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# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

University Hospitals Plymouth NHS Trust

Derriford Incinerator Facility
Derriford Hospital
Derriford Road
Plymouth
Devon
PL6 8DH

#### Variation application number

EPR/GP3236AX/V003

#### Permit number

EPR/GP3236AX

## Derriford Incinerator Facility Permit number EPR/GP3236AX

#### Introductory note

#### This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

This variation has been issued to update the permit following a statutory review of the permits in the industry sector for incineration. The opportunity has also been taken to consolidate the original permit and subsequent variations. The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) conclusions as described in the Commission Implementing Decision. The BAT conclusions for incineration were published on 03 December 2019 in the Official Journal of the European Union (L323) following a European Union wide review of BAT, implementing decision 2017/2117/EU of 21 November 2017.

The schedules specify the changes made to the permit. Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

#### Brief description of the process

This permit controls the operation of a waste incineration plant. The relevant listed activity is S5.1 A(1)(a). The permit implements the requirements of the EU Directives on Industrial Emissions and Waste.

The main features of the permit are as follows:

Furnace technology	Rotary Kiln
Number of lines	1
Principal waste type	Clinical waste
Stack height	70 m
Permitted plant capacity	4,270 tonnes per year
Heat export capacity	2.21 MWth

The incinerator is located to the north of Plymouth and is adjacent to Derriford Hospital. The incinerator currently processes non-hazardous and hazardous wastes, most of which is clinical waste.

The incinerator has a design capacity of 650 kg/hr with a typical operating capacity of approximately 510 kg/hr. The incinerator is fitted with air pollution control comprising of lime injection (to control emissions of sulphur dioxide and hydrogen chloride) and activated carbon (to control emissions of heavy metals and dioxins). There is also a high efficiency bag filtration system for the removal of particulate matter. There is a secondary combustion chamber that provides the required residence time of more than 2 seconds at a temperature of at

least 850°C and 1000°C for cytotoxic wastes. Natural gas is used to support the combustion and to maintain the secondary temperatures.

Emissions to air are discharged via a 70 metre high stack. There is an energy recovery system, the incinerator supplies hot water to the adjacent hospital. Solid wastes produced are bottom ash and residues from the air pollution control system. There is an environmental management system in place that is externally accredited. A small amount of effluent discharge to water and sewer. The former is uncontaminated surface water via an interceptor with the discharge to sewer primarily from the on-site bin washing activities.

There are designated European habitats located within 10km of the installation and Sites of Special Scientific Interest (SSSIs) located within 2km of the installation.

The permit included standard rules SR2008 No24, these rules allowed the operator to store and repackage healthcare waste, photographic and chemical wastes from healthcare premises, and similar municipal wastes at the site. We updated the permit to a bespoke activity so we could set conditions to require improvements.

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

Status log of the permit			
Description	Date	Comments	
Application EPR/VP3734SY/A001	Received 22/03/05	Application for the incineration of hazardous waste in an incineration plant.	
Additional information received	07/09/05	Response to request for information via Schedule 4 dated 08/07/05	
	15/09/05	Response to request for information dated 08/08/05	
	15/09/05	Response to request for information dated 24/08/05	
	31/10/05 & 01/12/05	Response to request for information dated 10/10/05	
Permit determined	12/12/05	Original permit issued to Viridor Waste Management Limited	
Variation notice issued EPR/VP3734SY/V002	18/05/07	Facility for the separation, transfer and bulk storage of dry Air Pollution Residue (APC) from the incinerator.	
Variation Application EPR/VP3734SY/V003	Duly made 15/12/09	Application to add two waste codes for incineration	
Variation Application EPR/VP3734SY/V003 determined	23/04/10	Variation issued	
Application EPR/GP3236AX/V003 (full transfer of permit, EPR/VP3734SY)	Duly made 05/06/15	Application to transfer the permit in full to University Hospitals Plymouth NHS Trust.	
Transfer determined EPR/GP3236AX	30/07/15	Full transfer of permit complete.	

Status log of the permit		
Description	Date	Comments
Variation Application EPR/GP3236AX/V0032 (variation and consolidation)	Duly made 12/09/18	Application to extend the site boundary and include the replacement APC residue silo. Varying of the permit to modern conditions.
Additional information received	20/09/17	Updated site plan provided
Variation determined EPR/GP3236AX	29/01/19	Varied permit issued to University Hospitals Plymouth NHS Trust.
Permit updated	23/02/2022	Following an external consultation, the Standard Rules SR2008 No24 was updated and applied to existing facilities from 23/02/22
Regulation 61 notice issued	10/12/21	Regulation 61 Notice requiring information for Statutory review of permit. BAT Conclusions published 03 December 2019.
Regulation 61 notice response	08/04/22	
Variation issued EPR/GP3236AX/V003	27/11/23	

End of introductory note

#### Notice of variation and consolidation

#### The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

#### Permit number

EPR/GP3236AX

#### Issued to

University Hospitals Plymouth NHS Trust ("the operator")

of

Derriford Hospital Derriford Road Plymouth Devon PL6 8DH

to operate a regulated facility at

Derriford Incinerator Facility
Derriford Hospital
Derriford Road
Plymouth
Devon
PL6 8DH

to the extent set out in the schedules.

The notice shall take effect from 27/11/2023

Name	Date
Principal Permitting Team Leader	27/11/2023

Authorised on behalf of the Environment Agency

#### Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

#### Schedule 2 - consolidated permit

Consolidated permit issued as a separate document.

#### **Permit**

#### The Environmental Permitting (England and Wales) Regulations 2016

#### Permit number

#### EPR/GP3236AX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/GP3236AX/V003 authorising,

University Hospitals Plymouth NHS Trust ("the operator"),

of

Derriford Hospital Derriford Road Plymouth Devon PL6 8DH

to operate an installation and waste operation at

Derriford Incinerator Facility Derriford Hospital Derriford Road Plymouth Devon PL6 8DH

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

Name	Date
Principal Permitting Team Leader	27/11/2023

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.
  - (c) referenced in schedule 1, table S1.1 (AR1), from 03/12/2023, in accordance with a written other than normal operating conditions (OTNOC) management plan.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 The operator shall review the written management system at least every 3 years or otherwise as requested by the Environment Agency.
- 1.1.4 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.
- 1.1.5 The operator shall comply with the requirements of an approved competence scheme.

#### 1.2 Energy efficiency

- 1.2.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR3) 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 For the following activities referenced in schedule 1, table S1.1 (AR1) the operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:
  - (a) new plans for significant developments within 15 km of the installation;
  - (b) changes to the Local Plan;
  - (c) changes to the UK CHP Development Map or similar; and
  - (d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

#### 1.3 Efficient use of raw materials

- 1.3.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR3) 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 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 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.
- 2.3.2 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.

- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
  - (a) it is of a type and quantity listed in schedule 2 table S2.2, S2.3, S2.4; and
  - (b) it conforms to the description in the documentation supplied by the producer or holder.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1 (AR1) waste paper, metal, plastic or glass that has been separately collected for the purpose of preparing for re-use or recycling shall not be accepted. Waste from the treatment of these separately collected wastes shall only be accepted if incineration delivers the best environmental outcome in accordance with regulation 12 of the Waste (England and Wales) Regulations 2011.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1 (AR1) separately collected fractions other than those listed in condition 2.3.5 shall not be accepted unless they are unsuitable for recovery by recycling.
- 2.3.7 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.
- 2.3.8 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.
- 2.3.9 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, unless otherwise agreed in writing with the Environment Agency.
- 2.3.10 The operator shall ensure that prior to accepting waste subject to condition 2.3.9 at the site, it has obtained sufficient information about the hazardous wastes to be burned to demonstrate compliance with the characteristics described in condition 2.3.9.
- 2.3.11 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 2.3.10. 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.
- 2.3.12 For the following activities referenced in schedule 1, table S1.1 (AR1) waste shall not be charged if:
  - (a) the combustion chamber temperature is below 850°C,
  - (b) it is hazardous waste with a hazardous halogenated organic content of more than 1% (expressed as chlorine) and the combustion chamber temperature is below 1,100°C.
  - (c) it is cytotoxic or cytostatic waste and the combustion chamber temperature is below 1,000°C
  - (d) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded during abnormal operation; or
  - (e) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than during abnormal operation; or
  - (f) continuous emission monitors to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than during abnormal operation; or

- (g) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than during abnormal operation.
- (h) continuous emission monitors to demonstrate compliance with the emission limit values for particulates, TOC or CO in schedule 3 are unavailable unless alternative techniques, as agreed in writing with the Environment Agency, are used to demonstrate compliance with those emission limit values.
- 2.3.13 For the following activities referenced in schedule 1, table S1.1 (AR1) the operator shall record the beginning and end of each period of "abnormal operation".
- 2.3.14 For the following activities referenced in schedule 1, table S1.1 (AR1) during a period of "abnormal operation", the operator shall restore normal operation of the failed equipment or replace the failed equipment as soon as possible.
- 2.3.15 For the following activities referenced in schedule 1, table S1.1 (AR1) the operator shall interpret the start of the period of "abnormal operation" as the earliest of the following:
  - (a) a technically unavoidable stoppage, disturbance, or failure of continuous emission monitors.
  - (b) a technically unavoidable stoppage, disturbance, or failure of the activated carbon abatement system
  - (c) Any other technically unavoidable stoppage, disturbance, or failure of the plant which is causing or could lead to an exceedance of an emission limit value in table S3.1.
- 2.3.16 For the following activities referenced in schedule 1, table S1.1 (AR1) 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) The failed equipment has not been repaired and brought back into normal operation and a single period of abnormal operation reaches a duration of 4 hours after the start of abnormal operation on an incineration line
  - (d) Abnormal operation occurs on an incineration line and the cumulative duration of abnormal operation periods over 1 calendar year has reached 60 hours on that incineration line;
- 2.3.17 For the following activities referenced in schedule 1, table S1.1 (AR1) the operator shall have at least one auxiliary burner in each line which shall be operated at start up, shut down and as required during operation to ensure that the operating temperature specified in condition 2.3.12 is maintained as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.12 is maintained in the combustion chamber, such burner(s) shall 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.
- 2.3.18 If Infectious clinical waste is burned, it 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.
- 2.3.19 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 operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table 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, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3, subject to condition 3.2.1, 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 S 3.5. 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 limits and monitoring for emission to air for incineration plant

- 3.2.1 The limits for emissions to air apply as follows:
  - (a) The limits in table S3.1 shall not be exceeded except during periods of abnormal operation.
  - (b) The limits in table S3.1 (a) shall not be exceeded during abnormal operation.
- 3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1 and S3.1(a); 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 of the emission limit values:

•	Carbon monoxide	10%
•	Sulphur dioxide	20%
•	Oxides of nitrogen (NO & NO <sub>2</sub> expressed as NO <sub>2</sub> )	20%
•	Particulate matter	30%
•	Total organic carbon (TOC)	30%
•	Hydrogen chloride	40%
•	Ammonia	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 3.2.2 (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 or 10 minute 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 calculated as follows:

- (i) for the daily average values in table S3.1, the average of valid half hourly averages or 10 minute averages over a calendar day excluding half hourly averages or 10 minute averages during periods of abnormal operation. The daily average value shall be considered valid if no more than five half-hourly average or fifteen 10minute 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.

#### 3.3 Emissions of substances not controlled by emission limits

- 3.3.1 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.
- 3.3.2 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.
- 3.3.3 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.
- 3.3.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

#### 3.4 Odour

- 3.4.1 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.
- 3.4.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to 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.

#### 3.5 Noise and vibration

- 3.5.1 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.
- 3.5.2 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.

#### 3.6 Monitoring

- 3.6.1 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), S3.2 and S3.3;
  - (b) process monitoring specified in table S3.4;
  - (c) residue quality in table S3.5.
- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and unless otherwise agreed in writing by the Environment Agency 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. Newly installed Data handling and acquisition systems (DAHS), or DAHS replacing existing DAHS, shall have MCERTS certification.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.1(a), S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

#### 3.7 Pests

- 3.7.1 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.
- 3.7.2 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 from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

#### 3.8 Fire prevention

- 3.8.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.
- 3.8.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
  - (b) implement the fire prevention 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 using the annual report form specified in schedule 4, table S4.4 or otherwise in a format agreed with the Environment Agency. 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;
  - (c) the performance parameters set out in schedule 4 table S4.3
  - (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 In the event:
  - (a) 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) 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) 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.
  - (d) of activation of the emergency release valve the operator must inform the Environment Agency immediately.
- 4.3.2 Any information provided under condition 4.3.1 (a), (b) or (c) 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 Any information provided under condition 4.3.1 (d) shall be confirmed by sending the information listed in part (a), and part (c) if required, of schedule 5 to this permit within the time period specified in that schedule.
- 4.3.4 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.
- 4.3.5 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.
- 4.3.6 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.
- 4.3.7 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.8 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
  - (a) a decision by the Secretary of State not to re-certify the agreement;
  - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
  - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

#### 4.4 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 reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	S5.1 A1 (a)	The incineration of hazardous waste including clinical waste in a waste	From receipt of waste to emission of exhaust gas and disposal of waste arising.
		incineration plant with a capacity of 10 tonnes per day or more	The total amount of waste stored on site at any one time, including both hazardous and non-hazardous waste, shall not exceed 30 tonnes.
			All infectious waste shall be stored inside a building unless agreed in writing with the Environment Agency following the completion of IC6.
			Waste shall be stored on impermeable surfacing with sealed drainage.
			Waste shall not be stored in vehicles or vehicle trailers, unless they are being received for immediate offloading or prepared for imminent transfer (that is, they will be removed from site within 24 hours, or 72 hours if over a weekend).
			Pharmaceutical, chemical, anatomical and palletised waste shall be stored securely within designated areas of the building.
			Infectious clinical waste shall be stored for no longer than 7 days if outside, or for no longer than 14 days if stored in a building Refrigerated anatomical waste shall be stored for no longer than 14 days.
			Unrefrigerated anatomical waste shall be stored for no longer than 24 hours, or up to 72 hours if over a weekend.
			The following waste types shall be stored on site for no longer than 6 months:
			non-infectious cytotoxic and cytostatic medicines
			other hazardous chemicals or other hazardous wastes

			Notwithstanding the limits given above where a shorter storage time period is given in an agreed management plan then that time period shall take precedence.  No waste types shall be submitted to this activity other than those hazardous wastes specified in Schedule 2, Table S2.2
Directly Associated A		T	T
AR2	Hot water generation	Generation of hot water using an energy recovery system to provide hot water for the adjacent hospital	From receipt of steam to export of heat transfer for hot water generation.
AR3	Cleaning and disinfection of containers and carts.	Washer that cleans and disinfects.	Handling, cleaning and storage of containers and carts prior to dispatch.  Bin, container or cart washing equipment shall be purpose-built, contained and located in a designated area of the facility provided with an impermeable surface with self-contained drainage. The cart or bin wash must be designed to collect and contain all wash waters, including any spray.
Waste Operations			
Activity reference	Description of activities for waste operations	Limits of activities	
AR4	Storage of hazardous and non-hazardous waste.  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 the waste is produced)	hazardous waste on stransfer off-site. The maximum quantitione time shall not exceed the maximum quantitiany one time shall not any one time shall not any one time shall not all infectious waste shagreed in writing with the completion of IC6. Waste shall be stored sealed drainage. Waste shall not be stounless they are being prepared for imminent removed from site with weekend). Pharmaceutical, chem	y of non-hazardous waste stored at t exceed 20 tonnes. hall be stored inside a building unless the Environment Agency following

Infectious clinical waste shall be stored for no longer than 7 days if outside, or for no longer than 14 days if stored in a building Refrigerated anatomical waste shall be stored for no longer than 14 days.

Unrefrigerated anatomical waste shall be stored for no longer than 24 hours, or up to 72 hours if over a weekend.

The following waste types shall be stored on site for no longer than 6 months:

- non-infectious cytotoxic and cytostatic medicines
- dental amalgam
- other hazardous chemicals or other hazardous wastes

Notwithstanding the limits given above where a shorter storage time period is given in an agreed management plan then that time period shall take precedence.

No waste types shall be submitted to this activity other than those hazardous wastes specified in Schedule 2, Table S2.3

AR5

Repackaging of hazardous and non-hazardous waste.

No more than 10 tonnes per day of hazardous waste shall be repackaged.

Repackaging is limited to:taking a waste packag

R12 Exchange of waste for submission to any of the operations numbered R1 to R11

D14 Repackaging prior to submission to any of the operations numbered D1 to D13

- taking a waste package (for example a bag, drum or box) out of one cart or bulk container (for example a skip) and placing it into another cart or bulk container (for example, a skip)
- taking a waste package from a cart or bulk container (for example, skip) and placing it onto a pallet or vehicle
- taking a waste package from a pallet and placing it into a cart or bulk container (for example, skip)

Waste shall not be transferred, removed or separated from its primary packaging (for example bags, bins, boxes and blister packs).

Repackaging shall take place on an impermeable surface with sealed drainage.

Repackaging of waste shall not change either the maximum storage times for waste on site or the amount that can be stored.

Bin, container or cart washing equipment shall be purpose-built, contained and located in a designated area of the facility provided with self-contained drainage. The cart or bin wash must be designed to collect and contain all wash waters, including any spray.

No waste types shall be submitted to this activity other than those hazardous wastes specified in Schedule 2, Table S2.3. Repackaging into a bulk container is restricted to those waste specified in Schedule 2, Table S2.4.

Description	Parts	Date Received
Application EPR/VP3734SY	The response to questions 2.1 and 2.2 given in pages 17 to 31 of the Application	22/03/05
Response to Schedule 4	The responses to questions 4, 6, 7, 11, 16, 30, 41 to and Appendices E, I and K	07/09/05
Specific information	Incineration capacity [B2.1.2]	22/03/05
	Description of each waste type (mass flow, CV & composition) [Additional information]	31/10/05
	Waste feed cessation system [Schedule 4, Q9 & Appendix E]	07/09/05
	Start-up and shut-down [B2.10.5.1 & Schedule 4 Q11]	22/03/05 & 07/09/05
	Temperature monitoring in the combustion chamber [B2.1.7 & Schedule 4, Q9 & Appendix E]	22/03/05 & 07/09/05
	Energy recovery from the Installation [B2.7.1]	22/03/05
	Temperature, oxygen, water vapour and pressure at air release sampling points [B2.10.2 & additional information]	22/03/05 & 31/10/05
	Arrangements for feeding infectious clinical waste to the incinerator without mixing with other classes of waste [B2.1.19]	22/03/05
	Alternative arrangements for CO, TOC and dust monitoring to make use of the relevant abnormal operation condition during CEM failure [Additional information]	15/09/05 & 31/10/05
	New facilities for the handling and storage of APC residues [variation NP3738UQ pages 1 to 26]	31/01/07
	Procedures for assessing, characterising, trialling and seeking approval of additional waste streams for incineration [variation NP3738UQ pages 1 to 26]	31/01/07
Variation application EPR/VP3734SY/V003	Non-Technical Summary dated 13/10/2009 and Site Working Plan ref 'DER 1'.	23/11/09
Variation Application EPR/GP3236AX/V002	Parts C2, C3 of the application documents and all referenced supporting information.	Duly Made 12/09/18
Additional Information	Updated site plan provided	06/11/18
Healthcare waste: appropriate measures for permitted facilities Version published 13 July 2020	Other than:  • those parts to which an improvement programme requirement applies in Table S1.3 (and only until the date that the improvement has been or must be met, whichever is the earlier.)  all of the following parts of the appropriate measures guidance shall apply:  • Waste pre-acceptance, acceptance and waste tracking appropriate measures  • Waste storage, segregation and handling appropriate measures	-

Table S1.2 Operating techniques		
Description	Parts	Date Received
Response to regulation 61 notice	Operating techniques as set out in the response to the regulation 61 notice.	08/04/22

Reference	Requirement	Date
IC1	The operator shall perform a study to determine the extent to which the operation of the systems in place at the plant to minimise NOx emissions (including the NOx abatement installed to meet the new emission limit value for NOx of 180 mg/m³ as a daily average) can be optimised. A written report of the study shall be submitted to the Environment Agency which shall include but not necessarily be limited to the following:  • A brief description of the measures installed measures at the installation to minimise NOx emissions, including details of how the reagent dosing system responds to emissions monitoring.  • The results the optimisation study including:  • a description of the parameters that were varied during the optimisation e.g. ammonia or urea feed rates, physical form of urea injected, air flows, and the range over which they were varied  • the levels of NOx achieved and associated levels of ammonia and nitrous oxide emissions and reagent consumption  • observed effects and predicted long-term impacts on plant operation, reliability and maintenance regime  • any changes to the composition of the bottom ash and boiler ash and the implications of those changes for the ability to process and use the ash, as well as for the pollution potential of the ash both during processing and its subsequent use as a secondary aggregate (if relevant)  • any other relevant cross-media effects  • a description of how the plant will be operated on an ongoing basis to minimise NOx emissions, including target emission limit values for NOx and NH₃	27/11/2024
IC2	The operator shall submit a report to the Environment Agency on whether waste feed to the plant can be proven to have a low and stable mercury content. The report shall have regard to BAT 4 of the BAT	31/12/23

Reference	Requirement	Date
1.0.0.0.0.0	and have regard to the Environment Agency Mercury Monitoring Protocol.	Juio
IC3	The operator shall submit a report to the Environment Agency on whether dioxin emissions to air are stable. The report shall have regard to BAT 4 of the BAT conclusions, be based on historic dioxin emissions monitoring data and have regard to the Environment Agency Dioxins Monitoring Protocol.	31/12/23
IC4	The operator shall carry out an assessment of the opportunities to increase the energy efficiency of the installation.  The assessment shall include but not necessarily be limited to:  • Improvements that could be made to the furnace (including	27/11/2024
	<ul> <li>control systems) in order to increase the amount of thermal energy produced per unit of thermal energy in the waste.</li> <li>Where relevant, improvements that could be made to the steam system and related components to allow a greater quantity of electricity to be generated per unit of thermal energy in the steam.</li> <li>Improvements in the heat and electrical efficiency of the plant's ancillary systems that could be made in order to reduce the heat and electrical loads of the plant.</li> <li>Where relevant, an implementation plan for the improvements identified, including the anticipated increase in the gross and/or net electrical efficiency of the plant which would be achieved.</li> <li>A written copy of the assessment shall be submitted to the Environment</li> </ul>	
	Agency.	
IC5	The operator shall implement measures to ensure compliance with BAT 12 and BAT 32, to ensure that surface water from external reception and storage area is routed to sewer rather than surface water.	03/12/2023
IC6	The operator shall review and update their waste storage procedures to ensure that they meet the requirements of our guidance Healthcare waste: appropriate measures for permitted facilities. Specifically, they must demonstrate that the following appropriate measure(s) of the guidance will be met:  • Waste storage point 11  A copy of the updated procedure(s) shall be submitted to the Environment Agency for approval.	27/05/2024
IC7	The operator shall review plant operation and emissions monitoring data over at least the previous 12 months to establish how daily average	27/05/2025
	emissions should be determined. The operator shall a report to the Environment Agency for approval that summarises the review and include but not necessarily be limited to:	
	The number of days on which the plant did not operate for a complete 24 hours	

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul> <li>Where the plant did not operate for 24 hours the number of hours that it did operate for and the number of hours where emissions were considered to be stable taking into account start-up and shut-down definitions.</li> <li>A proposal for the number of half hourly averages or 10 minute averages that are required for a daily average value to be valid</li> </ul>	
IC8	The operator shall carry out an assessment of the power demand associated with critical equipment required to maintain combustion and abatement systems and prevent operation of the emergency release valve (ERV) until the plant can be shut down safely or returned to normal operation. A comparison of this load (kWe) with the current provision for back-up power systems, and their response time in the event of:  (i) fluctuations in power to the site, and  (ii) the total loss of power to the facility shall be undertaken. Critical equipment shall include but not be limited too, the ID fan, compressed air systems, boiler feedwater pumps, PLC and auxiliary burners, CEMS as well as any other equipment identified in your response to the Regulation 61 Notice (received on 08/04/23).	27/05/2024
	A report of the assessment shall be submitted to the Environment Agency for approval.	
IC9	Upon notification from the Environment Agency following the operation of the emergency release valve (ERV) due to loss of or fluctuations in power the operator shall undertake an assessment of the technical and practical viability of installing back-up power equipment at the installation that are of sufficient capacity (as a minimum for the kWe identified in IC8) and have an appropriate response time to avoid activation of the emergency release valve (ERV) and maintains combustion following interruption or failure of power supply to the facility.	6 months from written notification from the Environment Agency
	A report on the assessment shall be submitted to the Environment Agency for approval.	
	The operator shall install and integrate measures for the provision of back-up power within 12 months from the date of approval	
IC10	The operator shall develop a method for assessing and identifying the root cause of the operation of the emergency release valve (ERV). The method shall have regard to the approach proposed in the Report titled 'Emergency Releases from the Incineration of Hazardous and Healthcare Waste' dated 26 June 2023 and shall include as a minimum an assessment of the adequacy of:	27/05/2024

Reference	Improvement programme requirements  Requirement	Date
Reference	<ul> <li>The design and specification of equipment to prevent mechanical and electrical failure of critical equipment</li> <li>The provision of back-up systems, redundancy and availability of spares for critical equipment</li> <li>Planned Preventative Maintenance of critical equipment</li> <li>Site management including Operating Procedures and management of personnel</li> <li>A rolling assessment of mitigation measures that will prevent reoccurrence of the cause of an ERV activation</li> </ul> The operator shall submit details of the method to be used to the Environment Agency for approval and incorporate it into their Environmental Management System.	Date
IC11	Upon notification from the Environment Agency following the repeat operation of the emergency release valve (ERV) the operator shall undertake a detailed review of the design, provision of redundancy and maintenance regimes for critical equipment and operating procedures that may result in operation of the emergency release valve (ERV).  The review shall have regard to the immediate and root causes and mitigation measures identified in the Report titled 'Emergency Releases from the Incineration of Hazardous and Healthcare Waste' dated 26 June 2023.  A report of the findings of the review and details of proposed improvements to reduce the potential for activation of the ERV, including timescales for their implementation, shall be submitted to the	9 months from written notification from the Environment Agency
IC12	Environment Agency for approval.  Following notification from the Environment Agency after repeat operation of the emergency release valve (ERV), the Operator shall undertake air dispersion modelling on the short-term environmental impact of the operation of the ERV on air quality and the environment. The assessment shall follow the approach in the Environment Agency's Air Emissions Risk Assessment guidance and have regard to the nature and duration of ERV activations that occurred during the last 3 years of the operation of the installation.	9 months from written notification from the Environment Agency
	The methodology for the impact assessment including assumptions on pollutant concentrations, exhaust gas characteristics and event durations shall be agreed with the Environment Agency in advance of the modelling being undertaken.  The operator shall submit a report summarising the dispersion modelling and the results to the Environment Agency for approval	

Table S1.3	Table S1.3 Improvement programme requirements		
Reference	Requirement	Date	
IC13	The Operator shall submit a written report to the Environment Agency for approval on the commissioning of the new boiler. 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 and confirm that the Environmental Management System (EMS) has been updated accordingly.	Within 3 months of completion of commissioning of the new boiler	
IC14	The operator shall notify the Environment Agency of the proposed date(s) that validation testing is planned for.	Notification at least 3 weeks prior to validation testing	
	During commissioning the operator shall carry out validation testing to validate the residence time, minimum temperature and oxygen content of the gases in the furnace whilst operating under normal load and most unfavourable operating conditions. The validation shall be to the methodology as approved through pre-operational condition PO9.	Validation tests completed before the end of commissioning	
	The operator shall submit a written report to the Environment Agency on the validation of residence time, oxygen and temperature whilst operating under normal load, minimum turn down and overload conditions.	Report submitted within 2 months of the completion of commissioning.	
	The report shall identify the process controls used to ensure residence time and temperature requirements are complied with during operation of the incineration plant		

Reference	Operation	Pre-operational measures
PO1	Operation of the new boiler scheduled for 2024	At least 2 months prior to commissioning of the new boiler, the Operator shall submit to the Environment Agency, and obtain the Environment Agency's written approval to it, a written commissioning plan for installation of the new boiler, 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.
PO2		The operator shall submit a written report to the Environment Agency, and obtain the Environment Agency's written approval to it, of the details of the computational fluid dynamic (CFD) modelling. The report shall explain how the new boiler and existing furnace has been designed to comply with the residence time and temperature requirements as defined by Chapter IV and Annex VI of the IED whilst operating under normal load and the most unfavourable operating conditions (including minimum turn down and overload conditions), and that the design includes sufficient monitoring ports to support subsequent validation of these requirements during commissioning.
PO3		At least 3 months before the commencement of commissioning of the new boiler or other date agreed in writing with the Environment Agency) the Operator shall submit, for approval by the Environment Agency, a methodology (having regard to Technical Report P4-100/TR Part 2 Validation of Combustion Conditions) to verify the residence time, minimum temperature and oxygen content of the gases in the furnace whilst operating under normal load, minimum turn down and overload conditions.

## 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 plant (activity AR1)		
Maximum quantity	4,270 tonnes per year	
Waste code	Description	
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	
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 hazardous substances	
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	non-infectious sharps, not contaminated with chemicals or medicines	
18 01 01 and 18 01 09	non-infectious sharps from vaccines delivered in mass vaccination centres, in the community and in care homes	
18 01 02	non-infectious anatomical waste, not chemically preserved	
18 01 02 and 18 01 06*	non-infectious anatomical waste, chemically preserved, hazardous chemicals	
18 01 02 and 18 01 07	non-infectious anatomical waste, chemically preserved, non-hazardous chemicals	
	infectious waste, not contaminated with chemicals or medicines (may contain sharps)	
18 01 03*	infectious anatomical waste, not chemically preserved	
	infectious gypsum wastes (for example, plaster casts and moulds)	
18 01 03* and 18 01	infectious waste, contaminated with chemicals	
06* or 18 01 07	infectious anatomical waste, chemically preserved	
18 01 03* and 18 01 08* or 20 01 31*	infectious waste, contaminated with cytotoxic and cytostatic medicines – (may contain sharps)	
18 01 03* and 18 01 09	infectious waste, medicinally contaminated (not cytotoxic or cytostatic) – (may contain sharps)	
	sharps from vaccinations delivered in hospitals or GP surgeries	
18 01 04	non-infectious offensive waste – human healthcare	
	non-infectious gypsum wastes (for example, plaster casts and moulds)	
18 01 06*	chemicals consisting of or containing hazardous substances	
18 01 07	chemicals other than those mentioned in 18 01 06	

18 01 08*	cytotoxic and cytostatic medicines
18 01 09	other waste medicines, excluding cytotoxic and cytostatic medicines – human healthcare
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 01	non-infectious sharps, not contaminated with chemicals or medicines
	infectious waste, not contaminated with chemicals or medicines (may contain sharps)
18 02 02*	infectious anatomical waste, not chemically preserved
	infectious gypsum wastes (for example, plaster casts and moulds)
18 02 02* and 18 02	infectious waste, contaminated with chemicals
05* or 18 02 06	infectious anatomical waste, chemically preserved
18 02 02* and 18 02 07* or 20 01 31*	infectious waste, contaminated with cytotoxic and cytostatic medicines (may contain sharps)
18 02 02* and 18 02 08	infectious waste, medicinally contaminated (not cytotoxic or cytostatic) (may contain sharps)
18 02 03	non-infectious anatomical waste, not chemically preserved
	non-infectious offensive waste
	non-infectious gypsum wastes (for example, plaster casts and moulds)
18 02 03 and 18 02 05*	non-infectious anatomical waste, chemically preserved, hazardous chemicals
18 02 03 and 18 02 06	non-infectious anatomical waste, chemically preserved, non-hazardous chemicals
18 02 05*	chemicals consisting of or containing dangerous substances
18 02 06	chemicals other than those mentioned in 18 02 05
18 02 07*	cytotoxic and cytostatic medicines
18 02 08	other waste medicines, excluding cytotoxic and cytostatic
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 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 04*	premixed wastes composed of at least one hazardous waste
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 31*	Cytotoxic and cytostatic medicines
20 01 32	Other waste medicines, excluding cytotoxic and cytostatic medicines – municipal, separately collected fractions not from healthcare or research-related sources
20 01 99	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)
20 03	other municipal wastes

20 03 01	mixed municipal waste
Any waste authorised under the Radioactive Substances Act 1993	

Table S2.3 Permitted waste types and quantities for storage and transfer (activities AR4, AR5)		
Maximum quantity	5,000 tonnes per year	
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	
09 01 02*	water-based offset plate developer solutions	
09 01 03*	solvent-based developer solutions	
09 01 04*	fixer solutions	
09 01 05*	bleach solutions and bleach fixer solutions	
09 01 07	photographic film and paper containing silver or silver compounds	
09 01 08	photographic film and paper free of silver or silver compounds	
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 04	Lead foils from dental care	
15 01 06	mixed packaging	
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 hazardous substances	
15 02 03	Commercial, separately collected fractions of absorbents, wiping cloths and protective clothing not contaminated by infectious substances	
16	Wastes not otherwise specified in the list	
16 05	Gases in pressure containers and discarded chemicals	
16 05 04*	Aerosol canisters from the servicing of washrooms and similar hygiene facilities, containing hazardous substances	
16 05 05	Aerosol canisters from the servicing of washrooms and similar hygiene facilities, other than those mentioned in 16 05 04	
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	non-infectious sharps, not contaminated with chemicals or medicines	
18 01 01 and 18 01 09	non-infectious sharps from vaccines delivered in mass vaccination centres, in the community and in care homes	
18 01 02	non-infectious anatomical waste, not chemically preserved	
18 01 02 and 18 01 06*	non-infectious anatomical waste, chemically preserved, hazardous chemicals	

	d waste types and quantities for storage and transfer (activities AR4, AR5)
Maximum quantity	5,000 tonnes per year
Waste code	Description
18 01 02 and 18 01 07	non-infectious anatomical waste, chemically preserved, non-hazardous chemicals
	infectious waste, not contaminated with chemicals or medicines (may contain sharps)
18 01 03*	infectious anatomical waste, not chemically preserved
	infectious gypsum wastes (for example, plaster casts and moulds)
18 01 03* and 18 01	infectious waste, contaminated with chemicals
06* or 18 01 07	infectious anatomical waste, chemically preserved
18 01 03* and 18 01 08* or 20 01 31*	infectious waste, contaminated with cytotoxic and cytostatic medicines – (may contain sharps)
18 01 03* and 18 01 09	infectious waste, medicinally contaminated (not cytotoxic or cytostatic) – (may contain sharps)
	sharps from vaccinations delivered in hospitals or GP surgeries
18 01 04	non-infectious offensive waste – human healthcare
	non-infectious gypsum wastes (for example, plaster casts and moulds)
18 01 06*	chemicals consisting of or containing hazardous substances
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 08*	cytotoxic and cytostatic medicines
18 01 09	other waste medicines, excluding cytotoxic and cytostatic medicines – human healthcare
18 01 10*	amalgam waste from dental care
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 01	non-infectious sharps, not contaminated with chemicals or medicines
	infectious waste, not contaminated with chemicals or medicines (may contain sharps)
18 02 02*	infectious anatomical waste, not chemically preserved
	infectious gypsum wastes (for example, plaster casts and moulds)
18 02 02* and 18 02	infectious waste, contaminated with chemicals
05* or 18 02 06	infectious anatomical waste, chemically preserved
18 02 02* and 18 02 07* or 20 01 31*	infectious waste, contaminated with cytotoxic and cytostatic medicines (may contain sharps)
18 02 02* and 18 02 08	infectious waste, medicinally contaminated (not cytotoxic or cytostatic) (may contain sharps)
18 02 03	non-infectious anatomical waste, not chemically preserved
13 02 00	non-infectious offensive waste

Table S2.3 Permitted waste types and quantities for storage and transfer (activities AR4, AR5)		
Maximum quantity	5,000 tonnes per year	
Waste code	Description	
18 02 03 and 18 02 05*	non-infectious anatomical waste, chemically preserved, hazardous chemicals	
18 02 03 and 18 02 06	non-infectious anatomical waste, chemically preserved, non-hazardous chemicals	
18 02 05*	chemicals consisting of or containing dangerous substances	
18 02 06	chemicals other than those mentioned in 18 02 05	
18 02 07*	cytotoxic and cytostatic medicines	
18 02 08	other waste medicines, excluding cytotoxic and cytostatic	
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 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)	
19 02 04*	premixed wastes composed of at least one hazardous waste	
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	
20 01 31*	Cytotoxic and cytostatic medicines	
20 01 32	Other waste medicines, excluding cytotoxic and cytostatic medicines – municipal, separately collected fractions not from healthcare or research-related sources	
20 01 99	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)	
20 03	other municipal wastes	
20 03 01	mixed municipal waste	
Any waste authorised under the Radioactive Substances Act 1993		

Table S2.4 Permitted waste types and quantities for repackaging into bulk containers (activity AR5)		
Maximum quantity	1,100 tonnes per year	
Waste code	Description	
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 04	non-infectious offensive waste – human healthcare	
	non-infectious gypsum wastes (for example, plaster casts and moulds)	

Table S2.4 Permitted waste types and quantities for repackaging into bulk containers (activity AR5)					
Maximum quantity	1,100 tonnes per year				
Waste code	Description				
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals				
18 02 03	non-infectious anatomical waste, not chemically preserved				
	non-infectious offensive waste				
	non-infectious gypsum wastes (for example, plaster casts and moulds)				
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				
20 01 99	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)				
20 03	other municipal wastes				
20 03 01	mixed municipal waste				

### **Schedule 3 – Emissions and monitoring**

Table S3.1 F	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 site plan in schedule 7)	Particulate matter	Main incinerator via abatement and 70m stack	30 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181	
	Particulate matter		10 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181	
			5 mg/m <sup>3</sup> from 03/12/2023				
	Total Organic Carbon (TOC)		20 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181	
	Total Organic Carbon (TOC)		10 mg/m <sup>3</sup>	daily average	Continuous	EN 14181	
	Hydrogen chloride		60 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181	
	Hydrogen chloride		10 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181	
			8 mg/m <sup>3</sup> from 03/12/2023				

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 (as shown on site plan in schedule 7)	Hydrogen fluoride	Main incinerator via abatement and 70m stack	2 mg/m³ until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	CEN TS 17340
			1 mg/m³ from 03/12/2023			
	Carbon monoxide		100 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
	Carbon monoxide		50 mg/m <sup>3</sup>	daily average	Continuous	EN 14181
	Sulphur dioxide		200 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
	Sulphur dioxide		50 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181
			40 mg/m <sup>3</sup> from 03/12/2023			
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )		400 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )		400 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181
			180 mg/m <sup>3</sup> from 03/12/2023			

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 (as shown on site plan in schedule 7)	Cadmium & thallium and their compounds (total)	incinerator via abatement and 70m stack  and its and its and stands  and its	0.05 mg/m <sup>3</sup> until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually from 03/12/2023	BS EN 14385
			0.02 mg/m <sup>3</sup> from 03/12/2023			
	Mercury and its compounds		0.05 mg/m <sup>3</sup> until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually until 02/12/2023	BS EN 13211
	Mercury and its compounds		0.02 mg/m <sup>3</sup> from 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually from 03/12/2023	BS EN 13211
			Limit does not apply if continuous monitoring has been specified by the Environment Agency		Not required if continuous monitoring has been specified by the Environment Agency	
	Mercury and its compounds		0.02 mg/m <sup>3</sup> from 03/12/2023	Daily average	Continuous from 03/12/2023  Not required unless continuous monitoring has been specified in writing by the Environment Agency	EN 14181

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 (as shown on	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their	Main incinerator via	0.5 mg/m³ Until 02/12/2023	Average of three consecutive measurements of at	Bi-annually	BS EN 14385
site plan in schedule 7)	compounds (total)	abatement and 70m stack	0.3 mg/m <sup>3</sup> from 03/12/2023	least 30 minutes each		
	Exhaust gas temperature	_	No limit set	-	Continuous	Traceable to national standards
	Exhaust gas pressure		No limit set	-	Continuous	Traceable to national standards
	Exhaust gas flow		No limit set	-	Continuous	BS EN 16911-2
	Exhaust gas oxygen content		No limit set	-	Continuous	EN 14181
	Exhaust gas water vapour content		No limit set	-	Continuous	EN 14181
	Ammonia (NH <sub>3</sub> )		15 mg/m <sup>3</sup> from 03/12/2023	daily average	Continuous from 03/12/2023	EN 14181
	Nitrous oxide (N₂O)		No limit set	½-hr average and daily average from 01/01/2023	Continuous	EN 14181

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 (as shown on	Carbon dioxide	Main incinerator via	No limit set	Continuous	Continuous	EN 14181
site plan in schedule 7)	Dioxins / furans (I-TEQ)	xins / furans (I-TEQ)	0.1 ng/m <sup>3</sup> Until 02/12/2023	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually until 02/12/2023	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (I-TEQ)		0.06 ng/m <sup>3</sup>	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually from 03/12/2023	EN 1948 Parts 1, 2 and 3
			and	and	and	and
			0.08 ng/m³ if long term limit is specified by the Environment Agency in line with sampling protocol from 03/12/2023	value over sampling period of 2 to 4 weeks for long term sampling	long term sampling if specified by the Environment Agency in line with sampling protocol from 03/12/2023	CEN TS 1948-5 if specified by the Environment Agency in line with sampling protocol
	Dioxin-like PCBs (WHO- TEQ Humans / Mammals, Fish, Birds)		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	BS EN 1948 Parts 1, 2 and 4
	Dioxins / furans (WHO-TEQ Humans / Mammals, Fish, Birds)		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	BS EN 1948 Parts 1, 2 and 3

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 (as shown on site plan in schedule 7)	Polybrominated dibenzo- dioxins and furans	Main incinerator via abatement and 70m stack	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually from 01/01/2023 Not required unless wastes containing brominated flame retardants are burned	Method based on procedural requirements of EN 1948
	Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Annually	BS ISO 11338 Parts 1 and 2.
A2 (as shown on site plan received on 10/11/23)	Carbon monoxide	Back-up electrical generator	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first) from 01/01/2030	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)

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)		
A3 (shown as dump stack on site plan in schedule 7)	No parameters set	Emergency by-pass valve	No limits set	-	-	-		

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 (as shown on site plan in schedule 7)	Particulate matter	Main incinerator via abatement and 70m stack	150 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181 during abatement plant failure or
	Total Organic Carbon (TOC)		20 mg/m <sup>3</sup>	½-hr average	Continuous	alternative surrogate as agreed in writing with the environment agency during failure of the
	Carbon monoxide		100 mg/m <sup>3</sup>	½-hr average	Continuous	continuous emission monitor

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 – emission to River Plym via interceptor (as shown on the Site Plan in Schedule 7)	Uncontaminated water from site surface drainage (No emission is permitted via W1 after completion of improvement condition IC5)	Oil, grease or biological matter	No visible trace present	-	-	Visual assessment

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site- emission limits and monitoring requirements							
Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method	
S1 – emission to South West Water Waste Water Treatment Works (as shown on the site plan in Schedule 7)	Bin wash and surface water run off	No parameters set	No limit set	-	-	-	

Table S3.4 Process monito	Table S3.4 Process monitoring requirements							
Emission point reference or source 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					
Opposite the entry point to Post Combustion Chamber 1	Temperature (°C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.				
In the roof of Post Combustion Chamber 2, adjacent to the exit point	Temperature (°C)							
Incineration plant	Boiler efficiency	within 6 months of any modification that significantly affects energy efficiency	Performance test at full load or other method as agreed in writing with the Environment Agency					

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Bottom Ash	or otherwise as agreed in writing with the Environment Agency	5% or otherwise as agreed in writing with the Environment Agency	Monthly in the first year of operation. Then Quarterly	EN 14899 and either EN 15169 or EN 15935 or otherwise as agreed in writing with the Environment Agency	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'
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.	-	Monthly in the first year of operation. Then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-
Bottom Ash	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	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-
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.	-	Monthly in the first year of operation. Then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
APC 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	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-
Boiler cleaning solid 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	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-
Boiler cleaning solid 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	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	-

<sup>\*</sup> 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	g data		
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.6.1.	A1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
LOI or otherwise as agreed in writing with the Environment Agency Parameters as required by condition 3.6.1	Bottom Ash	Quarterly	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 3.6.1	Bottom Ash	Quarterly	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 3.6.1	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 3.6.1	APC Residues	Quarterly	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 3.6.1	APC Residues	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	Boiler cleaning solid residues	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct

Table S4.1 Reporting of monitoring data								
Parameter	Emission or monitoring point/reference	Reporting period	Period begins					
Parameters as required by condition 3.6.1								
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 3.6.1	Boiler cleaning solid 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 clinical waste incinerated	tonnes	
Total non-clinical waste incinerated	tonnes	
Hot water exported	KWh	
Electrical energy used on installation	KWh	

Table S4.3 Performance parameters			
Parameter	Frequency of assessment	Units	
Annual Report as required by condition 4.2.2	Annually	-	
Electrical energy exported, imported and used at the installation	Annually	KWh / tonne of waste incinerated	
Natural gas consumption	Annually	KWh / tonne of waste incinerated	
Bottom Ash residue	Annually	Route, tonnes and tonnes / tonne of waste incinerated	
Fly Ash / APC residue	Annually	Route, tonnes and tonnes / tonne of waste incinerated	
Boiler cleaning solid residues	Annually	Route, tonnes and tonnes / tonne of waste incinerated	
Ammonia / Urea consumption	Annually	Kg / tonne of waste incinerated	
Activated Carbon consumption	Annually	Kg / tonne of waste incinerated	

Table S4.3 Performance parameters			
Parameter	Frequency of assessment	Units	
Lime consumption	Annually	Kg / tonne of waste incinerated	
Water consumption	Annually	Kg / tonne of waste incinerated	
Periods of abnormal operation	Annually	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	
Annual report required by condition 4.2.2	Annual performance report template	-	
Emissions to air until 02/12/2023	Forms A1 to A8	10/10/05	
Emissions to air from 03/12/2023	Forms air 1-9 or other forms as agreed in writing by the Environment Agency	27/11/23	
Residue quality	Form residue 1 and 2 or other form as agreed in writing by the Environment Agency	27/11/23	

### 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	
	any malfunction, breakdown or failure of equipment or techniques, ince not controlled by an emission limit which has caused, is 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	
	1

Measured value and uncertainty

Date and time of monitoring

(b) Notification requirements for t	the breach of a li	mit	
To be notified within 24 hours of	detection unless	otherwise specified bel	ow
Measures taken, or intended to be taken, to stop the emission			
Time periods for notification follo	wing detection of	of a breach of a limit	
Parameter			Notification period
(c) Notification requirements for t	the detection of a	any significant adverse e	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 submit		n as practicable	9
Any more accurate information on the notification under Part A.	ne matters for		
Measures taken, or intended to be t a recurrence of the incident	aken, to prevent		
Measures taken, or intended to be t limit or prevent any pollution of the e which has been or may be caused by	environment		
The dates of any unauthorised emis facility in the preceding 24 months.	sions from the		
Name*			
Post			
Signature			
Date			

<sup>\*</sup> 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 plant or the measurement devices. Abnormal operation starts as defined in condition 2.3.15 and ends as defined in condition 2.3.16. Abnormal operation is limited to 4 hours for a single occurrence and a total of 60 hours per year per line.

"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.

"BAT conclusions" means Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for Waste Incineration

"bottom ash" means ash from the third hearth of the primary chamber which has been through the ash box system and has been deposited in the ash skip as described in the application.

"building" is a covered structure enclosed on all vertical sides that provides sheltered cover and contains emissions of, for example, noise, particulate matter, odour and litter.

"CEM" Continuous emission monitor

"CEN" means Commité Européen de Normalisation

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

"clinical" waste means waste from a healthcare activity (including veterinary healthcare) that:

- a) contains viable micro-organisms or their toxins which are known or reliably believed to cause disease in humans or other living organisms
- b) contains or is contaminated with a medicine that contains a biologically active pharmaceutical agent
- c) is a sharp, or a body fluid or other biological material (including human and animal tissue) containing or contaminated with a hazardous substance

and waste of a similar nature from a non-healthcare activity.

"container" is a receptacle for waste for example bags, bins, boxes, drums, IBCs and blister packs. Wastes may be packaged in more than one receptacle for example a bag in a box.

"cytotoxic and cytostatic medicines" are medicinal products that possess one or more of the hazardous properties acutely toxic, carcinogenic, mutagenic or toxic for reproduction.

"D" means a disposal operation provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste.

'Daily average' emissions value means the average of at least 43 valid half hourly averages or for CO the average of at least 43 valid half hourly averages or 129 valid 10 min averages; or otherwise as agreed in writing with the Environment Agency after completion of IC7.

"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 2016 No.1154 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 in Annex III of the Waste Framework Directive

"hazardous substance" means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008.

'Hazardous waste' has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended)

"healthcare waste" means waste produced during human or animal healthcare, or related research activities. It covers both clinical and offensive waste. Wastes produced by healthcare in the community, and similar types of waste produced by non-healthcare activities are included, for example:

- cosmetic body piercing and body art
- non-medicinal procedures in the hair and beauty sector
- substance abuse
- crime scene clean-up.

"impermeable surface" means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

"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.

'List of Wastes' means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time

"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.

"medicines" are "medicinal products" as defined in Regulation 130 of Part VIII of the Medicines Act 1968. Waste medicines (or pharmaceutical waste) include:

- expired, unused, spilt and contaminated medical products that are no longer required and need to be disposed of appropriately;
- discarded items contaminated with medicines such as bottles or boxes with residues, gloves, masks, connecting tubing, syringe bodies and drug vials.

"mixing of hazardous waste" means mixing hazardous waste as defined by Regulation 18 of the Hazardous Waste (England and Wales) Regulations 2005.

"offensive waste" is waste that:

- · is not clinical waste
- · contains body fluids, secretions or excretions
- falls within waste codes 18 01 04, 18 02 03 or 20 01 99.

"PAH" means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]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.

"Pests" means Birds, Vermin and Insects.

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

"R" means a recovery operation provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste.

"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.

"repackaging" is:

- taking a waste package for example a bag, drum or box out of one cart or bulk container for example, skip and placing it into another cart or bulk container for example, skip
- taking a waste package from a cart or bulk container for example, skip and placing it onto a pallet or vehicle
- taking a waste package from a pallet and placing it into a cart or bulk container for example, skip
- transferring, removing or separating waste from its primary packaging into another container

"sealed container" for the purposes of this permit, means a container which is fully enclosed, weather proof, does not allow any solid or liquid content to escape and is lockable.

"sealed drainage" in relation to an impermeable surface means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquid will run off the surface otherwise than via the system
- except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump

"sharps" means items that could cause cuts or puncture wounds. They include needles, hypodermic needles, scalpels and other blades, knives, infusion sets, saws, broken glass, and nails.

"start up" is any period, where the plant has been non-operational, until waste has been fed to the plant in a sufficient quantity to initiate steady-state conditions as described in the application or as agreed in writing with the Environment Agency.

"shut down" is any period where the plant is being returned to a non-operational state as described in the application or as 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 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

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.

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.

Congener	I-TEF	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

TEF schemes for dioxins and furans				
Congener	I-TEF WHO-TEF			
	1990	2005	1997/8	
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	WHO-TEF 2005 1997/8		
	2005			
	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	<0.00005	0.00001	

<sup>&</sup>quot;year" means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table 2.2, for that table, they have the meaning given below:

'hazardous substance' means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

'heavy metal' means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances

#### 'PCBs' means

- polychlorinated biphenyls
- polychlorinated terphenyls

- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight

'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

'stabilisation' means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

'solidification' means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

'partly stabilised wastes' means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term.

# Schedule 7 – Site plan

This is the plan referred to in the standard rules SR2008 No24

