sup>0</sup>C for unabated operation). The coffin is placed inside and the door to the cremator sealed. The cremator then commences on a five part cremation cycle:

- (i) the brief "flash" caused by volatisation of the veneer on the outside of the coffin,
- (ii) burning of the coffin
- (iii) after the coffin breaks open, burning of the coffin and cremation of the body.
- (iv) calcification of the remains and
- (v) ashing

Typically these phases last between 55 – 180 minutes. Throughout the cremation cycle the various environmental monitors are recording the parameters set above and the cremator operator can make adjustments where parameters appear to be falling close to or outside acceptable limits.

The flue gases from each cremator enter an air(flue gas)-to-oil cooler at 800 - 1000<sup>0</sup>C via a refractory-lined duct and are cooled down to the abatement system operating temperature of 130-150<sup>0</sup>C.

The cooling oil is circulated through a closed-loop to an air blast cooler for removal of the waste heat. The cooling oil typically enters the cooler at 100<sup>0</sup>C and exits at 200<sup>0</sup>C, giving very high thermal efficiency.

After the cooler the flue gases pass through a pre-separator cyclone to the filter. The cyclone operates on centrifugal force, removing any sparks and coarse particles of sufficient mass to cause damage to the bag filter, thus minimising the fire risk. The particulate material collected by the cyclone is fed through a rotary valve airlock into a bin for disposal.

The bag filter performs high efficiency particulate removal from the flue gases in excess of 99.9%, with emissions generally in the range of 0-2 mg/m<sup>3</sup>. During normal operation, a 'cake' of dust builds on the outside of the filter bags, causing an increase in differential pressure from the dirty to the clean side. Periodically, this is removed by means of a compressed air pulse in the reverse direction to flow. The control system for the filter

cleaning, which is fully automatic in operation, minimising energy and compressed air consumption is activated by this differential pressure, ensuring that there is always an optimum depth of built-up 'cake' for efficient particulate removal. During the cleaning process of the filter, the collected dust cake falls into the hopper, from which it is fed through a rotary valve airlock into a bin for periodic disposal.

From the bag filter, the cleaned flue gas passes to carbon beds. These are static vessels containing activated carbon, and perform the task of removing the desired contaminants, e.g. any mercury present, and noxious gases such as SO<sub>2</sub>, and especially HF and HCl. It also removes any dioxins/furans which managed to re-form, thereby ensuring a belt-and-braces approach to flue gas cleaning. The carbon beds hold sufficient adsorbent to last 12-24 months.

The main centrifugal ID fan operates in clean air and draws the cleaned gases through the cooler, cyclone, filter and carbon bed, and releases them to atmosphere through a discharge stack. The fan is controlled by an inverter variable speed drive. The inverter takes its signal from the cremator transducer, to maintain a constant negative pressure in the secondary chamber irrespective of total system pressure loss. The fan therefore runs at the minimum speed necessary to ensure correct exhaust rates, at minimum energy consumption and maximum efficiency.

The whole process is automatically PLC controlled requiring minimal operator input; the PC shows a schematic of the whole system, with data on process set-points, pressures, temperatures, motor speeds, etc.

When the cremation cycle is completed, the remains, mainly bone are raked into a metal, sealed box beneath the grate of the cremator. During ash handling and treatment the equipment used is equipped with a dust extraction system which utilises an internal high efficiency fabric filter to capture all particulate material during the process. The dust is typically stored in an urn for the relatives of the bereaved to collect or else the ashes are scattered in the grounds.

In the context of this permit, "process" or activity comprises the whole process from receipt to dispatch of materials, and including the treating, handling and storage of all materials relating to the process.



## **Potential Releases**

The key emissions from these processes that constitute pollution for the purposes Crematoria are prescribed for Local Authority Pollution Control, under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) Number 675 and the Pollution Prevention Control Act 1999 and therefore warrant control are those consisting of odour, particulate matter, hydrogen chloride, nitrogen oxides, carbon monoxide, volatile organic compounds (from methane to polyaromatic hydrocarbons i.e. PAH), mercury compounds and PCDD/F. (PCDD/F are polychlorinated dibenzo-pdioxins and furans - often referred to simply as dioxins).

The flue gases are the main source of these releases and potential releases from crematoria.

The cremated remains size reduction machine may emit particulate matter.

At processes with gas cleaning, gas cleaning residues may emit particulate matter.

# **Section Two**

## **Permit Conditions**



**Pollution Prevention & Control Act 1999  
 Environmental Permitting (England & Wales) Regulation 2010**

**Permit Ref No. EP2008/10**

The conditions contained within this Permit are based upon Secretary of States Guidance Note PG 5/2 (12), for.

The requirements of the conditions attached to this permit shall come into effect on the date indicated in the individual condition or if no date is indicated shall take effect forthwith.

**1.0 Emission Limits, Monitoring and other Provisions**

1.1 The following are the emission limits for each cremator and no results obtained from non-continuous monitoring shall exceed these limits:

**Table 1: Emission Limits, Monitoring and other Provisions**

Row	Substance	Mass Limits per Cremator	Conc. Limits	Type of Monitoring	Monitoring Frequency (see notes following)
1	Hydrogen chloride (excluding particulate matter)	N / A	30 mg/m <sup>3</sup> averaged over an hour	Extractive test (in accordance with the requirements with this permit)	Annual
2	Total particulate matter from cremator	N / A	20 mg/m <sup>3</sup> averaged over an hour	Provision of visual alarms and record levels and alarms  Manual extractive test (as above) capable of collecting 75% of particulate matter with a diameter of 0.1 micron or less.	Continuous  Annual
3	Carbon monoxide	N / A	100 mg/m <sup>3</sup> averaged over the first hour for 95% of cremations; and 200 mg/m <sup>3</sup>	Record data at 15 second intervals or less. Provide visual alarms and record alarm events.	Annual  Periodic monitoring.  Validation of continuous emissions

Row	Substance	Mass Limits per Cremator	Conc. Limits	Type of Monitoring	Monitoring Frequency (see notes following)
			averaged over the first hour for all other cremations.		monitor (CEM) output through comparison with periodic test results.
4	Organic compounds (exc particulate matter) expressed as carbon	N / A	20mg/m <sup>3</sup> averaged over an hour of cremation		Annual test
5	Particulate matter from cremated remains reduction plant (cremulator) that vents externally	N / A	50mg/m <sup>3</sup> with no correction for oxygen concentration or water vapour		On commissioning
Row	Parameter	Combustion Provision		Type of Monitoring	Frequency
6	Temperature	Minimum of 1073K (800°C) in the secondary combustion chamber		Measure at the entrance and after the exit from the secondary combustion chamber. Automatically record temperatures. Visual alarm when temperature <1073K. Interlock to prevent cremator loading.	Continuous  Continuous  Record alarm activations Operate when temperature and combustion provisions in rows 6 & 7 are not met
7	Oxygen	At the end of the secondary combustion chamber, measured wet or dry, minimum average 6% and minimum 3%		Monitor and record of concentration at outlet of secondary combustion chamber.  Visual alarm and record alarm activations	Continuous  Activate alarm when oxygen falls below provision.



Row	Substance	Mass Limits per Cremator	Conc. Limits	Type of Monitoring	Monitoring Frequency (see notes following)
				During discontinuous tests, continuous reference oxygen measurements shall be at the same sampling locations as the parameters tested	
If the combustion provisions are not met, then the dioxin emission limit by extractive testing in row 8 below shall be applied					
Row	Substance	Mass Limits per Cremator	Conc. Limits	Type of Monitoring	Monitoring Frequency (see notes following)
8	PCDD/F On existing processes that don't meet the combustion provisions above	N / A	0.1ng/m <sup>3</sup> as ITEQ	Extractive  Temperature, oxygen and any flow parameters that apply during the dioxin tests, shall be required by this permit. Interlock to prevent cremator loading unless those parameters are met	On commissioning  Continuous
9	Mercury	N/A	50 micrograms/m <sup>3</sup>	Periodic	Annual



- 1.2 The permitted installation shall consist only of that plant and equipment stated in the process description as detailed in Section one of this Permit. No other plant or equipment shall be used without the prior written notification/consent of the regulator.
- 1.3 The emission limit values and provisions described in this section are achievable using the best available techniques. Monitoring of emissions should be carried out according to the method specified in this section or by an equivalent method agreed by the regulator

### **Monitoring, investigations and recording**

- 1.4 The need for and scope of testing, and the frequency and time of sampling depend on local circumstances, operational practice and the scale of operation. As part of proper supervision the operator will monitor emissions, make tests and inspections of the process and keep records, in particular:

The operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. The records should be:

- kept on site
- kept by the operator for at least two years; and
- made available for the regulator to examine

If any records are kept off-site they should be made available for inspection within one working week of any request by then regulator.

### **Information required by the regulator**

- 1.5 The regulator needs to be informed of monitoring to be carried out and the results. The results should include process conditions at the time of monitoring.
- The operator should notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator should state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
  - The results of non-continuous emission testing should be forwarded to the regulator within 8 weeks of completion of the sampling.
  - Adverse results from any monitoring activity (both continuous and non-continuous) should be investigated by the operator as soon as the monitoring data has been obtained and the regulator informed of the steps taken and the re-test results.

- 1.6 Adverse results from **any** monitoring activity (both continuous and non-continuous) shall be investigated by the operator as soon as the monitoring data has been obtained/received. The operator shall:
- identify the cause and take corrective action
  - record as much detail as possible regarding the cause and extent of the problem, and the action taken by the operator to rectify the situation
  - re-test to demonstrate compliance as soon as possible; and
  - notify the regulator

### **Visible and odorous emissions**

- 1.7 Visible and odorous emissions shall be limited and monitored as follows.
- Emissions from cremations should be free from visible smoke and in any case should not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742:1969.
  - Abnormal emissions require action.
  - There should be no offensive odour beyond the process boundary, as perceived by the regulator.
  - Whilst problems are ongoing, visual and olfactory boundary checks should also be made once per day when an installation is being operated. The time, location and result of these checks, along with weather conditions such as indicative wind direction and strength, should be recorded. Once the source of the emission is known, corrective action should be taken without delay and where appropriate the regulator may want to vary the permit in order to add a condition requiring the particular measure(s) to be undertaken.
  - All releases to air, other than condensed water vapour, shall be free from persistent visible emissions.
  - All emissions to air shall be free from droplets.

### **Abnormal Events**

- 1.8 The regulator needs to be notified about certain events, whether or not there is related monitoring showing an adverse result, and the operator shall respond to problems which may have an adverse effect on emissions to air. In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator shall:
- investigate and undertake remedial action **immediately**
  - adjust the process or activity to minimise those emissions; and
  - promptly record the events and actions taken

- 1.9 The regulator shall be informed without delay:



- if there is an emission that is likely to have an effect on the local community; or
- in the event of the failure of key arrestment plant, for example flue gas cleaning plant or use of the dump stack; or
- if the continuous monitoring results exceed the specified emission limit

### **Continuous monitoring**

1.10 Continuous indicative monitoring can be used as a management tool. In conjunction with continuous recording it identifies any trends in emissions; for example, that emissions are gradually increasing, which may indicate a need for maintenance. It can also be used with or without continuous recording to trigger an alarm when there is a sudden increase in emissions; for example, if arrestment plant fails. For a given concentration of particulate the output level varies with the instrument. It should be noted that not all monitors provide a linear response to an increase in particulate matter. The monitor shall be set up to provide a baseline output when the plant is known to be operating under the best possible conditions; i.e. such that emissions are fully compliant with the provisions. The instrument manufacturer should be able to set an output level which corresponds to around 95% of the emission limit, to trigger the alarms. Thus the alarms are activated in response to this significant increase in particulate loading above the baseline, so that warning of the changed state is given before an unacceptable emission occurs.

1.11 Where continuous monitoring is required, it shall be carried out as follows:

- All continuous monitoring readings shall be on display to appropriately trained operating staff.
- Instruments shall be fitted with visual alarms, situated appropriately to warn the operator of arrestment plant failure or malfunction.
- The activation of alarms shall be automatically recorded.
- All continuous monitors shall be operated, maintained and calibrated (or referenced) in accordance with the manufacturers' instructions, which shall be made available for inspection by the regulator. The relevant maintenance and calibration (or referencing) shall be recorded.
- All new continuous monitoring equipment shall be designed for less than 5% downtime over any 3-month period.
- For all continuous measurements, the mass of emissions per hour is calculated from the measured values from 2

minutes after the close of coffin loading door until the removal of calcined remains.

- The operator shall decide whether to report for periods of 4 weeks or 1 month.

1.13 For each cremator, for carbon monoxide, and for particulate matter, the operator shall report the following continuous monitoring values to the regulator every 6 months.

- monthly or four weekly average from the first hour of each cremation
- values that exceed the 95% limit for each substance in Table 1 in that period for each cremation
- 60 minute mean emission values that exceed the 100% limit for each substance in Table 1 in that period for each cremation
- a list of the highest 60minute mean emission value for each period
- the 95-percentile value for each period.

1.14 For temperature and oxygen, the operator shall report the following continuous monitoring values to the regulator every 6 months

- secondary chamber entrance temperature, 4 weekly / monthly maximum and minimum (of 5 minute averages).
- secondary chamber exit temperature, 4 weekly / monthly maximum and minimum (of 5 minute averages).
- oxygen concentration, 4 weekly / monthly minimum (of 5-minute averages).

1.15 Where the combustion provisions in **Table 1** Rows 6 and 7 are not met continuously, then more detailed reporting may be needed. The results shall be presented in a format that enables the regulator to check compliance for oxygen, temperature, carbon monoxide and particulate matter with **Table 1**. This data should be kept available.



## **Calibration and Compliance Monitoring**

- 1.16 Calibration of quantitative instruments and compliance monitoring shall meet the following provisions as appropriate: No result shall exceed the emission concentration limits specified, except where either:
- data is obtained over at least 5 sampling hours in increments of 15 minutes or less; or
  - at least 20 results are obtained where sampling time increments of more than 15 minute are involved; AND in the case of (a) or (b)
  - no daily mean of all 15-minute mean emission concentrations shall exceed the specified emission concentration limits during normal operation (excluding start-up and shut-down); and
  - no 15-minute mean emission concentration shall exceed twice the specified emission concentration limits during normal operation (excluding start-up and shut-down).
- 1.17 Non-continuous emissions monitoring of particulate matter shall be carried out according to the main procedural requirements of BS ISO 9096: 2003, with averages taken over operating periods, excluding start-up and shutdown.

## **Varying Monitoring Frequency**

- 1.18 Where non-continuous quantitative monitoring is required, the frequency may be varied. Where there is consistent compliance with emission limits, the regulators may consider reducing the frequency. When determining "consistent compliance" factors to consider include:
- (a) the variability of monitoring results, for example, results which range from 15 - 45 mg/m<sup>3</sup> , against an emission limit of 50 mg/m<sup>3</sup> might not qualify for a reduction in monitoring.
  - (b) the margin between the results and the emission limit, for example, results which range from 45 - 50 mg/m<sup>3</sup> when the limit is 50 mg/m<sup>3</sup> might not qualify for a reduction in monitoring.
- 1.19 Consistent compliance shall be demonstrated using the results from at least;
- three or more monitoring exercises within two years; or
  - two or more monitoring exercises in one year supported by continuous monitoring

1.20 Any significant process changes, which might have affected the monitored emission, shall be taken into account. The frequency of testing shall be increased, for example, as part of the commissioning of new or substantially changed processes, or where emission levels are near to or approach the emission concentration limits.

### **Sampling provisions**

1.21 Care is needed in the design and location of sampling systems in order to obtain representative samples. BS ISO 9096 calls for sampling within a straight section of flue, about 7 to 10 diameters in length.

- The operator shall ensure that adequate facilities for sampling are provided on vents or ducts.
- Sampling points on new plant shall be designed to comply with the British or equivalent standards.

### **Mercury abatement**

1.22. The operator shall reduce mercury emissions using carbon capture as part of the exhaust gas abatement plant. The operator shall send the regulator, by no later than 1 April each year, a certificate issued by the CAMEO Burden Sharing Scheme or appropriate evidence from a comparable audited burden sharing arrangement or scheme which specifies, (excluding those cremations involving stillbirths, perinatal deaths, and deaths of infants under 5 years old):-

- a) the total number of cremations in the previous 12 months; and
- b) the number of cremations undertaken in the previous 12 months in cremators fitted with operational mercury abatement equipment; or
- c) the proportion of cremations undertaken in the previous 12 months subject to burden sharing arrangements under which money is paid for the benefit of abated crematoria; or
- d) in cases where operational mercury abatement equipment is fitted but fewer than 50% of cremations at the installation were undertaken in cremators fitted with such equipment in the previous 12 months, the relevant information in both b) and c).



## **2.0 Control Techniques**

### **Summary of Best Available Techniques**

- 2.1 The following table provides a summary of the best available techniques that can be used to control the process in order to meet the emission limits and provisions in **Section 1**. Provided that it is demonstrated to the satisfaction of the regulator that an equivalent level of control will be achieved, then other techniques may be used.

**Table 2: Summary of Control Techniques**

Release Source	Substance	Control Techniques
Flue gas	Odour	Good combustion and a secondary combustion zone
	Particulate matter	Good combustion, slow gas velocities and a secondary combustion zone
	Hydrogen chloride	Minimise halogens combusted, avoid excessive temperature in primary chamber Abatement further minimises emissions
	Nitrogen oxides	No control
	Carbon monoxide	Good combustion and a secondary combustion zone
	Volatile organic compounds	Good combustion and a secondary combustion zone
	Mercury and its compounds	Abatement.
	PAH	Good combustion and a secondary combustion zone
	PCDD/F	Minimise chlorine combusted and particulate matter emitted, good combustion and a secondary combustion zone Abatement further minimises emissions
Cremated remains size reduction machine	Particulate matter	Filter integral with machine.
Spent gas-cleaning materials	Particulate matter Mercury	Keep containers tightly lidded

## **Techniques to control emissions from contained sources**

### **2.2 Odour**

Odour is prevented by good combustion.

### **2.3 Particulate matter**

Particulate matter in flue gases (including smoke) is controlled by good combustion and by gas flows that do not carry particles out of the cremator. Arrestment is not usually needed to meet the emission limit at existing and substantially changed processes. At new processes arrestment is needed.

### **2.4 Hydrogen chloride**

Hydrogen chloride mostly arises from the salt content of bodies and is not arrested at existing and substantially changed processes but dispersed. Chlorine is avoided in coffins, shrouds, clothing and other materials burnt. Condensation is prevented by dilution and preheating stacks. At new processes hydrogen chloride is arrested.

### **2.5 Nitrogen oxides**

Nitrogen oxides arising from coffins might be lessened by switching from coffins made using board made from wood and nitrogen-containing resins. However plain wood is considered too expensive to be required as BATNEEC/BAT. Cardboard caskets also contain nitrogen in the wet strength additives. Thermal NO<sub>x</sub> is minimal due to the secondary chamber temperature and because combustion is staged over primary and secondary chambers.

### **2.6 Carbon monoxide**

Carbon monoxide is a pollutant but is also an indicator of incomplete combustion that emits un-burnt hydrocarbons, PAH and PCDD/F, which are much more difficult to monitor. Arrestment of carbon monoxide is not BATNEEC/BAT but good combustion minimises emissions. Carbon monoxide emissions after the first 60 minutes ought to be minimal

### **2.7 Volatile organic compounds**

Volatile organic compounds are also controlled by good combustion.

## **2.8 Mercury and its compounds**

Mercury is highly volatile and therefore almost exclusively passes into the flue-gas stream. Mercury is only partially removed with particulate matter. The rest remains in the flue gases as volatile compounds. Where activated carbon is used as part of the abatement technique, operators should be aware of potential health and safety risks arising from spontaneous combustion.

## **2.9 Dioxins**

Good combustion and low particulate matter emissions minimise the emission of PCDD/F (polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, often referred to as 'dioxins and furans', or even just as 'dioxin').



## **2.10 Coffin Materials and Cremator Design**

The emission limits and provisions specified in **Section 1** above may be achieved by careful use of materials in coffin construction and furnishing and by cremator design and operation (including arrestment at new processes).

The range of materials used for coffin or casket construction has increased recently and now includes cardboard, wickerwork (made from willow) as well as wood composite board and solid wood. Shrouds are also available and often use natural fibres such as cotton and linen. A body in a shroud may be supported on a stiff baseboard. Materials to be avoided in coffin or casket construction, furnishings and body preparation/embalming include chlorinates, metals (except steel screws and staples), wax and more than a thin layer of water based lacquer on wood. PVC and melamine shall not be used in coffin construction or furnishings. Cardboard coffins shall not contain chlorine in the wet-strength agent. (e.g. not using polyamidoamine-epichlorhydrin based resin (PAA-E))

Packaging for stillbirth, neonatal and foetal remains shall not include any chlorinated plastics. Coffins containing lead or zinc shall not be cremated.

The cremator shall be designed and operated in order to prevent the discharge of smoke, fumes, or other substances during charging. The charging system shall be interlocked to prevent the introduction of a coffin to the primary combustion zone unless the secondary combustion zone temperature exceeds that specified for good combustion in the authorisation/ permit. The cremator and all ductwork shall be made and maintained leakproof if under negative pressure and gas tight if under positive pressure to prevent the escape of gases from the ductwork or cremator to the air.

## **2.11 Good Combustion**

As one of the means of achieving good combustion, all new cremators shall be designed so that there is adequate secondary air in the primary combustion zone to ensure good turbulence.

The secondary combustion zone starts after the last injection of combustion air. Air injected at support burners in the secondary combustion chamber is ignored, as long as there is no more than about 6% excess air for the fuel burnt.

All cremators shall be designed to ensure complete combustion and shall be fitted with a secondary combustion zone. The manufacturer shall state the volume of the secondary combustion zone. When rebricking a cremator, the convolutions of the secondary combustion chamber shall be maintained and the volume of the chamber recalculated and restated.



## 2.12 Cremated Remains

For all cremators

- The remains in the cremator shall only be moved when calcination is completed.
- The removal of ash and non-combustible residues from the cremator shall be undertaken carefully so as to prevent dust emissions via the flue.
- Cremated remains shall be moved and stored in a covered container.

Many cremated remains treatment plants have an internal filter and discharge inside the building and for them an emission limit and testing are unlikely to be needed.

- Cremated remains treatment plant venting externally shall be arrested to meet the particulate matter limit in [Table 1](#); and
- testing shall be needed at commissioning only
- subsequent performance can be demonstrated indicatively, for example by the use of a pressure drop indicator on the bag filter

## 2.13 Stacks

Liquid condensation on internal surfaces of stacks and exhaust ducts might lead to corrosion and ductwork failure or to droplet emission. Adequate insulation will minimise the cooling of waste gases and prevent liquid condensation by keeping the temperature of the exhaust gases above the dew point. Stacks and ductwork shall be leak proof.

The dispersion from all stacks and vents can be impaired by low exit velocity at the point of discharge, or deflection of the discharge. Unacceptable emissions of droplets could possibly occur from wet arrestment plant where the linear velocity within the associated ductwork exceeds 9 m/sec. The use of mist eliminators reduces the potential for droplet emissions.

- Where a linear velocity of 9 m/sec is exceeded in the ductwork of existing wet arrestment plant, it shall be reduced to the extent that is practicable to ensure that droplet fallout does not occur.
- Flues and ductwork shall be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

- Exhaust gases discharged through a stack or vent shall be designed to achieve an exit velocity of 15 m/sec during peak operating conditions to achieve adequate dispersion.
- Stacks or vents shall not be fitted with any restriction at the final opening such as a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions.

## **2.14 Management Techniques**

Important elements for effective control of emissions include:

- proper management, supervision and training for process operations
- proper use of equipment
- effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air; and
- it is good practice to ensure that spares and consumables are available at short notice in order to rectify breakdowns rapidly. This is important with respect to arrestment plant and other necessary environmental controls. It is useful to have an audited list of essential items

Spares and consumables - in particular, those subject to continual wear - shall be held on site, or shall be available at short notice from guaranteed local suppliers, so that plant breakdowns can be rectified rapidly.

## **2.15 Appropriate Management Systems**

Effective management is central to environmental performance; It is an important component of BAT and of achieving compliance with permit conditions. It requires a commitment to establishing objectives, setting targets, measuring progress and revising the objectives according to results. This includes managing risks under normal operating conditions and in accidents and emergencies. It is therefore desirable that processes put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process. Operators may also find that an EMS will help identify business savings.



## **2.16 Training**

Staff at all levels need the necessary training and instruction in their duties relating to control of the process and emissions to air. In order to minimise risk of emissions, particular emphasis shall be given to control procedures during start-up, shut down and abnormal conditions. Training may often sensibly be addressed in the EMS referred to above. The Crematorium Technicians Training Scheme operated by the Institute of Cemetery and Crematorium Management shall be adequate for this purpose, as shall the Training and Examination Scheme for Crematorium Technicians which is run by the Federation of Burial and Cremation Authorities.

Training of all staff with responsibility for operating the process shall include:

- awareness of their responsibilities under the permit, and in particular maintenance of monitoring equipment
- minimising emissions on start up and shut down
- action to minimise emissions during abnormal conditions

The operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment. These documents shall be made available to the regulator on request.

## **2.17 Maintenance**

Effective preventative maintenance shall be employed on all aspects of the process including all plant, buildings and the equipment concerned with the control of emissions to air. Cleaning of cremator ducts and flue ways is considered part of preventative maintenance eg raking out twice a year. In particular:

- A written maintenance programme shall be provided to the regulator with respect to pollution control equipment, including control instrumentation and the cremator secondary chamber, and ducts and flues and should also include
  - inspecting, repairing and replacing brick, flue, control software and hardware, monitoring equipment, etc.
  - regular maintenance and inspection by service engineer
  - operator maintenance - daily, weekly, monthly, by number of cremations, etc.
- A record of such maintenance shall be made available for inspection.
- Cleaning schedules shall be available on site to the regulator.

## 2.18 Health and Safety

Operators of processes and installations must protect people at work as well as the environment:

- requirements of a permit or authorisation shall not put at risk the health, safety or welfare of people at work
- equally, the permit or authorisation must not contain conditions whose only purpose is to secure the health of people at work. That is the job of the health and safety enforcing authorities

Where emission limits quoted in this guidance conflict with health and safety limits, the tighter limit should prevail because:

- emission limits under the Environment Protection Act 1990 or Pollution Prevention and Control Act 1999 relate to the concentration of pollutant released into the air from prescribed activities
- exposure limits under health and safety legislation relate to the concentration of pollutant in the air breathed by workers
- these limits may differ since they are set according to different criteria. It will normally be quite appropriate to have different standards for the same pollutant, but in some cases they may be in conflict (for example, where air discharged from a process is breathed by workers). In such cases, the tighter limit should be applied to prevent a relaxation of control

## 2.19 Gas usage, carbon dioxide emissions and carbon footprint

Operators should keep simple records of quarterly gas consumption for inspection by the regulator.

Consumption should be converted into CO<sub>2</sub> equivalent emissions using the following conversion equation:

$$\text{Gas usage (kWh)} \times \text{conversion factor} = \text{kgCO}_2\text{e}$$



### **3.0 Sampling Protocol**

The table below specifies the preferred test methods to be used in monitoring emissions from crematoria for each particular pollutant in PG5/2(12).

**Table 3: Suggested test methods for monitoring of different substances**

<b>Substance</b>	<b>Suggested test method</b>
Particulate	BS EN 13284 part 1 for particulate below 50 mg/m <sup>3</sup> BS ISO 9096:2003 for particulate above 20 mg/m <sup>3</sup>
Hydrogen Chloride	BS EN 1911 parts 1 to 3
Organic matter excluding particulate matter	BS EN 12619 up to 20mg/m <sup>3</sup> BS EN 13256 over 20mg/m <sup>3</sup>
Oxygen	BS ISO 12039
Carbon Monoxide	BS ISO 12039
Polychlorinated dibenzo-p-dioxins and furans	BS EN 1948 parts 1 to 3
Mercury	BS EN 13211

#### **3.1 Preferred Sampling Location**

In most crematoria the cremators have been designed to fit into an existing building. Thus, even those built to be compliant with the Environmental Protection Act tend to have very few locations where a sampling point can actually physically be placed, and fewer still have sampling points which are the correct number of flue diameters away from bends and other obstructions. Given the choice, sampling points located in the "hot-leg" of the flue - that is, prior to the introduction of dilution air - are to be preferred, since the oxygen concentration at such points will be lower, and thus the correction to 11% oxygen will be better defined given a constant error on an oxygen determination. However, when sampling for polychlorinated dibenzo dioxins and furans, the sampling point shall if possible be located such that the temperature of the flue gases is below 200°C-that is, outside the



temperature range where reformation or de novo synthesis takes place-and remains so until discharge to atmosphere. Where this is not possible, the operator shall notify the authority of the minimum temperature at which the measurement can practically be made, and the reason why this cannot be below the maximum temperature, before sampling takes place.

### **3.2 Sampling Points**

For each pollutant to be measured, calculation of the location and number of sampling points shall be carried out as specified in the relevant standard. The general requirement for sample point location is given in BS EN13284-1 and BS ISO 9096:2003. The new standards relate the sampling time to the limit of detection of the analysis method. Increasing the number of sampling points on the sample plane does not increase the sample time.

### **3.3 Modifications due to the batch nature of a process**

Cremation is a batch process consisting (neglecting pre-heating and shut-down) of

- (i) the brief "flash" caused by volatilization of the veneer on the outside of the coffin,
- (ii) burning of the coffin,
- (iii) after the coffin breaks open, burning of the coffin and cremation of the body.
- (iv) calcification of the remains and
- (v) ashing.

The timescales involved for these processes are typically (i) 1 minute, (ii) 20 minutes, (iii) 40 minutes, (iv) 30 minutes, and (v) 2 minutes, although observation of the process or asking the manufacturers or operators shall provide installation-specific times for these. In order to take into account the batch nature of the process, at least one complete traverse across the flue shall be made during each of processes (ii) to (iv). Process (i) has too short a duration for a complete traverse and so sampling shall not commence until at least two minutes after the coffin is charged. Similarly, sampling shall stop before ashing; again, it is not practical to traverse during ashing, and the turbulence caused by the open ash door may bias the results.

### **3.4 Sampling Time**

Sampling shall last for one complete cremation, commencing as soon as stable conditions are achieved inside the machine-at least 2 minutes after the coffin is charged-and ceasing just before the operator rakes down the machine. One must decide the total sampling time before commencing sampling, in accordance with the requirement of the relevant standard that is to be used, refer Environment Agency Technical Guidance note M2. Unfortunately, it is not possible to know beforehand how long a charge will take to cremate, as this depends on the construction of the coffin, the weight of the body and what the deceased died of. A cancerous body will take longer to cremate, for example.

In order that the result from different cremations may be meaningfully compared, we suggest the following procedure. Learn either from observation of the cremator in operation, or from the operators, the duration of an average of light, average and heavy charges, and take this as the definition of "cremation" then sample for this amount of time. If a significant amount of remains are left at the end of this period, then continue to sample if possible, or void the test. If the cremation finishes significantly before the completion of testing, then stop if possible or again void the test. In any case, sampling shall not be for less than 1 hour. Sampling for dioxins and furans shall cover the time needed to meet the limit of detection specified by the analytical laboratory, refer BS EN1948. The requisite number of whole cremations to achieve this sampling time shall be sampled and could well be from 2 to 4 cremations.

### **3.5 Minimum volume of gas sampled**

The volume of gas sampled will depend on the size of the charge, the standard used for the testing, the type of machine (i.e., electric cremators will have a smaller volumetric flow rate) and whether sampling is performed before or after the introduction of dilution air. European standards, e.g. BS EN 1384 -1 and BS EN1948, state that the sample time is calculated by the limit of detection of the analysis method employed. .



### **3.6 Concurrent Oxygen Readings**

Oxygen readings will be required, which are concurrent with the monitoring of the other pollutants, in order to make the correction to standard conditions.

These readings shall be made in the same sampling plane in which the other samples are being taken; if not, extra dilution air could be introduced into the flue, changing the oxygen concentration at a point downstream. Care must be taken, however, that any probe used to extract the sample of gas for oxygen analysis shall not cause interference to other sampling equipment in the flue, and vice-versa.

### **3.7 Minimum equipment standards**

The equipment used in the sampling shall meet as a minimum the standards laid out in the relevant standards specified in **Table 3**.

### **3.8 Minimum number of samples**

For a valid statistical treatment of the results to give a 95% confidence result a minimum of three samples is required, and shall generally be available in one working day from all but the least used crematoria. The size of the 95% confidence interval shall not exceed the following percentage of the emission limit value

- carbon monoxide: 10 %
- particulate matter: 30 %
- total organic carbon: 30 %
- hydrogen chloride: 40 %

### **3.9 Minimum standard of reporting**

Reports shall contain as a minimum the following information:

- the name of the crematorium
- the identification of the units under test with make and model numbers
- the identification of the version of computer software used to control the unit under test
- for each test the report shall show the date, the cremation number, the test duration, an estimate of the mass of the deceased (light, average, heavy) and any unusual features of the coffin (for example, heavily varnished or of foreign make) or cremation. Coffins of unusual construction or extreme mass shall not be tested



- a brief summary of each test method referencing standard documents where necessary
- a full summary of non-standard test methods with justifications for their use
- the raw data obtained from non-standard test methods
- any deviations from standard test methods with justifications
- results calculated via the formulae given for each test method with estimates of the errors on each parameter—the effects on the errors of deviations from the standard methods shall be fully investigated if possible
- a summary of the results and errors in comparison to the PG5/2(2012) values

In addition, the section of the report dealing with PCDD/F results shall also detail as a minimum

- the concentration of each congener detected, in addition to the final toxic equivalent, since two tests producing different relative concentrations of each congener may produce an identical toxic equivalent
- the recovery of pre-sample spikes as an indication of sampling performance and method compliance; these numbers may be summarised as a maximum, minimum and average recovery of the pre-sample spikes
- the toxic equivalent with the equivalence factors used in the calculations
- the details of the processing of laboratory method blanks with the results expressed identically to the sample results. From these the detection limits for each congener shall be determined and reported (vital in the cases of non-detection)

The inclusion of raw data shall not be considered mandatory. However, the testing house providing the report shall guarantee to keep the raw data for one year longer than the report remains a part of the public record

## **4. General Conditions**

**It is an offence to contravene a condition contained in an Environmental Permit. In accordance with the Environmental Permitting Regulations, such offences are punishable in the Magistrates' court by a maximum fine of £20,000 and/or up to 6 months imprisonment per offence, and in the Crown court by an unlimited fine and/or up to 2 years imprisonment.**

If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

Operations during the life of the permit shall not lead to any deterioration of the site if the requirements of the permit and its associated conditions are adhered to. Where an operator breaches a permit condition, causing pollution, authorities may issue enforcement notices to make operators put things right while the installation is still in operation. These notices may specify what the operator must do to remedy the effects of the pollution (EP regulation 36(3)) and to make the installation comply with the conditions.

The authority must be notified without delay of any incident or accident significantly affecting the environment

The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit. (EP regulation 72(7))





# **Section Three**

## **Location of Permitted Installation, Site Plan and Process Flow Diagram.**



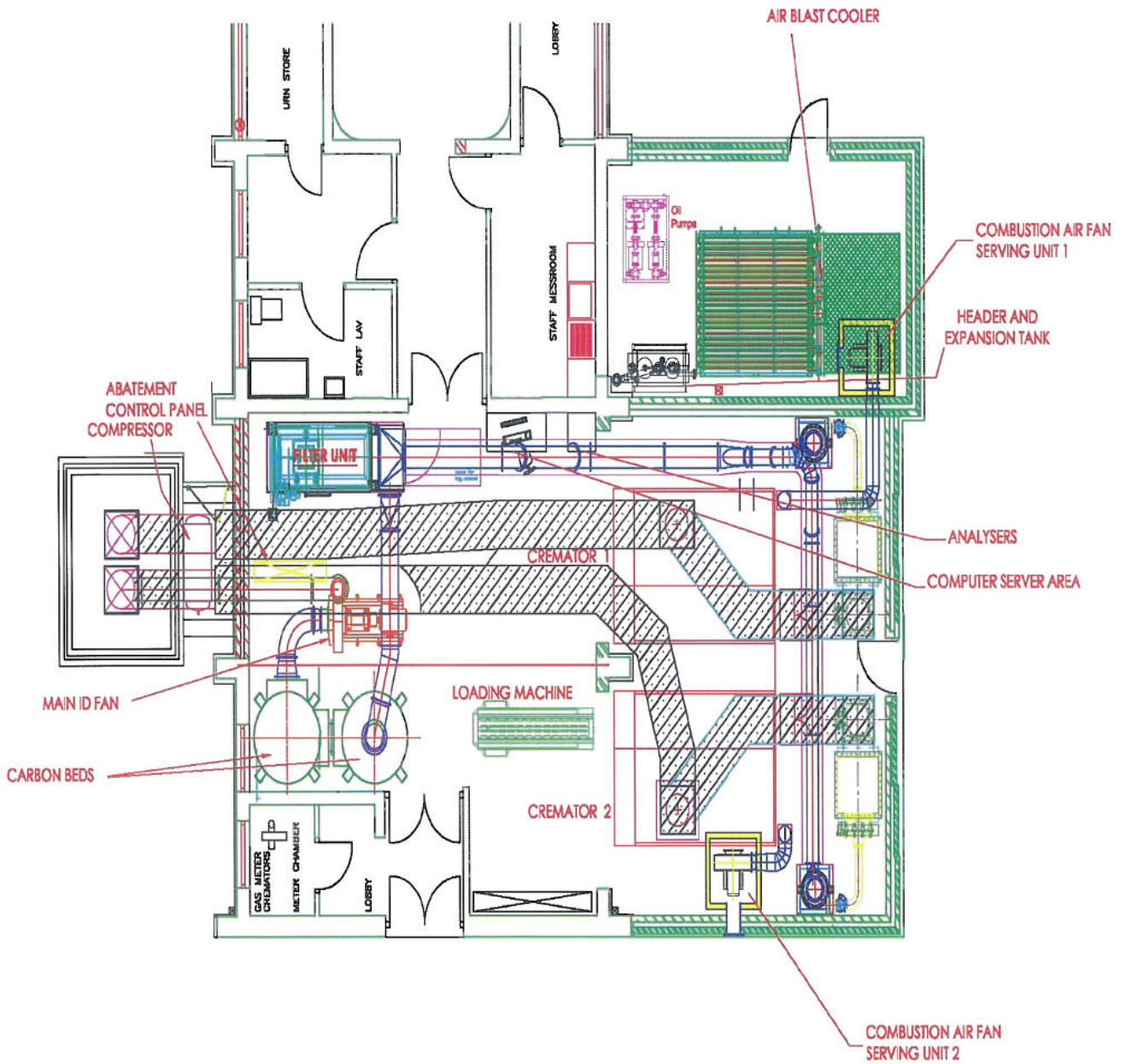
## Site Location Map (EP2008/10/1)



Hartlepool Crematorium,  
Stranton Grange Cemetery,  
Tanfield Road,  
Hartlepool  
TS25 5DD



## Site plan (EP2008/10/1)



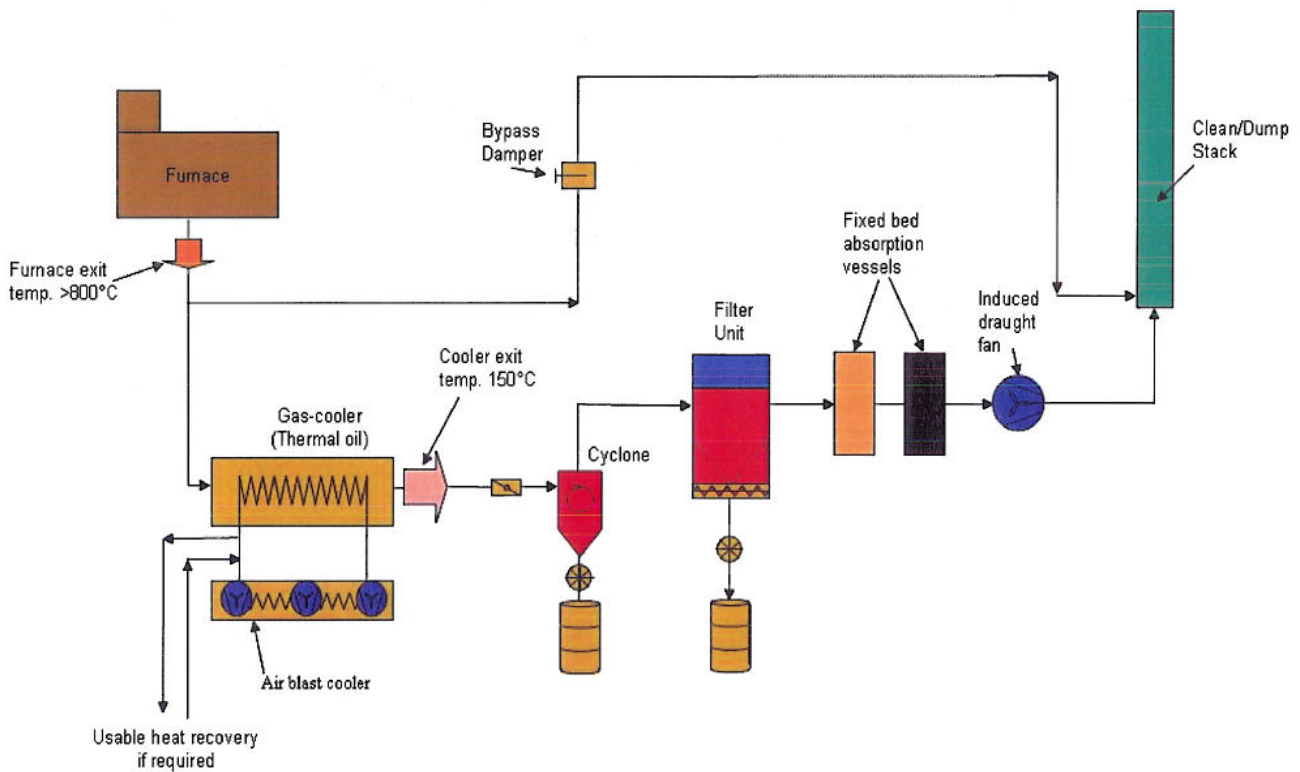
PLAN ON CREMATORY

## Process Flow Diagram (EP2008/10/1)

**SHELTON**

Cremator fluegas cleaning system  
Fixed bed, thermal oil cooling

**Nederman**



# **Section Four**

## **Explanatory Notes And Appeals Procedure**





## Hartlepool Borough Council

The Pollution Prevention Control Act 1999  
Environmental Permitting (England & Wales) Regulations 2010

### EXPLANATORY NOTE

*The preceding Permit is issued under the Environmental Permitting (England and Wales) Regulations 2010 (“the EP Regulations”) to operate an installation carrying out one or more of the activities listed in Part 2 of Schedule 1 of those Regulations, to the extent authorised by the Permit. The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the EP Regulations.*

*These notes do not form part of the Permit or conditions attached to it.*

#### 1. BAT CONDITION

Article 2(11) of the IPPC Directive defines “best available techniques” as follows:

“Best available techniques’ shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

- **BEST** shall mean most effective in achieving a high general level of protection of the environment as a whole.
- **AVAILABLE** techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,
- **TECHNIQUES** shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned,

### Policy and Procedures Guidance Manual

The Secretary of State has published a “General Guidance Manual on Policy and Procedures for A2 and B Installations” which is available from the Defra website at:

<http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/manuals.htm>

### Surrender of the permit

Where an operator intends to cease the operation of an installation (in whole or in part) the Council should be informed in writing, such notification must include the information specified in EP regulation 24.

### Noise

This Permit does not include reference to noise. Statutory noise nuisance is regulated separately under the provisions of Part III of the Environmental Protection Act 1990.



## **2. STATUTORY REQUIREMENTS**

This Permit does not detract from any of the following statutory requirements where applicable:-

- (a) The requirement to obtain Planning Permission for the installation and any new construction.
- (b) The requirement to obtain discharge consent from the Environment agency.
- (c) The requirement to obtain Building Regulation approval for any construction work.
- (d) The requirement of a Waste Disposal Licence.
- (e) The requirement to comply with the Health and Safety at Work etc Act 1974.

### **3. PUBLIC REGISTER**

Local authorities are required by EP regulation 46 to maintain a public register containing information on all the LA-IPPC and LAPPC installations and mobile plant they are responsible for. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00am to 5.00pm) at

**Hartlepool Borough Council,  
Public Health Department  
Victoria Road  
Civic Centre  
Hartlepool  
TS24 8AY**

Subject to exclusions of commercially confidential information and information affecting national security, registers will contain the following:

- a. Applications for a permit;
- b. Notices asking for information and responses to such;
- c. Advertisements and representations in response to such (unless requested not to by the person responding)
- d. In the case of c) above, a statement to the effect that representations were made but have been omitted – must not identify the person making the representation;
- e. Statutory consultee responses to applications or applications for variations;
- f. Permits;
- g. Notifications of changes in the operation of installations;
- h. Applications for variations, transfers or surrenders of permits;
- i. Variations, transfers and surrenders granted;
- j. Revocations;
- k. Enforcement or suspension notices;
- l. Notices withdrawing enforcement and suspension notices;
- m. Notice of an appeal including the grounds of the appeal, relevant correspondence between the appellant and the regulator, and the decision/notice which is the subject of the appeal;
- n. Representations in response to appeal (unless requested not to by the person responding);
- o. In the case of n) above, a statement to the effect that representation were made but have been omitted – must not identify the person making the representations;
- p. The appeal decision and any accompanying report;



- q. Convictions, formal cautions; to include the name of the person, date of conviction/caution, and (where appropriate) penalty and name of court. This requirement does not override the Rehabilitation of Offenders Act 1974 regarding spent conditions, and authorities must take care to remove relevant entries at the appropriate time;
- r. Monitoring data obtained by the authority from its own monitoring, or sent to the authority on accordance with a permit condition or regulation 28(2) notice;
- s. If any monitoring information is omitted because it is commercially confidential, the authority must put a statement on the register indicating whether relevant permit conditions are being complied with, based on the withheld information;

### **Commercial Confidentiality**

An operator may request certain information to remain confidential i.e. not be placed on the public register. The operator must request the exclusion from the public register of commercially confidential information at the time of supply of the information requested by this notice or any other notice. The operator shall provide clear justification for each item wishing to be kept from the register. The amount of information excluded from the register shall be kept to the minimum necessary to safeguard the operator's commercial advantage

The general principle is that information shall be freely available to the public. An operator may request certain information in relation to a LA-IPPC or LAPPC permit to remain confidential, i.e. not be placed on the public register. The onus is on the operator to provide a clear justification for each item he or she wishes to be kept from the register. EP regulation 45 defines 'commercial information' as "information that is commercially or industrially confidential in relation to any person".

The local authority will determine this request within 20 working days of the date of such an application and will issue a Determination Notice detailing their decision. The notice may specify a time period over which the information is to remain commercially confidential (if not specified, it will be four years beginning with the date of the determination). The operator may appeal to the Secretary of State within 21 days of the notification of the decision.

If the application is granted the local authority will place a statement on the public register stating that certain information has been withheld and stating the reasons why, plus whether this information is relevant to a permit condition, and whether the permit condition has been complied with.



## **National Security**

EP regulation 47 allows for information to be kept from public registers for reasons of national security. For this to happen, the Secretary of State/Welsh Ministers must determine that placing the information on the register would be contrary to the interests of national security. An operator who believes any information meets this test may apply to the Secretary of State/Welsh Ministers.

The operator must notify the local authority that he or she has asked for this determination, but must not exclude the information from any submission to the authority, such as a permit application. The Secretary of State/Welsh Ministers may direct the authority on what information, if any, to exclude from the register.

Any such applications must be made to either:

**Secretary of State for Environment,  
Food and Rural Affairs  
Nobel House  
17 Smith Square  
LONDON  
SW1P 3JR**

and should be marked "*application under the Environmental Permitting Regulations*".

#### **4. UPGRADING PROGRAMMES**

The following information does not comprise part of the Permit, but contains guidance, which should be noted when considering the upgrading programme.

##### **Aim of Upgrading Programme**

To identify the areas where the existing installation does not meet the required standards ("new process" standards), as detailed in the relevant Secretary of State's Process Guidance Note, the steps to be taken to meet these standards, and the time-table of dates by which these steps are to be implemented. (You are advised to refer to the Department of Environment, General Guidance Note 4 - Interpretation of terms used in Process Guidance Notes (available from H.M. Stationery Office)).

##### **Content of Upgrading Programme**

There is not a specified format for an upgrading programme but, wherever possible, it should identify reasonably precise actions to be taken and the dates on which these actions will be instigated. If abatement plant is to be installed technical specifications and schematic drawings along with operational procedures should be detailing in the upgrading plan.

##### **Council Action upon receipt of Upgrading Programmes**

It is an offence not to submit the upgrading programme by the date specified in the Permit.

The Council will assess the adequacy of the submission and if satisfied with the content, will place it on the Public Register (operators may apply for matters which are considered to be commercially confidential to be excluded from the Register).

The Council will bring the upgrading programme within the terms of the Permit by issuing a Variation Notice to add the programme as a condition to the initial Permit. This will ensure that commitments given are made into enforceable conditions (this may not preclude changes to the programme where there are sound reasons for such a change).



## **5. FEES**

(EP regulation 65).

Operators must pay an annual subsistence charge to cover local authorities' continuing regulatory costs once a permit has been issued. It will cover such things as checking monitoring data or carrying out inspections. The level of subsistence charge is contained in the relevant charging scheme and will become due on 1st April each year. The operator is liable for the full subsistence charge for the year of operation. You are advised that if you fail to pay the fee due promptly, the Council may revoke the Permit.

The risk-based charging scheme was introduced in 2006/7 for all standard activities. The risk-based method applies a low, medium or high risk rating to activities operating at an installation. The resulting subsistence fees are proportionate to the risk rating. This risk-assessment method uses a "point scoring" approach which combines the indicative environmental impact assessment (EIA) of the activity itself and the Operator Performance Assessment (OPA) covering the operational aspects of the installation. This is outlined in the Risk-Based Inspection Methodology which is available on the PPC web pages

## **6. TRANSFER OF PERMITS**

LA-IPPC and LAPPC installations may change hands through normal business transactions. EP regulation 21 therefore allows for permit transfers either for the whole installation, or for one or more parts of it through partial transfer arrangements. New operators should have the appropriate management systems and the competence to run installations properly in compliance with the conditions of the existing permits.

When an operator wants to transfer all or part of a permit to someone else, he/she and the proposed transferee must make a joint application and also pay a fee. They must both sign the application form. The joint application should contain their telephone numbers and addresses plus any additional correspondence address. The application should be accompanied by the current permit document and must include the appropriate transfer fee.



## **7. PROCESS VARIATIONS**

A local authority may decide that the existing permit conditions require amendment without receiving any notification or application from the operator (EP regulation 20(1)). This is most likely to occur when the authority decides that the conditions need varying having conducted a periodic review in accordance with EP regulation 34, or in the light of revised guidance from Defra/WAG, or because of the transfer of a permit to another operator. Other instances could be the revision of a relevant environmental quality standard, the declaration of an area as an air quality management area, or (in the case of LA-IPPC) a requirement from the Environment Agency to revise a water-related condition.

If there is no such condition included in their permit, operators should be aware that there are risks to them should they fail to notify the relevant local authority of a change. The risks are that the authority decides that the change means that the operator is either carrying on the activity beyond the extent authorised by the existing permit, or is doing so in contravention of an existing permit condition. Both are offences under EP regulation 38. On the positive side, some changes could result in a lowering (as well as, potentially, raising) of an installation's risk rating. These could include alterations to management or training practices, or technical changes such as the use of less toxic chemicals.

Many changes will not have consequences for the environment and notification will be unnecessary; although there may be cases where it is nonetheless good practice for an operator to do so in order to keep the authority informed. It is also good practice to notify authorities of any administrative changes, such as the name or address of the operator (where the installation has not changed ownership), and authorities can simply amend the permit without going through any formal procedures.

The IPPC Directive definition of 'substantial change', which is incorporated by the EP Regulations, is "a change in operation which, in the opinion of the regulator, may have significant negative effects on human beings or the environment". For installations subject to the Solvent Emissions Directive, further criteria may be relevant.

If an operator has any doubt over whether a particular change is substantial, he/she should ask the opinion of the relevant local authority.

## 8. APPEALS

Under EP regulation 31 operators have the right of appeal against the enforcing authority in the following circumstances:

- 1 refusal or deemed refusal to grant a permit;
- 2 refusal of an application to vary a permit;
- 3 if the operator disagrees with the conditions imposed by the authority as a result of a permit application or an application for a variation notice;
- 4 refusal of an application to transfer a permit, or if the operator disagrees with the conditions imposed by the authority to take account of such a transfer;
- 5 refusal of an application to surrender a permit, or if the operator disagrees with the conditions imposed by the authority to take account of the surrender;
- 6 the service of a variation notice (not following an application by the operator), a revocation notice, an enforcement notice, or a suspension notice on the operator;
- 7 the deemed withdrawal by a local authority of a duly-made application because the operator has not provided further information (paragraph 4 of Schedule 5 to the EP Regulations).

Under EP regulation 53(1) operator has the right of appeal against a decision that information will not be withheld from the public register for reasons of commercial confidentiality.

The rights to appeal listed in 1-6 above do not apply where the decision or notice implements a direction given by the Secretary of State or Welsh Ministers. There is also no right of appeal if a revocation notice has been served for non-payment of subsistence fees (EP regulation 31(3)).

Appeals under 3-6 above do not stop the conditions coming into effect. Appeals against variation, enforcement and suspension notices do not stop the notices coming into effect. However, appeals against revocation notices suspend the operation of the notices coming into effect until the appeal is decided or withdrawn.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the notice, which is the subject matter or the appeal. The Secretary of State may in a particular case allow notice of appeal



to be given after the expiry of this period, but would only do so in the most compelling circumstances.

## How to appeal

There are no charges for appealing and there is no statutory requirement to submit an appeal form. However, an appeal form has been prepared and is available for use at <http://www.planning-inspectorate.gov.uk/pins/environment/environment/index.htm>. For an appeal to be valid, appellants (the person/operator making the appeal) are legally required to provide all of the following (see EP Regulations Schedule 6, paragraph 2(2)):

- written notice of the appeal
- a statement of the grounds of appeal
- a statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or at a hearing - a hearing must be held if either the appellant or local authority requests this, or an appointed person or the Secretary of State/Welsh Ministers decide to hold one (appellants must copy the above three items to the local authority when the appeal is made)
- a copy of any relevant application
- a copy of any relevant permit
- a copy of any relevant correspondence between the appellant and the regulator
- a copy of any decision or notice, which is the subject matter of the appeal.

Appellants should state whether any of the information enclosed with the appeal has been the subject of a successful application for commercial confidentiality under EP regulation 49 and provide relevant details. Unless such information is provided all documents submitted will be open to inspection.



## **Where to send your appeal documents**

Appeals should be despatched on the day they are dated, and addressed to:

**The Planning Inspectorate  
Environment Team, Major & Specialist Casework  
Room 4/04 Kite Wing  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol BS1 6PN  
Tel: 0117 372 8726  
Fax: 0117 372 8139**

On receipt of an appeal and during the appeal process both main parties will be informed by the Inspectorate about the next steps, which will explain the procedures and submission timetable for representations. To withdraw an appeal – which may be done at any time - the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority who must in turn notify anyone who has expressed an interest in the appeal.

## **Costs**

The operator and local authority will normally be expected to pay their own expenses during an appeal. Where a hearing or inquiry is held as part of the appeal process, by virtue of paragraph 5(6) of Schedule 6, either the appellant or the authority can apply for costs. Applications for costs are normally heard towards the end of the proceedings and will only be considered if the party claiming them can show that the other side behaved unreasonably and put them to unnecessary expense. There is no provision for costs to be awarded where appeals are dealt with by written representations.

Following an application for costs, the Inspector or the Secretary of State/Welsh Ministers will act in the spirit of DOE Circular 8/93 – The Award of Costs in Planning and Other Proceedings. Schedule 6, paragraph 5(6) of the EP Regulations applies section 250 (as modified) of the Local Government Act 1972 to hearings and inquiries. Under section 250, persons may be summonsed to appear to give evidence, the appointed person may seek recovery of his or her certified costs from either party and may make a costs order so that one party pays part of the other side's costs.

## **9. Secretary of State's Guidance**

This permit is covered by Secretary of State's Guidance:

<b>PG5/2(12) Secretary of State's Guidance for Crematoria</b>	<b><a href="http://www.defra.gov.uk/industrial-emissions/las-regulations/guidance/">www.defra.gov.uk/industrial- emissions/las- regulations/guidance/</a></b>
<b>Pollution Prevention and Control Act 1999</b>	<b><a href="http://www.defra.gov.uk/environment/index.htm">www.defra.gov.uk/environment/ index.htm</a></b>
<b>Environmental Permitting (England &amp; Wales) Regulations 2010</b>	<b><a href="http://www.environment-agency.gov.uk/business/topics/permitting/32320.aspx">http://www.environment- agency.gov.uk/business/topics/ permitting/32320.aspx</a></b>
<b>General Guidance Manual on Policy and Procedures for A2 and B Installations</b>	<b><a href="http://www.defra.gov.uk/environment/index.htm">www.defra.gov.uk/environment/ index.htm</a></b>

## **10. Reporting Requirements and Contact Details**

Where a Permit condition imposes a requirement to forward documents to the Local Authority or to report a specified occurrence the following address and telephone number shall be used:

### **By Post**

**Hartlepool Borough Council,  
Public Health Department  
Victoria Road  
Civic Centre  
Hartlepool  
TS24 8AY**

### **By Telephone**

**During office hours:                      01429 266522**

