



Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

SRCL Limited

Avonmouth Healthcare Waste Incinerator and
Transfer Facility
Holesmouth Road
Avonmouth
Bristol
BS11 9BP

Permit number
EPR/VP3130EF

Avonmouth Healthcare Waste Incinerator and Transfer Facility

Permit number EPR/VP3130EF

Introductory note

This introductory note does not form a part of the permit

The site incorporates two regulated facilities, an installation and a waste operation, and this permit covers both. The permit implements the requirement of the EU Directives on Industrial Emissions and Waste.

The Installation

The permit controls the operation of a waste incineration plant. The relevant listed activity is Section 5.1 Part A(1)(a) for the incineration of hazardous waste in a waste incineration plant with a capacity exceeding 10 tonnes per day.

The main features of the facility are as follows:

The installation is designed for the thermal treatment of healthcare (clinical) waste, by incineration. Energy will be recovered from the installation in the form of electricity, for use primarily within the facility and for the export of any surplus to the national grid.

The installation is located on a 4.3 hectare site at national grid reference ST 521 805, in the industrialised area of Avonmouth, near to Bristol. The installation is located approximately 10km north west of the city centre.

The installation will process up to 6570 tonnes of waste per year (0.75 tonnes per hour) in a single incineration line. The waste will primarily comprise packaged healthcare waste streams, collected from various medical, veterinary and pharmaceutical sites within, but not exclusively, the catchment area of the incineration plant. This will also include some specified hazardous wastes.

The incinerator is of a mass burn, stepped hearth design. Waste will be delivered to the plant by road in United Nations approved packaging, and will be stored in locked wheeled carts. The waste will be loaded from the wheeled carts into a cradle for inspection prior to being loaded into the incinerator. Any non-conforming waste will be intercepted at this point and reported in-line with the operational procedures. Once unloaded the waste carts are washed in a purpose built cart washer, then rinsed and drained before being returned to customers. The rinse water is recycled as wash water in order to minimise water usage.

Heat from the combustion process is used to generate steam in a multi stage boiler plant which is integral to the combustion process. This is fed to a steam reciprocating unit to generate electricity. The energy recovery plant has a total capacity of approximately 4MW (thermal input) and is capable of generating up to 0.15MWe of electrical power, of which up to 0.058MWe will be exported to the National Grid. Provision has been made in the design for the plant to be capable of supplying heat in the form of steam, once a viable heat user becomes available to take the heat as an output.

The furnace design ensures that a temperature of at least 850°C (or 1000°C for cytotoxic or cytostatic waste) for a period of at least two seconds is achieved in the secondary combustion chamber. To ensure that the temperature does not fall below the required minimum temperature, auxiliary burners firing natural gas are automatically triggered by online process monitoring equipment. Auxiliary burners are also used to achieve and maintain the minimum furnace temperature during start up and shutdown periods.

Combustion gases are cleaned before they are released to atmosphere. There are four components to the flue gas cleaning and abatement technique:

- optimisation of oxygen conditions within the furnace combined with the use of water sprays to control temperature, provides for the abatement of nitrogen oxides;
- dry hydrated lime reagent, injected to neutralise acid gas compounds;
- activated carbon, injected to absorb mercury, dioxins and furans; and
- bag filtration to remove particulates.

Cleaned flue gases exiting the abatement system of the incineration line are discharged through a 40 metre tall stack. Exhaust flue gases are continuously monitored for particulate matter, oxides of nitrogen, sulphur dioxide, carbon monoxide, total organic carbon and hydrogen chloride. Monitoring for heavy metals, dioxins and hydrogen fluoride is carried out periodically.

Liquid effluent emissions from the installation are directed to foul sewer and comprise of:

- boiler blow down effluent;
- washwater from the process of cleaning the waste carts;
- domestic sewage from staff welfare facilities, i.e. toilets / washrooms; and
- firefighting water when necessary.

The incineration process results in solid residues of incinerator bottom ash (IBA) and air pollution control (APC) residues. Following quenching in the ash pit the IBA from the combustion process is transferred to skips for off-site disposal. APC residues are collected and temporarily stored on site prior to being removed from the site in enclosed tankers for subsequent disposal.

The permit also controls the operation of a clinical waste transfer station. The relevant listed activity is Section 5.6 Part A(1)(a) for the temporary storage of hazardous waste with a total capacity exceeding 50 tonnes. Following storage this waste will be transferred off-site for disposal or recovery, with any residual waste being directed to the incineration plant.

The main features of the facility are as follows:

An internal storage area, within the waste processing building, with a storage capacity of 50 tonnes. The area will have an impermeable surface together with a sealed drainage system for the storage of waste in sealed containers.

An external storage area, adjacent to the waste processing building, with a storage capacity of 30 tonnes. The area will have an impermeable surface together with a sealed drainage system for the storage of waste in leak-proof trailers or skips.

The Waste Operation

As described above, the permit controls the operation of a clinical waste transfer station. The storage of non-hazardous waste prior to transfer off-site for disposal or recovery is not a Part A listed activity under EPR, but a 'waste operation' under the Waste Framework Directive. Following storage this waste will be transferred off-site for disposal or recovery, with any residual waste being directed to the incineration plant. The features of the facility are as described in the section above.

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/VP3130EF/A001	Duly made 10/03/14	
Additional Information Received	30/06/14	Response to Schedule 5 Notice dated 09/06/14
Additional Information Received	12/09/14	Response to Environment Agency e-mail dated 04/08/14
Additional Information Received	25/11/14	Response to Environment Agency e-mails dated 25/11/14
Permit determined EPR/VP3130EF (Billing reference: VP3130EF)	22/12/2014	Issue of bespoke permit to SRCL Ltd

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/VP3130EF

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

SRCL Limited (“the operator”),

whose registered office is

Indigo House
Sussex Avenue
Leeds
West Yorkshire
LS10 2LF

company registration number **03226910**

to operate an installation at

Avonmouth Healthcare Waste Incinerator and Transfer Facility
Holesmouth Road
Avonmouth
Bristol
BS11 9BP

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

Name	Date
Emma Pemberton	22/12/2014

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.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

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 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 Combined Heat and Power (CHP) implementation 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 tables S2.2 and S2.3; and
 - (b) it conforms to the description in the documentation supplied by the producer or holder.
- 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 the Application.
- 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 is below, or falls below, 850°C for non-hazardous waste or hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1%, or 1000°C where cytotoxic or cytostatic drugs are burned; 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 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 Infectious clinical waste must be placed in the furnace without first being mixed with other categories of waste, using techniques which are no less effective than those described in the application.
- 2.3.16 Bottom ash and APC residues shall not be mixed.
- 2.3.17 Containers shall be adequately and securely labelled at all times so that the producer, source of the wastes, contents and date of receipt can be identified.
- 2.3.18 The operator shall maintain a tracking system which can identify wastes prior to their onward dispatch.
- 2.3.19 The operator shall use appropriate measures to disinfect surfaces and static containers used for the storage of clinical and healthcare wastes.
- 2.3.20 All surfaces where waste is stored shall allow effective disinfection.

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 and S3.2, 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 table 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 PO8.

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.
- 3.3.3 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, S3.1(a) and S3.2;
 - (b) process monitoring specified in table S3.3;
 - (c) 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, S3.1(a) and S3.2 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 or 10-minute averages 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 or 10-minute average shall in any case be considered valid if measurements are available for a minimum of 20 minutes or 7 minutes during the half-hour or 10-minute period respectively. The number of half-hourly or 10-minute averages so validated shall not exceed 5 or 15 respectively per day;
 - (d) daily average values shall be determined as the average of all the valid half-hourly average or 10-minute average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average or 15 10-minute 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, hazard 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 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.

4.3.4 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.

4.3.5 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 "immediately", 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 and WFD Annex IIA and IIB operations	Limits of specified activity and waste types
S5.1 A(1)(a)	The incineration of hazardous waste in a waste incineration plant with a capacity exceeding 10 tonnes per day. D10: Incineration on land	From receipt of waste to emission of exhaust gas and disposal of waste arising. Waste types specified in Table S2.2 of this permit.
S5.6 A(1)(a)	The temporary storage of hazardous waste with a total capacity exceeding 50 tonnes. R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)	From receipt of hazardous waste to transfer off-site for recovery or disposal. Waste types specified in Table S2.3 of this permit. There shall be no compaction of waste. There shall be no mixing of hazardous waste. All waste storage shall take place on an impermeable surface with sealed drainage. All clinical waste shall be stored in appropriate lidded, lockable, rigid, leak proof containers.
Directly Associated Activities		
Electricity Generation	Generation of electrical power using a steam reciprocating unit from energy recovered from the flue gases.	From receipt of steam to export of electricity for either on-site use or export to the grid
Container washing	Washing of re-usable healthcare waste containers (carts) prior to despatch to customers	From receipt of empty waste carts following incinerator charging, to completion of washing cycle (including the discharge of wastewater to foul sewer)
Raw materials	Storage of raw materials (APC chemicals, boiler treatment chemicals, detergents and oils)	From receipt of raw materials in the storage area to removal from the storage area
Waste Operations		
Waste transfer off-site	R13: Storage of waste pending any of the	From receipt of non hazardous waste to transfer off-site for

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex IIA and IIB operations	Limits of specified activity and waste types
(non-hazardous waste)	<p>operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p>D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced) pending transfer for disposal</p>	<p>recovery or disposal.</p> <p>Waste types specified in Table S2.3 of the permit.</p> <p>All waste storage shall take place on an impermeable surface with sealed drainage.</p> <p>All clinical waste shall be stored in appropriate lidded, lockable, rigid, leak proof containers.</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/VP3130EF/A001	<ul style="list-style-type: none"> • Parts B2 and B3 of the Application Form • Supporting information document (reference AV/201305) including Appendices A and C. • Responses to questions 5, 9, 10, 14, 15 and 23 of the Not Duly Made letter. 	10/03/14
Response to Schedule 5 Notice dated 09/06/14 EPR/VP3130EF/A001	<ul style="list-style-type: none"> • Abnormal emissions assessment report, reference S1587-0300-0006RSF. • Human Health Risk Assessment update, reference S1587-0300-0005RSF 	30/06/14
Additional information EPR/VP3130EF/A001	<ul style="list-style-type: none"> • Responses to questions 1, 2, 3, 5, 7 and 8 of Environment Agency e-mail dated 04/08/14. • Responses to Environment Agency emails dated 25/11/14. 	25/11/14

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 for approval by the Environment Agency to carry out such tests and produce a report on the results. On receipt of written agreement by the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	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 abatement system and/or combustion settings to minimise oxides of nitrogen (NO _x) emissions within the emission limit values described in this permit. The report shall include an assessment of the level of NO _x 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, Cd, As, Ni and Cr VI. A report on the assessment shall be made to the Environment Agency. 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 can be exceeded, the report shall include proposals for further investigative work.	15 months from completion of commissioning

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
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) complies 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 completion of commissioning.
IC8	The Operator shall carry out the monitoring approved under pre-operational condition PO7 and provide the Environment Agency with a written report of the impact of noise from the installation. In the event that the report shows that noise could have a significant impact, the report shall include proposals for the further attenuation and/or management of noise.	6 months from completion of commissioning

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
PO1	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.
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 bottom ash for the purposes of permit compliance and assessment of 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	At least 2 months 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, unless previously agreed in writing by the Environment Agency..
PO5	Prior to the commencement of commissioning, the operator shall submit a written report to the Environment Agency for approval, detailing validation of combustion conditions for the furnace, in accordance with section 2.5 of Environment Agency guidance, <i>EPR 5.01 The Incineration of Waste</i> (March 2009). The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by the IED.
PO6	Prior to the commencement of commissioning, the operator shall submit a written report to the Agency for approval that includes 'as built' detailed site drainage plans (internal process water and external surface water, including emergency fire fighting water) and the specific design detail of the containment infrastructure at the site, including all sub-surface structures and equipment. The report shall also include an inspection and maintenance programme for the containment infrastructure and equipment at the site.
PO7	Prior to the commencement of commissioning the operator shall provide the Environment Agency with a written report for approval describing a detailed programme of noise and vibration monitoring that will be carried out at the site (a) prior to the commencement of commissioning to establish baseline conditions, (b) during the commissioning stage, and (c) when the plant is fully operational. The report shall include confirmation of locations, time, frequency and methods of monitoring.
PO8	Prior to the commencement of commissioning the Operator shall submit the written protocol referenced in condition 3.2.4 for the monitoring of soil and groundwater for approval by the Environment Agency. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1)(b), 14(1)(e) and 16(2) of the IED.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
-	-

Table S2.2 Permitted waste types and quantities for incineration

Maximum quantity	Maximum quantity of all waste incinerated shall not exceed 6,570 tonnes per annum.
Waste code	Description
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 02	Animal-tissue waste
02 01 03	Plant tissue waste
02 02	Wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 02	Animal tissue waste
02 02 03	Materials unsuitable for consumption or processing
02 02 99	Wastes not otherwise specified (comprising of impounded/condemned foodstuffs and genetically modified materials arising from healthcare and research activities)
02 03	Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 04	Materials unsuitable for consumption or processing
02 05	Wastes from the dairy products industry
02 05 01	Materials unsuitable for consumption or processing
02 06	Wastes from the baking and confectionery industry
02 06 01	Materials unsuitable for consumption or processing
07	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 05	Wastes from the MFSU of pharmaceuticals
07 05 13*	Solid wastes containing dangerous substances
07 05 14	Solid wastes other than those mentioned in 07 05 13
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	End-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 21*	Hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 02	Wastes from electrical and electronic equipment
16 02 13	Discarded equipment containing hazardous components (2) other than those mentioned in 16 02 09 to 16 02 12
16 05	Gases in pressure containers and discarded chemicals

Table S2.2 Permitted waste types and quantities for incineration

Maximum quantity	Maximum quantity of all waste incinerated shall not exceed 6,570 tonnes per annum.
Waste code	Description
16 05 06*	Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals (hazardous lab chemicals)
16 05 09	Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08 (Non hazardous lab chemicals)
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT 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 01	Sharps (except 18 01 03)
18 01 02	Body parts and organs including blood bags and blood preserves (except 18 01 03)
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection.
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers).
18 01 06*	Chemicals consisting of or containing dangerous chemicals (excluding X-ray photochemicals)
18 01 07	Chemicals other than those mentioned in 18 01 06 (excluding X-ray photochemicals)
18 01 08*	Cytotoxic and cytostatic medicines
18 01 09	Medicines other than those mentioned in 18 01 08
18 02	Wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 01	Sharps (except 18 02 02)
18 02 02*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection.
18 02 03	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection.
18 02 05*	Chemicals consisting of or containing dangerous substances (excluding X-ray photochemicals)
18 02 06	Chemicals other than those mentioned in 18 02 05 (excluding X-ray photochemicals)
18 02 07*	Cytotoxic and cytostatic medicines
18 02 08	Medicines other than those mentioned in 18 02 07
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard (Confidential materials including paper, cardboard and clothes)
20 01 31*	Cytotoxic and cytostatic medicines
20 01 32	Medicines other than those mentioned in 20 01 31
20 01 99	Other fractions not otherwise specified (comprising of separately collected fractions of municipal clinical waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is subject to special requirements in order to prevent infection) Other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection) ¹
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste

Note 1: These entries are limited to those wastes that are not described, packaged, labelled or transported as infectious or clinical wastes.

Table S2.3 Permitted waste types and quantities for off-site transfer	
Maximum quantity	The maximum throughput of the transfer operation shall not exceed 80 tonnes per day. The maximum throughput of dental and x-ray waste shall not exceed 850 tonnes per annum.
Exclusions	Dangerous goods: Any waste, otherwise permitted by table S2.3, that is either transported in a vehicle, or is packaged in a manner that does not meet the requirements for carriage of that waste, unless agreed in writing by the Environment Agency for that individual consignment or batch of waste.
Waste code	Description
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01	Wastes from the photographic industry
09 01 01*	Water-based developer and activator solutions ¹
09 01 02*	Water-based offset plate developer solutions ¹
09 01 03*	Solvent-based developer solutions ¹
09 01 04*	Fixer solutions ¹
09 01 05*	Bleach solutions and bleach fixer solutions ¹
09 01 07	Photographic film and paper containing silver or silver compounds ¹
09 01 08	Photographic film and paper free of silver or silver compounds ¹
15	WASTE PACKAGING, ABSORBENTS, 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 (Lead foils)
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except 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 01	Sharps (except 18 01 03) ²
18 01 02	Body parts and organs including blood bags and blood preserves (except 18 01 03) ²
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers) ²
18 01 06*	Chemicals consisting of or containing dangerous substances (excluding X-ray photochemicals)
18 01 07	Chemicals other than those mentioned in 18 01 06 (excluding X-ray photochemicals)
18 01 08*	Cytotoxic and cytostatic medicines
18 01 09	Medicines other than those mentioned in 18 01 08
18 01 10*	Amalgam waste from dental care
18 02	Wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 01	Sharps (except 18 02 02) ²
18 02 02*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 03	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection ²
18 02 05*	Chemicals consisting of or containing dangerous substances (excluding X-ray photochemicals)
18 02 06	Chemicals other than those mentioned in 18 02 05 (excluding X-ray photochemicals)
18 02 07*	Cytotoxic and cytostatic medicines

Table S2.3 Permitted waste types and quantities for off-site transfer

Maximum quantity	The maximum throughput of the transfer operation shall not exceed 80 tonnes per day. The maximum throughput of dental and x-ray waste shall not exceed 850 tonnes per annum.
Exclusions	Dangerous goods: Any waste, otherwise permitted by table S2.3, that is either transported in a vehicle, or is packaged in a manner that does not meet the requirements for carriage of that waste, unless agreed in writing by the Environment Agency for that individual consignment or batch of waste.
Waste code	Description
18 02 08	Medicines other than those mentioned in 18 02 07
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	<i>Separately collected fractions (except 15 01)</i>
20 01 31*	Cytotoxic and cytostatic medicines
20 0132	Medicines other than those mentioned in 20 01 31
20 01 99	Other fractions not otherwise specified (comprising of separately collected fractions of municipal clinical waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is subject to special requirements in order to prevent infection) Other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection) ¹

Note 1: These entries are limited to photographic wastes arising from healthcare and/or related research.

Note 2: These entries are limited to those wastes that are not described, packaged, labelled or transported as infectious or clinical wastes.

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 - as shown on the Site Plan in Schedule 7	Particulate matter	Incineration exhaust gases	30 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Particulate matter	Incineration exhaust gases	10 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Total Organic Carbon (TOC)	Incineration exhaust gases	20 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Total Organic Carbon (TOC)	Incineration exhaust gases	10 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Hydrogen chloride	Incineration exhaust gases	60 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Hydrogen chloride	Incineration exhaust gases	10 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Hydrogen fluoride	Incineration exhaust gases	2 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
A1 - as shown on the Site Plan in Schedule 7	Carbon monoxide	Incineration exhaust gases	150 mg/m ³	95% of all 10-minute averages in any 24-hour period	Continuous measurement	BS EN 15267-3 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 - as shown on the Site Plan in Schedule 7	Carbon monoxide	Incineration exhaust gases	50 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Sulphur dioxide	Incineration exhaust gases	200 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Sulphur dioxide	Incineration exhaust gases	50 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Incineration exhaust gases	400 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Incineration exhaust gases	200 mg/m ³	daily average	Continuous measurement	BS EN 15267-3 BS EN 14181
A1 - as shown on the Site Plan in Schedule 7	Cadmium & thallium and their compounds (total)	Incineration exhaust gases	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 - as shown on the Site Plan in Schedule 7	Mercury and its compounds	Incineration exhaust gases	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 - as shown on the Site Plan in Schedule 7	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	Incineration exhaust gases	0.5 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385

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 - as shown on the Site Plan in Schedule 7	Dioxins / furans (I-TEQ)	Incineration exhaust gases	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 - as shown on the Site Plan in Schedule 7	Dioxins / furans (WHO-TEQ Humans / Mammals)	Incineration exhaust gases	No limit set	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 - as shown on the Site Plan in Schedule 7	Dioxins / furans (WHO-TEQ Fish)	Incineration exhaust gases	No limit set	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 - as shown on the Site Plan in Schedule 7	Dioxins / furans (WHO-TEQ Birds)	Incineration exhaust gases	No limit set	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 - as shown on the Site Plan in Schedule 7	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Incineration exhaust gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1 - as shown on the Site Plan in Schedule 7	Dioxin-like PCBs (WHO-TEQ Fish)	Incineration exhaust gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1 - as shown on the Site Plan in Schedule 7	Dioxin-like PCBs (WHO-TEQ Birds)	Incineration exhaust gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4

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 - as shown on the Site Plan in Schedule 7	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	Incineration exhaust gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.
A2 - as shown on the Site Plan in Schedule 7	-	Incineration exhaust gases via the Emergency Relief Vent	No limit set	-	-	-

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

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 - as shown on the Site Plan in Schedule 7	Particulate matter	Incineration exhaust gases	150 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure
A1 - as shown on the Site Plan in Schedule 7	Total Organic Carbon (TOC)	Incineration exhaust gases	20 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure or alternative surrogate as specified in the Application ¹ during failure of the continuous emission monitor
A1 - as shown on the Site Plan in Schedule 7	Carbon monoxide	Incineration exhaust gases	100 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure or alternative surrogate as specified in the Application ² during failure of the continuous emission monitor

Note 1: For TOC, demonstrating that the reading of CO by the multigas analyser is below 25 mg/m³ as a half-hourly average.

Note 2: For CO, demonstrating that the TOC concentration, as measured by the FID monitor, is below 10 mg/m³ as a half-hourly average.

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
S1 - as shown on the Site Plan in Schedule 7	-	Boiler blow-down, wastewater from waste container washing system, domestic sewage, and firefighting water (as required)	No limit set	-	-	-

Table S3.3 Process monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
As agreed with the Environment Agency	Wind speed and direction	Continuous	Anemometer	
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 - as shown on the Site Plan in Schedule 7	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1 - as shown on the Site Plan in Schedule 7	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1 - as shown on the Site Plan in Schedule 7	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	
A1 - as shown on the Site Plan in Schedule 7	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.

Table S3.4 Residue quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *
Bottom Ash	TOC	<3%	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per Environment Agency ash sampling protocol, or in accordance with protocol approved under pre-operational condition PO3.
Bottom Ash	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	No limit set	Monthly in the first year of operation, then Quarterly, or otherwise as agreed in writing with the Environment Agency	
Bottom Ash	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	Before use of a new disposal or recycling route	
APC Residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	No limit set	Monthly in the first year of operation, then Quarterly, or otherwise as agreed in writing with the Environment Agency	
APC Residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	Before use of a new disposal or recycling route	
APC Residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	Before use of a new disposal or recycling route	

* 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	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
TOC Parameters as required by condition 3.5.1	Bottom Ash	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	Bottom Ash	Quarterly (but monthly for the first year of operation), or otherwise agreed in writing with the Environment Agency	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	Bottom Ash	Before use of a new disposal or recycling route	
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 Residues	Quarterly (but monthly for the first year of operation), or otherwise agreed in writing with the Environment Agency	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 Residues	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 waste incinerated	tonnes
Total waste transferred off-site	tonnes

Table S4.2 Annual production/treatment

Parameter	Units
Total electrical energy generated	KWhrs
Electrical energy exported	KWhrs
Electrical energy utilised by the installation	KWhrs
Waste heat utilised by the installation	KWhrs
Total energy usage	KWhrs
Energy exported as heat (if any)	KWhrs
Total quantity Incinerator Bottom Ash (IBA) exported	tonnes
Total quantity APC Residues exported	tonnes

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Total waste incinerated	Quarterly	tonnes
Electrical energy exported, imported and used at the installation	Quarterly	KWhrs / tonne of waste incinerated
Mass of Bottom Ash produced	Quarterly	Kgs / tonne of waste incinerated
Mass of APC residues produced	Quarterly	Kgs / tonne of waste incinerated
Activated Carbon consumption	Quarterly	Kgs / tonne of waste incinerated
Lime 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
Periods of operation of Emergency Relief Vent (ERV)	Quarterly	No of occasions and duration in minutes of each event

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	01/12/14
Residues	Form residues1 or other form as agreed in writing by the Environment Agency	01/12/14
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	01/12/14
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/12/14

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	EPR/VP3130EF
Name of operator	SRCL Limited
Location of Facility	Holesmouth Road, Avonmouth, Bristol, BS11 9BP
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 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;

“bottom ash” means ash falling through the grate;

“CEM” Continuous emission monitor

“CEN” means Comité 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 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 as described in the application 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 in sufficient quantity to cover the primary hearth to initiate steady-state conditions as described in the application 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. In respect of Bottom Ash, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

“*Waste 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) 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,
- (d) 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.

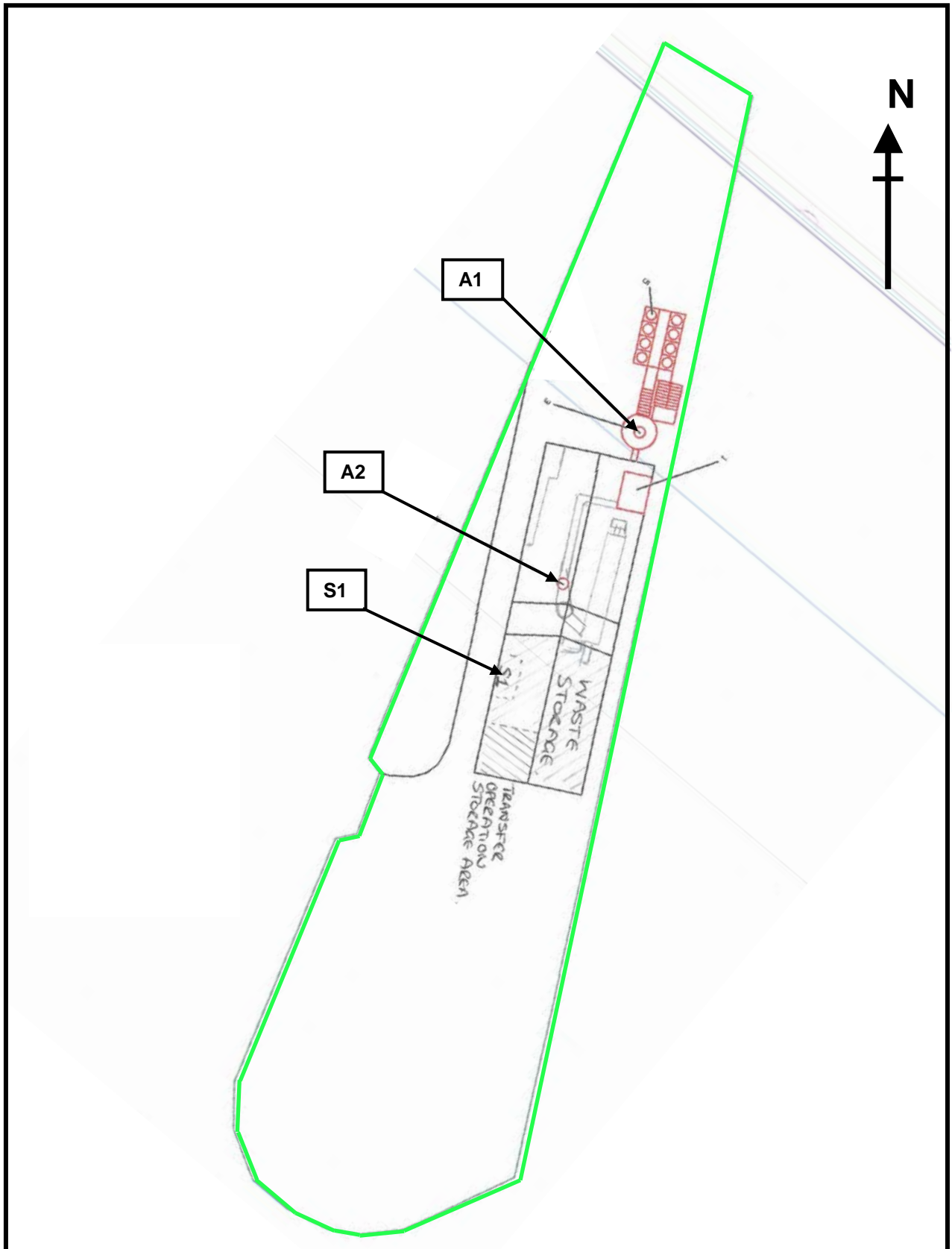
For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their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