Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Fortitude Environmental Limited

FE Installation
Huntsman Drive
Seal Sands
Billingham
Middlesbrough
TS2 1TT

Permit number

EPR/LP3536NX

FE Installation
Permit number EPR/LP3536NX

Introductory note

This introductory note does not form a part of the permit

This permit controls the operation of a waste incineration plant. The relevant listed activity is 5.1 A (1)(a) - the incineration of hazardous waste in a waste incineration plant with a capacity exceeding 10 tonnes per day. The permit implements the requirements of the EU Directives on Industrial Emissions and Waste.

The main features of the installation are as follows:

The installation will accept 60,000 tonnes per annum of a large variety of organically contaminated hazardous wastes. These will mainly be highly contaminated and complex organic waste materials, such as materials contaminated with chlorinated pesticides, polychlorinated biphenyls (PCBs),and poly aromatic hydrocarbons (PAHs).

Waste Acceptance Handling and Storage

Prior to the waste being accepted on site, it will be analysed for chemical and physical properties, and subjected to a treatability study to assess and confirm how the waste should be treated. The analysis will assess against the limits set out in this permit and consider hazardous properties to ensure appropriate storage within the building. This ensures that any loads requiring segregation, separation or specialised storage are identified (e.g. loads that contain halogens that require to be incinerated at 1100ºC). A tracking system will ensure that all wastes can be identified and treated in the required way by tracking from pre-acceptance through to the treated waste being deposited or recovered at an appropriate site.

The operator will look at compatibility issues, and the concentration of organic/inorganic loading. Using this information the operator will determine wastes' pre-treatment requirements, the most efficient feed rate and treatment temperature to volatilise and oxidise the organic pollutants.

Pre-treatment of waste

The waste will be pre-treated prior to going through the plant, as per the pre-acceptance/treatability tests required. The pre-treatment may consist of:

- air drying
- size reduction (shredding or crushing)
- screening
- blending with lime
- magnetic separation of metals prior to treatment in the primary treatment unit (PTU)

Treatment and Incineration

The plant consists of:

- a thermal desorption unit (PTU)
- a thermal oxidiser incineration furnace known as the secondary treatment unit (STU) for the treatment of waste gases

- process gas treatment.

After pre-treatment, waste is fed into the PTU via a magnetic conveyer belt. The PTU is a directly heated rotary kiln used to volatilise organic contaminants which are then oxidised in the STU. The process gases are firstly treated to minimise NO_x using Selective Non Catalytic Reduction (SNCR). The combustion gases will be cleaned in a multicyclone to reduce particulate levels. The gases will then be cooled by a water spray prior to being treated with activated carbon, before passing through bag filters to reduce particulate levels further. The gases are further cooled via a quench and passed through a wet scrubber to remove any remaining particles and acidic components from the gases. The remaining inorganic portion of the waste is then stored, tested and removed from site to an appropriate waste treatment or landfill site for recovery or disposal.

Emissions

There is only one point source emission point via the Stack (A1). All the emissions are abated and continuously monitored to ensure compliance with Annex VI of the Industrial Emission Directive. This system also controls the automatic cut outs if any preset limits are breached. If a breach is detected the control system will initiate a shutdown of the plant. These preset limits are defined in Appendix 24 of the permit application

There are no emissions to water or sewer.

Raw material efficiency

The main raw materials used in the plant are water, diesel, recycled fuel oil (RFO), lime, sodium hydroxide and sodium metabisulphite, urea and activated carbon.

Water from the hardstanding and roof of the building are gathered and stored on site. These and any waters for the process will be treated to reduce the suspended solids and used in the plant. The liquors from the gas handling processes may also be combined with the materials that are discharged from the kiln to ensure dust control on the site.

Diesel will only be used as a start up and shut down fuel. Once the plant is up to the appropriate temperatures in the PTU and the STU the fuel will be switched over to recycled fuel oil.

Installation and its locality

The site is centred at NGR 452492 522590 on the north bank of the River Tees estuary approximately 3.5 km northeast of Middlesbrough. The area of the site is approximately 1.1 hectares. The site is surrounded predominantly by industrial activities.

The Tees & Hartlepool Foreshore & Wetland Site of Specific Scientific Interest (SSSI) is located within 2 km of the installation.

The status log of the permit sets out the permitting history, including any changes to the permit reference number

Status Log of the permit		
Detail	**Date**	**Comments**
Application EPR/LP3536NX/A001	Duly made 16/08/13	

Status Log of the permit		
Detail	**Date**	**Comments**
Additional Information Received	23/12/2013	Report regarding Human Health Risk Assessment
Additional Information Received	15/10/2014	List of waste codes
Additional Information Received	16/10/2014	Drawing showing Hot air feed
Additional Information Received	29/10/2014	Abnormal Emissions Human Health Risk Assessment
Additional Information Received	16/10/14 27/11/14	Reagent specifications
Additional Information Received	25/11/14	Abnormal emissions report and calculations
Additional Information Received	04/12/14	Additional Abnormal emissions report and calculations
Additional Information Received	07/12/14	Additional Abnormal modelling report and calculations
Additional Information Received	10/12/14	Additional report on HCl abnormal emissions
Additional Information Received	12/12/14	Consolidated supporting documents
Permit determined EPR/LP3536NX (Billing Reference LP3536NX)	15/12/14	Permit issued to Fortitude Environmental Limited

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/LP3536NX

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

Fortitude Environmental Limited ("the operator"),

whose registered office is

5th Floor
2 Wellington Place
Leeds
West Yorkshire
United Kingdom
LS1 4AP

company registration number 7984606

to operate an installation at

FE Installation
Huntsman Drive
Seal Sands
Billingham
Middlesbrough
TS2 1TT

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

Name	Date
Claire Roberts	**15/12/2014**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities.

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

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

1.2.2 The operator shall provide and maintain steam and/or hot air and/or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable.

1.2.3 The operator shall review the practicability of the recovery and use of waste heat at least every 2 years. The results shall be reported to the Agency within 2 months of each review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

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

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.1.2 Waste authorised by this permit in condition 2.3.3 shall be clearly distinguished from any other waste on the site.

2.1.3 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

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

(b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.3 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.2; and

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

(c) it having been separately collected for recycling, it is subsequently unsuitable for recovery by recycling.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.6 The operator shall burn only those hazardous wastes where the throughputs, calorific values and pollutant compositions are within the ranges specified in table S2.2 of schedule 2.

2.3.7 The operator shall ensure that prior to accepting waste subject to condition 2.3.6 at the site, it has obtained sufficient information about the hazardous wastes to be burned to demonstrate compliance with the characteristics described in condition 2.3.6.

2.3.8 The operator shall take representative samples of all hazardous waste deliveries to the site unless otherwise agreed in writing with the Environment Agency and test a representative selection of these samples to verify conformity with the information obtained as required by condition 2.3.7. These samples shall be retained for inspection by the Environment Agency for a period of at least 1 month after the material is incinerated and results of any analysis made of such samples will be retained for at least 2 years after the material is incinerated.

2.3.9 Waste shall not be charged, or shall cease to be charged, if:

(a) the combustion chamber temperature of the secondary treatment unit (STU) is below, or falls below, 850^{o}C for hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1% and 1100^{o}C for hazardous waste where the content of halogenated organic substances exceeds 1% (as chlorine); or

(b) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded; or

(c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than under abnormal operating conditions; or

(d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under abnormal operating conditions.

2.3.10 The operator shall have at least one auxiliary burner in each line at start up or shut down or whenever the operating temperature falls below that specified in condition 2.3.9, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.9 is maintained in the combustion chamber, such burner(s) may be fed only with fuels which result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.

2.3.11 The operator shall record the beginning and end of each period of “abnormal operation”.

2.3.12 During a period of “abnormal operation”, the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.

2.3.13 Where, during “abnormal operation”, on an incineration line, any of the following situations arise, waste shall cease to be charged on that line until normal operation can be restored:

(a) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 due to disturbances or failures of the abatement systems, or continuous emission monitor(s) are out of service, as the case may be, for a total of 4 hours uninterrupted duration;

(b) the cumulative duration of “ abnormal operation” periods over 1 calendar year has reached 60 hours;

(c) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 (a) due to disturbances or failures of the abatement systems;

(d) continuous emission monitors or alternative techniques to demonstrate compliance with the emission limit value(s) for particulates, TOC and / or CO in schedule 3 table S3.1 (a), as detailed in the application or as agreed in writing with the Environment Agency, are unavailable.

2.3.14 The operator shall interpret the end of the period of “abnormal operation” as the earliest of the following:

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

(b) when the operator initiates a shut down of the waste combustion activity, as described in the application or as agreed in writing with the Environment Agency;

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

(d) when, in any calendar year, an aggregated period of 60 hours “abnormal operation” has been reached.

2.3.15 Bottom ash and APC residues shall not be mixed.

2.4 Improvement programme

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

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

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, except in “abnormal operation”, when there shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1(a).

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1. 3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S3.4. Additional samples shall be taken and tested and appropriate action taken, whenever:

(a) disposal or recovery routes change; or

(b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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

3.2.4 The Operator shall carry out monitoring of groundwater at least once every 5 years; and of soil at least once every 10 years; to the protocol agreed in writing with the Environment Agency under PO7.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1, and S3.1(a);

(b) ambient air monitoring specified in table S3.2;

(c) process monitoring specified in table S3.3;

(d) residue quality in table S3.4.

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

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.1(a) unless otherwise agreed in writing by the Environment Agency.

3.5.5 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that;

(a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages:

- Carbon monoxide 10%
- Sulphur dioxide 20%
- Oxides of nitrogen (NO & NO2 expressed as NO2) 20%
- Particulate matter 30%
- Total organic carbon (TOC) 30%
- Hydrogen chloride 40%

(b) 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 the value of the confidence intervals in condition 3.5.5 (a);

(c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case 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;

(d) 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 shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;

(e) no more than ten daily average values per year shall be determined not to be valid.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazards or annoyance from pests;

(b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

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

(a) be legible;

(b) be made as soon as reasonably practicable;

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

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

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

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

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

(d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Chapter IV of the Industrial Emissions Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the IED.

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

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and

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

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

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 The Operator shall

(a) in the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) in the event of a breach of any permit condition, the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

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

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

Where the operator is a registered company:

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

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

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) 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 of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

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

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “without delay”, in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	**Description of specified activity**	**Limits of specified activity**
S5.1 A1 (a)	The incineration of hazardous waste in a waste incineration plant with a capacity exceeding 10 tonnes per day.	From receipt of waste to emission of exhaust gas and disposal of waste arising. Waste types and quantities as specified in Table S2.2 of this permit. Only wastes with a Flashpoint Limit >=55^{o}C shall be pre-treated unless done in the presence of an inert atmosphere.
Directly Associated Activities		
Back up electrical generator	For providing emergency electrical power to the plant in the event of supply interruption.	-
Water Storage and Treatment	Treatment and storage of water gathered from: the building roof, hardstanding or recycled from the process. Water to be stored in tanks.	From storage of surface water runoff and roof run off to the treatment and re-use as dust suppressant.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Application Form B2, Questions 3, 6, and 7. Application Form B3 Questions 1, 2, 3, 4, Appendix 5 Hazardous and Non hazardous Waste Recovery and Disposal and Appendix 6 relating to the Hazardous Waste Incineration Site.	16/08/13
Additional information - application supporting documents	Supporting document Sections 5 to 29 relating to the design, construction, commissioning, operation and performance of the Hazardous Waste Incineration site	12/12/14

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System and the progress made in the certification of the system by an external body or if appropriate submit a schedule by which the EMS will be certified.	Within 12 months of the date on which waste is first burnt.
IC2	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A1, identifying the fractions within the PM_{10}, and $PM_{2.5}$ ranges. The proposal shall include a timetable to carry out such tests and produce a report on the results, for the written approval of the Environment Agency. On receipt of written agreement by the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit a report on the results to the Environment Agency.	Within 6 months of the completion of commissioning.
IC3	The Operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Within 4 months of the completion of commissioning.
IC4	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency.	Within 4 months of the completion of commissioning.
IC5	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of the Selective Non Catalytic Reduction (SNCR) system and combustion settings to minimise oxides of nitrogen (NO_x) emissions, within the emission limit values described in this permit, with the minimisation of nitrous oxide emissions. The report shall include an assessment of the level of NO_x and N_2O emissions that can be achieved under optimum operating conditions. The report shall also provide details of the optimisation (including dosing rates) for the control of acid gases and dioxins	Within 4 months of the completion of commissioning.
IC6	The Operator shall carry out an assessment of the impact of emissions to air of the following component metals subject to emission limit values, i.e. Cadmium (Cd), Thallium (Tl), Antimony (Sb), Arsenic (As), Lead (Pb), Chromium (Cr), Cobalt (Co), Copper (Cu), Manganese (Mn), Nickel (Ni) and Vanadium (V). A report on the assessment shall be made to the Environment Agency.	15 months from commencement of operations

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the Application. An assessment shall be made of the impact of each metal against the relevant EQS/EAL. In the event that the assessment shows that an EQS/EAL has been exceeded, the report shall include proposals for further investigative work.	
IC7	The Operator shall submit a written summary report to the Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) comply with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning Full summary evidence compliance report to be submitted within 18 months of commissioning.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO1	Prior to the commencement of commissioning, the Operator shall submit a report on the baseline conditions of soil and groundwater at the installation. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in application Site Condition Report, needed to meet the information requirements of Article 22(2) of the IED.
PO2	Prior to the commencement of commissioning, the Operator shall send a report to the Environment Agency which will contain a comprehensive review of the options available for utilising the heat generated by the waste incineration process in order to ensure that it is recovered as far as practicable. The review shall detail any identified proposals for improving the recovery and utilisation of waste heat and shall provide a timetable for their implementation.
PO3	Prior to the commencement of commissioning, the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of incinerator inorganic residues for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO4	Prior to the commencement of commissioning; the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO5	Prior to the commencement of commissioning, the Operator shall submit a written report to the Agency detailing the waste acceptance procedure to be used at the site. The waste acceptance procedure shall include the process and systems by which wastes unsuitable for incineration at the site will be rejected. For those wastes that are acceptable, the Operator shall submit details of the mass flow to the Environment Agency. The Operator shall submit a report for written approval. The procedure shall be implemented in accordance with the written approval from the Agency.
PO6	After completion of furnace design and at least three calendar months before any furnace operation; the operator shall submit a written report to the Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by the Waste Incineration Directive.
PO7	Prior to construction of the facility, the Operator shall submit a report on the baseline conditions of soil and groundwater at the Installation. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in application Site Condition Report, needed to meet the information requirements of Article 22(2) of the IED.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO8	Prior to construction of the facility the Operator shall submit a written proposal for an ambient air monitoring system in line with M17 Monitoring Particulate Matter in Ambient Air around Waste Facilities, to ensure that the storage and handling of untreated and treated waste do not result in uncontrolled fugitive emissions. The proposal shall include but not be limited to:- • full details of the methodology to be utilised • installation details of selected measuring device • background sampling. Also, the Operator shall ensure that this is fully incorporated into the final design, commissioning plan and report referenced above. Installation ambient air monitoring shall be carried out in accordance with the final design, installation methodology and commissioning plans as approved.
PO9	Prior to the commencement of commissioning, the Operator shall send a summary of the site Environment Management System (EMS) to the Environment Agency and make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements set out in Section 1 of How to comply with your environmental permit – Getting the basics right. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Fuel Oil	< 0.1% sulphur content
Recycled Fuel Oil	< 1% sulphur content < 10ppm cadmium content < 275ppm lead content
Sodium Hydroxide (NaOH)	<0.5% Mercury <2% sulphur dioxide
Sodium Metabisulphite ($Na_2S_2O_5$)	<0.0001% Mercury and Arsenic <0.001% Heavy Metals
Lime	0.5% Mercury <2% sulphur dioxide
Activated Carbon	None

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 08*	agrochemical waste containing dangerous substances
03	**WASTES FROM WOOD RPCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**
03 01	**Wastes from wood processing and the production of panels and furniture**
03 01 04*	sawdust, shavings, cuttings, wood, particle board and veneer containing dangerous substances

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
03 02	**Wastes from wood preservation**
03 02 01*	non-halogenated organic wood preservatives
03 02 02*	organochlorinated wood preservatives
03 02 03*	organometallic wood preservatives
03 02 04*	inorganic wood preservatives
03 02 05*	other wood preservatives containing dangerous substances
04	**WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES**
04 01	**Wastes from the leather and fur industry**
04 01 03*	degreasing wastes containing solvents without a liquid phase
04 02	**Wastes from the textile industry**
04 02 14*	wastes from finishing containing organic solvents
04 02 16*	dyestuffs and pigments containing dangerous substances
04 02 19*	sludges from on-site effluent treatment containing dangerous substances
05	**WASTES FROM THE PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL**
05 01	**Wastes from petroleum refining**
05 01 02*	desalter sludges
05 01 03*	tank bottom sludges
05 01 04*	acid alkyl sludges
05 01 05*	oil spills
05 01 06*	oily sludges from maintenance operations of the plant or equipment
05 01 07*	acid tars
05 01 08*	other tars
05 01 09*	sludges from on-site effluent treatment containing dangerous substances
05 01 11*	wastes from cleaning of fuels with bases
05 01 12*	oil containing acids
05 01 15*	spent filter clays
05 06	**Wastes from the pyrolytic treatment of coal**
05 06 01*	acid tars
05 06 03*	other tars
06	**WASTES FROM INORGANIC CHEMICAL PROCESSES**
06 05	**Sludges from on-site effluent treatment**
06 05 02*	sludges from on-site effluent treatment containing dangerous substances
06 07	**Wastes from the MFSU of halogens and halogen chemical processes**
06 07 02*	activated carbon from chlorine production

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
06 10	**Wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture**
06 10 02*	wastes containing dangerous substances
06 13	**Wastes from inorganic chemical processes not otherwise specified**
06 13 02*	spent activated carbon (except 06 07 02)
06 13 05*	Soot
07	**WASTES FROM ORGANIC CHEMICAL PROCESSES**
07 01	**Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
07 01 07*	halogenated still bottoms and reaction residues
07 01 08*	other still bottoms and reaction residues
07 01 09*	halogenated filter cakes and spent absorbents
07 01 10*	other filter cakes and spent absorbents
07 01 11*	sludges from on-site effluent treatment containing dangerous substances
07 02	**Wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 07*	halogenated still bottoms and reaction residues
07 02 08*	other still bottoms and reaction residues
07 02 09*	halogenated filter cakes and spent absorbents
07 02 10*	other filter cakes and spent absorbents
07 02 11*	sludges from on-site effluent treatment containing dangerous substances
07 02 14*	wastes from additives containing dangerous substances
07 02 16*	wastes containing dangerous silicones
07 03	**Wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 07*	halogenated still bottoms and reaction residues
07 03 08*	other still bottoms and reaction residues
07 03 09*	halogenated filter cakes and spent absorbents
07 03 10*	other filter cakes and spent absorbents
07 03 11*	sludges from on-site effluent treatment containing dangerous substances
07 04	**Wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
07 04 07*	halogenated still bottoms and reaction residues
07 04 08*	other still bottoms and reaction residues
07 04 09*	halogenated filter cakes and spent absorbents
07 04 10*	other filter cakes and spent absorbents
07 04 11*	sludges from on-site effluent treatment containing dangerous substances

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
07 04 13*	solid wastes containing dangerous substances
07 05	**Wastes from the MFSU of pharmaceuticals**
07 05 07*	halogenated still bottoms and reaction residues
07 05 08*	other still bottoms and reaction residues
07 05 09*	halogenated filter cakes and spent absorbents
07 05 10*	other filter cakes and spent absorbents
07 05 11*	sludges from on-site effluent treatment containing dangerous substances
07 05 13*	solid wastes containing dangerous substances
07 06	**Wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
07 06 07*	halogenated still bottoms and reaction residues
07 06 08*	other still bottoms and reaction residues
07 06 09*	halogenated filter cakes and spent absorbents
07 06 10*	other filter cakes and spent absorbents
07 06 11*	sludges from on-site effluent treatment containing dangerous substances
07 07	**Wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
07 07 07*	halogenated still bottoms and reaction residues
07 07 08*	other still bottoms and reaction residues
07 07 09*	halogenated filter cakes and spent absorbents
07 07 10*	other filter cakes and spent absorbents
07 07 11*	sludges from on-site effluent treatment containing dangerous substances
08	**WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINITING INKS**
08 01	**Wastes from MFSU and removal of paint and varnish**
08 01 11*	**waste paint and varnish containing organic solvents or other dangerous substances**
08 01 13*	sludges from paint or varnish containing organic solvents or other dangerous substances
08 01 17*	wastes from paint or varnish removal containing organic solvents or other dangerous substances
08 01 21*	waste paint or varnish remover
08 03	**Wastes from MFSU of printing inks**
08 03 14*	ink sludges containing dangerous substances

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
08 04	**Wastes from MFSU of adhesives and sealants (including waterproofing products)**
08 04 11*	adhesive and sealant sludges containing organic solvents or other dangerous substances
08 04 17*	rosin oil
10	**WASTES FROM THERMAL PROCESSES**
10 01	**Wastes from power stations and other combustion plants (except 19)**
10 01 18*	wastes from gas cleaning containing dangerous substances
10 01 20*	sludges from on-site effluent treatment containing dangerous substances
10 02	**Wastes from the iron and steel industry**
10 02 07*	solid wastes from gas treatment containing dangerous substances
10 02 13*	sludges and filter cakes from gas treatment containing dangerous substances
10 03	**Wastes from aluminium thermal metallurgy**
10 03 23*	solid wastes from gas treatment containing dangerous substances
10 03 25*	sludges and filter cakes from gas treatment containing dangerous substances
10 04	**Wastes from lead thermal metallurgy**
10 04 06*	solid wastes from gas treatment
10 04 07*	sludges and filter cakes from gas treatment
10 05	**Wastes from zinc thermal metallurgy**
10 05 05*	solid waste from gas treatment
10 05 06*	sludges and filter cakes from gas treatment
10 06	**Wastes from copper thermal metallurgy**
10 06 06*	solid wastes from gas treatment
10 06 07*	sludges and filter cakes from gas treatment
10 08	**Wastes from other non-ferrous thermal metallurgy**
10 08 17*	sludges and filter cakes from flue gas treatment containing dangerous substances
10 10	**Wastes from casting of non-ferrous pieces**
10 11 15*	solid wastes from flue gas treatment containing dangerous substances
10 11 17*	sludges and filter sakes from flue gas treatment containing dangerous substances
10 11 19*	solid wastes from on-site effluent treatment containing dangerous substances
10 12	**Wastes from manufacture of ceramic goods, brick, tiles and construction products**
10 12 09*	solid wastes from gas treatment containing dangerous substances
10 13	**Wastes from manufacture of cement, lime and plaster and articles and products made from them**

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
10 13 12*	solid wastes from gas treatment containing dangerous substances
11	**WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS, NON-FERROUS HYDRO-METTALURGY**
11 01	**Wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)**
11 01 08*	phosphatising sludges
11 01 09*	sludges and filter cakes containing dangerous substances
11 01 15*	eluate and sludges from membrane systems or ion exchange systems containing dangerous substances
11 01 16*	saturated or spent ion exchange resins
11 01 98*	other wastes containing dangerous substances
11 05	**Wastes from hot galvanising processes**
11 05 03*	solid wastes from gas treatment
11 05 04*	spent flux
12	**WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS**
12 01	**Wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 14*	machining sludges containing dangerous substances
12 01 16*	waste blasting material containing dangerous substances
12 01 18*	metal sludge (grinding, honing and lapping sludge) containing oil
12 01 20*	spent grinding bodies and materials containing dangerous substances
13	**OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)**
13 05	**Oil/water separation contents**
13 05 01*	solids from grit chambers and oil/water separators
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 08*	mixtures of wastes from grit chambers and oil/water separators
13 07	**Wastes of liquid fuels**
13 07 03*	other fuels (including mixtures) - solids only
13 08	**Oil wastes not otherwise specified**
13 08 99*	wastes not otherwise specified
14	**WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except**

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
	07 and 08)
14 06	**Waste organic solvents, refrigerants and foam/aerosol propellants**
14 06 04*	sludges or solid wastes containing halogenated solvents
14 06 05*	sludges or solid wastes containing other solvents
15	**WASTE PACKING, ABSORBANTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**Packaging (including separately collected municipal packaging waste)**
15 01 10*	packaging containing residues of or contaminated by dangerous substances
15 02	**Absorbents, filter materials, wiping cloths and protective clothing**
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 03	**Off-specification batches and unused products**
16 03 03*	inorganic wastes containing dangerous substances
16 03 05*	organic wastes containing dangerous substances
16 07	**Wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)**
16 07 08*	wastes containing oil
16 07 09*	wastes containing other dangerous substances
16 08	**Spent catalysts**
16 08 02*	spent catalysts containing dangerous transition metals or dangerous transition metal compounds
16 08 07*	spent catalysts contaminated with dangerous substances
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**Concrete, bricks, tiles and ceramics**
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances
17 02 04*	glass, plastic and wood containing or contaminated with dangerous substances
17 03	**Bitumous mixtures, coal tar and tarred products**
17 03 01*	bituminous mixtures containing coal tar
17 03 03*	coal tar and tarred products
17 04 10	cables containing oil, coal tar and other dangerous substances
17 04 11*	
17 05	**Soil (including excavated soil from contaminated sites), stones and dredging**

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
	spoil
17 05 03*	soil and stones containing dangerous substances
17 05 05*	dredging soils containing dangerous substances
17 05 07*	track ballast containing dangerous substances
17 06	**Insulation materials and asbestos-containing construction materials**
17 06 03*	other insulation materials consisting of or containing dangerous substances
17 08	**Gypsum-based construction material**
17 08 01*	gypsum-based construction materials contaminated with dangerous substances
17 09	**Other construction and demolition wastes**
17 09 02*	construction and demolition wastes containing PCB (for example PCB containing sealants, PCB containing resin based floorings, PCB containing sealed glazing units, PCB containing capacitors)
17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances
18	**WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except for kitchen and restaurant wastes not arising from immediate health care)**
18 01	**Wastes from natal care, diagnosis, treatment or prevention of disease in humans**
18 01 06*	chemicals consisting of or containing dangerous substances
18 02	**Wastes from research, diagnosis, treatment or prevention of disease involving animals**
18 02 05*	chemicals consisting of or containing dangerous substances
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**
19 01	**Waste from incineration or pyrolysis of waste**
19 01 05*	filter cake from gas treatment
19 01 07*	solid wastes from gas treatment
19 01 15*	boiler dust containing dangerous substances
19 02	**Wastes from physico/chemical treatments of waste (including dechromation, decyanidation, neutralisation)**
19 02 04*	pre-mixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 07*	oil and concentrates from separation

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
19 02 09*	solid combustible wastes containing dangerous substances
19 02 11*	other wastes containing dangerous substances
19 03	**stabilised/ solidified wastes**
19 03 04*	wastes marked as hazardous, partly stabilised
19 03 06*	wastes marked as hazardous, solidified
19 04	**Vitrified waste and wastes from vitrification**
19 04 03*	non-vitrified solid phase
19 08	**Wastes from waste water treatment plants not otherwise specified**
19 08 06*	saturated or spent ion exchange resins
19 08 07*	solutions and sludges from regeneration of ion exchangers
19 08 08*	membrane system waste containing heavy metals
19 08 10*	grease and oil mixture from oil/water separation other than those mentioned in 19 08 09
19 08 11*	sludges containing dangerous substances from biological treatment of industrial waste water
19 08 13*	sludges containing dangerous substances from other treatment of industrial waste water
19 10	**Wastes from shredding of metal-containing wastes**
19 10 03*	fluff-light fraction and dust containing dangerous substances
19 10 05*	other fractions containing dangerous substances
19 11	**Wastes from oil regeneration**
19 11 01*	spent filter clays
19 11 02*	acid tars
19 11 04*	wastes from cleaning of fuels with bases
19 11 05*	sludges from on-site effluent treatment containing dangerous substances
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 06*	wood containing dangerous substances
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances
19 13	**Wastes from soil and groundwater remediation**
19 13 01*	solid wastes from soil remediation containing dangerous substances
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 05*	sludges from groundwater remediation containing dangerous substances
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL,**

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	60,000 tonnes per annum
Maximum quantity stored at any one time	10,000 tonnes
Permitted Hazardous Properties	H2, H3A, H3B, H4, H5, H6, H7, H8, H10, H11, H13, H14, H15
Calorific value range of waste	0– 48MJ/kg
Prohibited Pollutant and Waste limits	Total Mercury content < 2mg/kg No radioactive waste No detectable asbestos No Liquids
	INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	**Separately collected fractions (except 15 01)**
20 01 19*	Pesticides
20 01 26*	oil and fat other than those mentioned in 20 01 25 - solids only
20 01 27*	paints, inks, adhesives and resins containing dangerous substances (sludges and solids only)
20 01 37*	wood containing dangerous substances

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard(s) or method(s)**
A1	Particulate matter	Incineration Plant Stack	30 mg/m^3	½-hr average	Continuous measurement	BS EN 14181
A1	Particulate matter	Incineration Plant Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)	Incineration Plant Stack	20 mg/m^3	½-hr average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)	Incineration Plant Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride	Incineration Plant Stack	60 mg/m^3	½-hr average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride	Incineration Plant Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen fluoride	Incineration Plant Stack	2 mg/m^3	periodic over minimum 1-hour period	Quarterly in first year of operation. Then Bi-annual	BS ISO 15713
A1	Carbon monoxide	Incineration Plant Stack	100 mg/m^3	½-hr average	Continuous measurement	BS EN 14181
A1	Carbon monoxide	Incineration Plant Stack	50 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide	Incineration Plant Stack	200 mg/m^3	½-hr average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide	Incineration Plant Stack	50 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	Incineration Plant Stack	400 mg/m^3	½-hr average	Continuous measurement	BS EN 14181

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard(s) or method(s)**
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	Incineration Plant Stack	200 mg/m^3	daily average	Continuous measurement	BS EN 14181
A1	Cadmium & thallium and their compounds (total)	Incineration Plant Stack	0.05 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Mercury and its compounds	Incineration Plant Stack	0.05 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
A1	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	Incineration Plant Stack	0.5 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Ammonia (NH_3)	Incineration Plant Stack	-	½-hr average and / or daily average	Continuous where CEM installed.	BS EN 14181
A1	Nitrous oxide (N_2O)	Incineration Plant Stack	-	½-hr average and / or daily average	Continuous where CEM installed.	BS EN 14181
A1	Dioxins / furans (I-TEQ)	Incineration Plant Stack	0.1 ng/m^3	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Humans / Mammals)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard(s) or method(s)**
A1	Dioxins / furans (WHO-TEQ Fish)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Birds)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Fish)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Birds)	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	Incineration Plant Stack	-	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.

Table S3.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1	Particulate matter	Incineration Plant Stack	150 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure- during failure of the continuous emission monitor
A1	Total Organic Carbon (TOC)	Incineration Plant Stack	20 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure- during failure of the continuous emission monitor
A1	Carbon monoxide	Incineration Plant Stack	100 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure - during failure of the continuous emission monitor

Table S3.2 Ambient air monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
All monitoring points detailed in reports resulting from PO8	Parameters as detailed in reports resulting from PO8	Monitoring frequency as detailed in reports resulting from PO8	Monitoring standard or method as detailed in reports resulting from PO8	Other specifications as detailed in reports resulting from PO8

Table S3.3 Process monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
As identified in the Application	Wind Speed and Direction	Continuous	Anemometer	As agreed in writing with the Agency.
Location close to the Combustion Chamber inner wall or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	
A1	Scrubber liquor pH and flow	Continuous	-	As agreed in writing with the Agency.
Thermal Desorption Chamber	Chamber operating Temperature	Continuous	-	As agreed in writing with the Agency.
	Exit gas temperature	Continuous	-	As agreed in writing with the Agency.
	Solid waste temperature achieved	Continuous	-	As agreed in writing with the Agency.

Table S3.4 Residue quality					
Emission point reference or source or description of point of measurement	**Parameter**	**Limit**	**Monitoring frequency**	**Monitoring standard or method ***	**Other specifications**
Solid residues from the PTU, pug mill, and the baghouse	TOC	<3%	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	
APC (baghouse) Residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	
APC (baghouse) Residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	
Solid residues from the PTU, and pug-mill	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	
Solid residues from the PTU, and pug-mill	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	

* Or other equivalent standard as agreed in writing with the Environment Agency.

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1	Continuous: Quarterly Periodic: Quarterly for first year, then bi-annual	1 Jan, 1 Apr, 1 Jul and 1 Oct 1 Jan, 1 Apr, 1 Jul and 1 Oct 1 Jan and 1 Jul
Ambient air monitoring Parameters as required by condition 3.5.1	All monitoring points agreed in report for pre-operational condition PO8	Bi-Annually	1 Jan and 1 Jul
TOC Parameters as required by condition 3.5.1	Solid residues from the PTU, pug-mill, and the baghouse	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC (baghouse) residues, Solid residues from the PTU, and pug-mill	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	APC (baghouse) residues, Solid residues from the PTU, and pug-mill	Before use of a new disposal or recycling route	
Functioning and monitoring of the incineration plant as required by condition 4.2.2		Annually	1 Jan

Table S4.2: Annual production/treatment

Parameter	Units
Total Hazardous Waste treated	Tonnes
Thermal energy produced e.g. steam for export	kWhrs
Electrical energy used on installation	kWhrs
Waste heat utilised by the installation	kWhrs
Water treated	m^3
Total amount of treated waste exported	tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Mass of Waste treated	Quarterly	tonnes of waste treated
Mass of Waste treated with a halogen content greater than 1% (as Chlorine)	Quarterly	tonnes of waste treated
Electrical energy imported and used at the installation	Quarterly	kWhrs / tonne of waste incinerated
Recycled Fuel Oil consumption	Quarterly	kgs / tonne of waste incinerated
Fuel oil consumption	Quarterly	kgs / tonne of waste incinerated
Mass of inorganic residue from the PTU produced	Quarterly	kgs / tonne of waste incinerated
Mass of APC (bag house) residues produced	Quarterly	kgs / tonne of waste incinerated
Mass of Other solid residues produced	Quarterly	kgs / tonne of waste incinerated
Ammonia / Urea consumption	Quarterly	kgs / tonne of waste incinerated
Lime consumption	Quarterly	kgs / tonne of waste incinerated
Sodium Hydroxide consumption	Quarterly	kgs / tonne of waste incinerated
Sodium Metabisuphite consumption	Quarterly	kgs / tonne of waste incinerated
Water consumption	Quarterly	kgs / tonne of waste incinerated
Periods of abnormal operation	Quarterly	No. of occasions and cumulative hours for current calendar year for each line.

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1-7 or other form as agreed in writing by the Environment Agency	15/12/14
Residues	Form residues 1-2 or other form as agreed in writing by the Environment Agency	15/12/14
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	15/12/14
Water Usage and Raw Materials	Form WU/RM1 or other form as agreed in writing by the Environment Agency	15/12/14
Waste recovery and disposal	Form R1 or other form as agreed in writing by the Environment Agency	15/12/14
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	15/12/14

Schedule 5 - Notification

These pages outline the information that the operator must provide.

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

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 EP Regulations.

Part A

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

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

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

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

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

Part B - to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

"abatement equipment" means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

"abnormal operation" means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices other than continuous emission monitors for releases to air of particulates, TOC and/or CO, during which the emissions into the air and the discharges of waste water may exceed the prescribed emission limit values

"accident" means an accident that may result in pollution.

"APC residues" means air pollution control residues

"application" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

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

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

"CEM" Continuous emission monitor

"*CEN"* means Commité Européen de Normalisation

"*daily average"* for releases of substances to air means the average of valid half-hourly averages over a calendar day during normal operation.

"*dioxin and furans*" means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

"disposal". Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"*emissions to land"* includes emissions to groundwater.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*emissions of substances not controlled by emission limits"* means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit**.**.

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"*hazardous property"* has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

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

"*Industrial Emissions Directive"* means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

"*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.

"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.

"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 the table below.*

"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.

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

"recovery" means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"*shut down"* is any period where the plant is being returned to a non-operational state and there is no waste being burned or agreed in writing with the Environment Agency.

"start up" is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the plant to initiate steady-state conditions or agreed in writing with the Environment Agency.

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

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

"Waste Framework Directive" or "WFD" means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

"year" means calendar year ending 31 December.

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

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

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

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

(c) *(Where the installation is an incineration plant)* in relation to gases from incineration plants other than those burning waste oil, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 11% dry, where hazardous wastes are burned in plant covered by Schedule 13 of Environmental Permitting Regulations 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 (a) – (c) above. In other cases, the measured emissions shall be standardised only for moisture, pressure and temperature.

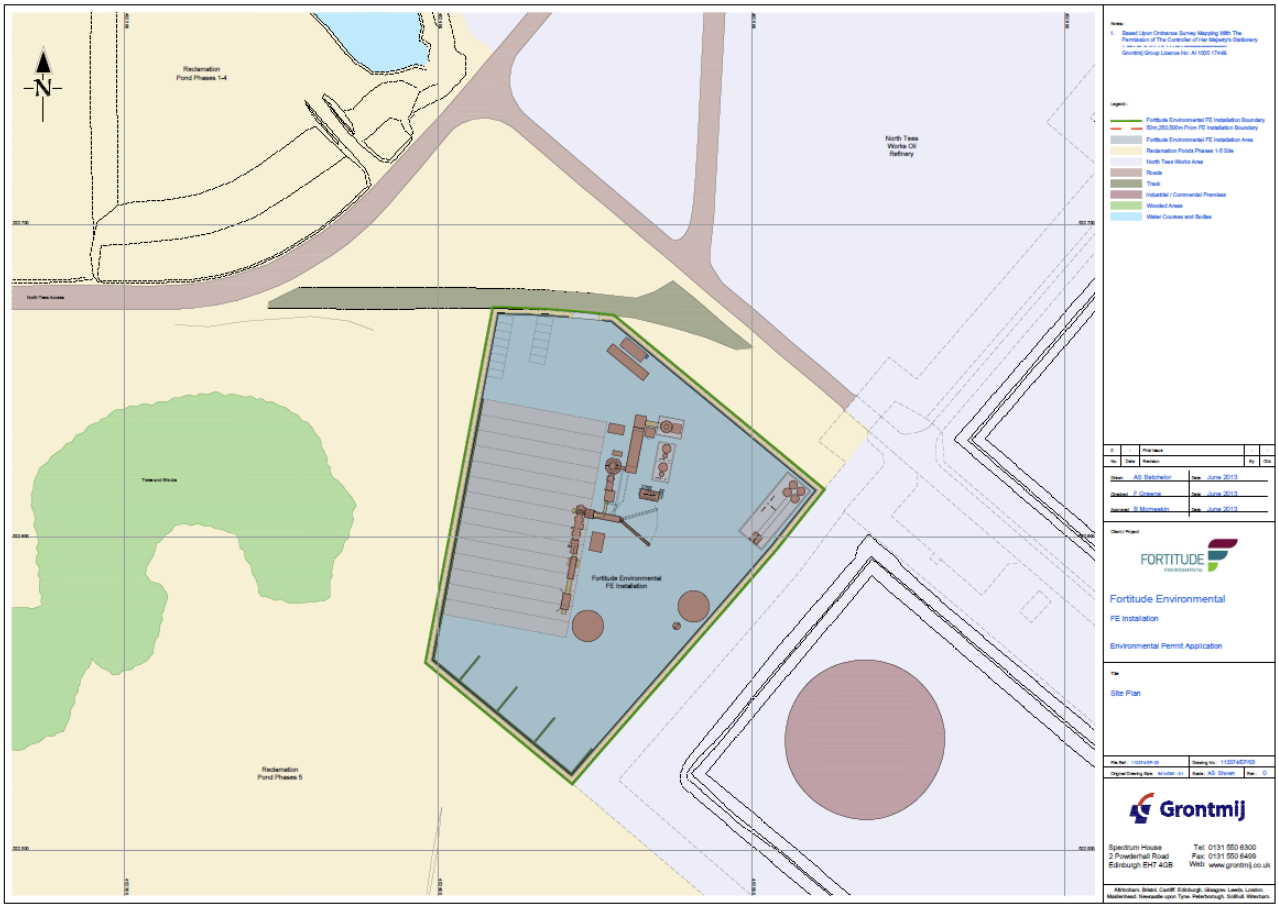
For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should 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 then the detection limit assumed to be at the detection limit as a maximum. However the minimum value should be used when assessing compliance with the emission limit value in table S3.1.

TEF schemes for dioxins and furans				
Congener	***I-TEF***	***WHO-TEF***		
	1990	**2005**	**1997/8**	
		Humans / Mammals	***Fish***	***Birds***
Dioxins				
2,3,7,8-TCDD	*1*	*1*	*1*	*1*
1,2,3,7,8-PeCDD	*0.5*	*1*	*1*	*1*
1,2,3,4,7,8-HxCDD	*0.1*	*0.1*	*0.5*	*0.05*
1,2,3,6,7,8-HxCDD	*0.1*	*0.1*	*0.01*	*0.01*
1,2,3,7,8,9-HxCDD	*0.1*	*0.1*	*0.01*	*0.1*
1,2,3,4,6,7,8-HpCDD	*0.01*	*0.01*	*0.001*	*<0.001*
OCDD	*0.001*	*0.0003*	*-*	*-*
Furans				
2,3,7,8-TCDF	*0.1*	*0.1*	*0.05*	*1*
1,2,3,7,8-PeCDF	*0.05*	*0.03*	*0.05*	*0.1*
2,3,4,7,8-PeCDF	*0.5*	*0.3*	*0.5*	*1*
1,2,3,4,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,7,8,9-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
2,3,4,6,7,8-HxCDF	*0.1*	*0.1*	*0.1*	*0.1*
1,2,3,4,6,7,8_HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
1,2,3,4,7,8,9-HpCDF	*0.01*	*0.01*	*0.01*	*0.01*
OCDF	*0.001*	*0.0003*	*0.0001*	*0.0001*

TEF schemes for dioxin-like PCBs			
Congener	***WHO-TEF***		
	2005	**1997/8**	
	Humans / mammals	***Fish***	***Birds***
Non-ortho PCBs			
3,4,4',5-TCB (81)	*0.0001*	*0.0005*	*0.1*
3,3',4,4'-TCB (77)	*0.0003*	*0.0001*	*0.05*

3,3',4,4',5 - PeCB (126)	*0.1*	*0.005*	*0.1*
3,3',4,4',5,5'-HxCB(169)	*0.03*	*0.00005*	*0.001*
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	*0.00003*	*<0.000005*	*0.0001*
2,3,4,4',5-PeCB (114)	*0.00003*	*<0.000005*	*0.0001*
2,3',4,4',5-PeCB (118)	*0.00003*	*<0.000005*	*0.00001*
2',3,4,4',5-PeCB (123)	*0.00003*	*<0.000005*	*0.00001*
2,3,3',4,4',5-HxCB (156)	*0.00003*	*<0.000005*	*0.0001*
2,3,3',4,4',5'-HxCB (157)	*0.00003*	*<0.000005*	*0.0001*
2,3',4,4',5,5'-HxCB (167)	*0.00003*	*<0.000005*	*0.00001*
2,3,3',4,4',5,5'-HpCB (189)	*0.00003*	*<0.000005*	*0.00001*

Schedule 7 - Site plan



END OF PERMIT