

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

United Utilities Waste Operations
Limited
Sinfin Lane Waste Treatment Facility
Derby
Derbyshire
DE24 9GF

Permit number EPR/WP3133KP

Sinfin Lane Waste Treatment Facility, Derby

Permit number EAEPRWP3133KP

Introductory note

This introductory note does not form a part of the permit.

The main features of the facility are as follows:

The Installation comprises a gasification process for the thermal treatment of residual municipal waste and some industrial and commercial waste. The process comprises, pre-treatment, gasification with combustion of the resulting syngas, and energy recovery. This permit is required as the activity is covered by the description in Section 5.1 Part A(1)(c) – incineration of non-hazardous waste in an incineration plant with a capacity of 1 tonne or more per hour in Part 2 to Schedule 1 of the Environmental Permitting Regulations.

The main feature of the facility is an Energy from Waste plant which will process about 200,000 tonnes of municipal waste leading to a net export of approximately 8.7 MW of electrical energy to the National Grid. The facility comprises three identical gasifier lines with a combined capacity of 18 tonne/hr of waste of an approximate 8MJ/kg calorific value. Each line has a dedicated secondary combustion chamber where the syngas is incinerated. Pretreatment is used to dry and blend the waste to a uniform sized feedstock for the gasification process. Non ferrous and ferrous metals are removed prior to gasification. The waste will be delivered to the site by road.

The ash will be quenched to control fugitive dust. Primary measures will be used to reduce emissions of oxides of nitrogen, lime to reduce acid gas emissions and carbon injection for the reduction of dioxins and volatile heavy metals. The treated emissions to air are released through a 55 metre stack comprising three flues that run the full length of the stack (one for each incineration line). Each flue is equipped with Continuous Emission Monitors (CEMs) which continuously monitor for particulates, carbon monoxide (CO), sulphur dioxide (SO₂), hydrogen chloride (HCl), oxygen (O₂), nitrogen oxides (NO_x) and total organic compounds (TOC). Emissions of hydrogen fluoride, heavy metals, dioxins and furans, dioxin-like PCBs and polyaromatic hydrocarbons will be monitored periodically. There are no emissions from the process to controlled waters.

The facility will have auxiliary burners to support start-up and shutdown, and a stand-by diesel generator to support emergency shutdown during power failure.

There is one locally designated statutory nature conservation site, within 2 km of the site, Sunnydale Park Local Nature Reserve (LNR) which is located around 1200m to the west of the application site. The proposed site of the installation is located in the proximity of an area that has been declared an Air Quality Management Area (AQMA) by Derby City Council due to an exceedance of the annual mean of 40 µg m⁻³ for nitrogen dioxide.

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

Status Log of the permit		
Detail	Date	Response Date
Application EPR/WP3133KP/A001	Duly made 13/07/09	
Amended Site Plan defining Installation boundary		Received electronically 06/04/10
Further Information Schedule 5 Notice (BAT assessment for NO _x and general queries)	31/03/10	29//04/10 & 27/05/10
Additional information (Energos plant performance data)		Received electronically 22/06/10
Withdrawal of specified waste activity and provision of updated list of waste codes		Received electronically 02/07/10
Additional information in support of Schedule 5 responses		Received electronically 05/07/10
Additional information regarding WID abnormal operation		Received electronically 22/07/2010
Additional information regarding Water Consumption		Received electronically 31/08/2010
Additional information confirming the relationship between United Utilities and Resource Recovery Solutions (RRS)		Received electronically 31/08/2010
Additional information regarding Biodiversity Action Plan species present on the site		Received electronically 02/09/2010
Permit decision EA/EPR/WP3133KP	11/11/2010	

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit

Permit number

EPR/WP3133KP

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

United Utilities Waste Operations Limited (“the operator”),

whose registered office is

**Dunedin House Auckland Park
Mount Farm
Milton Keynes
Buckinghamshire
MK1 1BU**

company registration number 06585068

to operate a facility comprising an installation at

**Sinfin Lane
Derby
Derbyshire
DE24 9GF**

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

Name	Date
A. J. Nixon	11 November 2010

Authorised on behalf of the Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is recovered and used efficiently in the activities;
 - (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy recovery and efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.
- 1.2.2 The operator shall provide and maintain steam and/or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable.
- 1.2.3 The operator shall review the practicability of Combined Heat and Power (CHP) implementation at least every 2 years. The results shall be reported to the Agency within 2 months of each review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every 4 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 appropriate further measures identified by a review.

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

1.4.1 The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every 4 years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is 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.

2.2 The site

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

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in Schedule 1, Table S1.2, unless otherwise agreed in writing by the Agency.
- (b) If notified by the Agency that the activities are giving rise to pollution, the operator shall submit to the 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, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Agency.
- 2.3.2 No raw materials or fuels listed in Schedule 2 Table S2.1 shall be used unless they comply with the specifications set out in that table.
- 2.3.3 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in Schedule 2 Table S2.2, complies with any limitations listed in that table; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazard classification associated with the waste; and
 - (e) the waste code of the waste.

- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.
- 2.3.6 Waste shall not be charged, or shall cease to be charged, if:
- (a) the secondary combustion chamber temperature is below, or falls below, 850°C or
 - (b) any continuous emission limit value in Schedule 3 Table S 3.1(a) is exceeded; or
 - (c) any continuous emission limit value in Schedule 3 Table S 3.1 is exceeded, other than under WID abnormal operating conditions ; or
 - (d) monitoring results required to demonstrate compliance with any continuous emission limit value in Schedule 3 Table S 3.1 are unavailable other than under WID abnormal operating conditions.
- 2.3.7 The operator shall have at least one auxiliary burner in each line at start up or shut down or whenever the operating temperature falls below that specified in condition 2.3.6, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.6 is maintained in the combustion chamber, such burner(s) may be fed only with fuels which result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.
- 2.3.8 The operator shall record the beginning and end of each period of "WID abnormal operation".
- 2.3.9 During a period of "WID abnormal operation", the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.
- 2.3.10 Where, during "WID abnormal operation", any of the following situations arise, the operator shall, as soon as is practicable, cease the burning of waste until normal operation can be restored:
- (a) continuous measurement shows that an emission exceeds any emission limit value in Schedule 3, Table S3.1 due to disturbances or failures of the abatement systems, or continuous emission monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration.
 - (b) the cumulative duration of "WID abnormal operation" periods over 1 calendar year exceeds 60 hours on an incineration line;
 - (c) continuous measurement shows that an emission exceeds any emission limit value in Schedule 3, Table S3.1 (a) due to disturbances or failures of the abatement systems;
 - (d) the alternative techniques to demonstrate compliance with the "WID abnormal operation" emission limit value(s) for particulates, TOC and CO in schedule 3 table S3.1 (a), as detailed in the application or as agreed in writing with the Environment Agency, are unavailable.
- 2.3.11 The operator shall interpret the end of the period of "WID 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 Agency;
 - (c) when a period of 4 hours has elapsed from the start of the "WID abnormal operation";
 - (d) when, in any calendar year, an aggregated period of 60 hours "WID abnormal operation" has been reached for a given incineration line.
- 2.3.12 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 Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in Schedule 3 Tables S3.1 and S3.2 except in WID abnormal operations when there shall be no point source emissions to water, air or land except from the sources and emission points listed in Schedule 3 Tables S3.1(a) and S3.2.
- 3.1.2 The limits given in Schedule 3 shall not be exceeded.
- 3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with Schedule 3 Table S3.4. Additional samples shall be taken and tested and appropriate action taken, whenever:
- (a) disposal or recovery routes change; or
 - (b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.

3.2 Fugitive emissions of substances

- 3.2.1 Fugitive emissions of substances (excluding odour, noise and vibration) 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 fugitive emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Agency that the activities are giving rise to pollution, submit to the Agency for approval within the period specified, a fugitive emissions management plan;
 - (b) implement the approved fugitive emissions management plan, from the date of approval, unless otherwise agreed in writing by the Agency.
- 3.2.3 All liquids, 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 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Agency for approval within the period specified, a noise and vibration management plan;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in Schedule 3 to this permit:
- (a) point source emissions specified in Tables S3.1, S3.1(a) and S3.2;
 - (b) process monitoring specified in Table S3.3;
 - (c) ash monitoring specified in Table S3.4.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in Schedule 3, Table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 3 Tables S3.1, S3.1a, and S3.2 unless otherwise specified in that Schedule.
- 3.5.5 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that;
- (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages:
 - Carbon monoxide 10%
 - Sulphur dioxide 20%
 - Oxides of nitrogen (NO & NO₂ expressed as NO₂) 20%
 - Particulate matter 30%
 - Total organic carbon (TOC) 30%
 - Hydrogen chloride 40%

- (b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.5.5 (a);
- (c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. The number of half-hourly averages so validated shall not exceed 5 per day;
- (d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;
- (e) no more than ten daily average values per year shall be determined not to be valid.

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 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 All records, plans and the management system required to be maintained by this permit shall be held on the site.

4.2 Reporting

4.2.1 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.

4.2.2 A report on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report 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 using the forms specified in Table S4.4 of that schedule; and
- (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 Article 12(2) of the Waste Incineration Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the WID.

- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the 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 4 years, submit to the Agency, within 6 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 one month of the end of each quarter, the operator shall submit to the Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit; or
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the 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 Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in Schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity and waste types
A1	Section 5.1 Part A(1)(c)	<p>incineration of non-hazardous waste in an incineration plant with a capacity of 1 tonne or more per hour</p> <p>The thermal treatment technology is gasification which produces a gaseous fuel known as synthesis gas (Syngas). The Syngas contains the energy from the waste and is combusted in a secondary combustion chamber in accordance with the WID.</p> <p>The facility has a maximum capacity of 200,000 tonnes per annum, of which 140,000 will be thermal treated using three process lines with a gross thermal input of 58.5MW.</p>	<p>From receipt of waste to emission of exhaust gas and disposal of waste arising, includes the pre-treatment of incoming waste using Mechanical Biological Treatment .</p> <p>Waste types as specified in Table S3.2 of this permit.</p>
Directly Associated Activity			
DAA	Electrical power supply.	Energy recovery from the combustion of syngas using steam boilers dedicated to each process stream with the generation of approximately 9MW of electrical power for export using a steam turbine.	The electricity is used on-site and exported to the National Grid.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/WP3133KP/A001	<p>The following Sections of the Application Management Plan:</p> <p>Chapter 5 Management Report all sections</p> <p>Chapter 6 Operational Techniques Report sections;</p> <p>Section 4 Waste Reception</p> <p>Section 5 Waste Pre-treatment</p> <p>Section 6 Mechanical Biological Treatment</p> <p>Section 7 Thermal Treatment</p> <p>Section 8 Residual Materials Management</p> <p>Section 9 Plant Commissioning</p> <p>Chapter 7 Resource Management Report</p> <p>Section 2 Raw Materials Management</p> <p>Section 3 Water Management</p> <p>Section 4 Energy Management</p> <p>Chapter 8 Emissions Management (including fugitive emissions, odour and noise) Report all sections</p> <p>Chapter 9 Accident Management Plan all sections</p> <p>Chapter 10 Closure Management Report all sections</p>	13/07/09
Further Information Schedule 5 Notice dated 31/03/10	<p>Response to question 8 Bag Filter Maintenance</p> <p>Response to question 9 Odour Control during Biofilter Maintenance</p> <p>Response to question 10 Air Quality Revised Chromium VI Standards</p> <p>Response to question 11 Boiler Water Treatment</p> <p>Further information Section 13.2.2 Plant Construction & Commissioning</p>	29/04/10
Withdrawal of specified waste management activities (Hazardous Waste Transfer Station) from the Permit Application	Amended Site Plan and letter.	02/07/10
Further information in support of Schedule 5	Section 6 NO _x limit values to demonstrate BAT	05/07/10

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	<p>The operator shall submit a written proposal to the Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission points A1 to A3, identifying the fractions within the PM₁₀, PM_{2.5} and PM_{1.0} ranges. The proposal shall include a timetable to carry out such tests and produce a report on the results.</p> <p>The operator shall carry out the tests as approved by the Agency and submit to the Agency a report on the results.</p>	<p>Proposal to be submitted to the Agency within 6 months of completion of commissioning.</p> <p>Report to be submitted within the period specified in the Agency's approval.</p>
IC2	<p>The operator shall submit a written summary report to the Agency to confirm by the results of calibration and verification testing whether the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.</p>	<p>Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning.</p> <p>Full summary evidence compliance report to be submitted within 18 months of commissioning.</p>
IC3	<p>The operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the secondary combustion chamber whilst operating under the anticipated most unfavourable operating conditions.</p> <p>The results shall be submitted in writing to the Agency.</p>	<p>Within 3 months of completion of commissioning.</p>
IC4	<p>The operator shall submit a report describing the performance and optimisation of the abatement control measures including:</p> <ul style="list-style-type: none"> • the methodology to be used to optimise primary control measures for NO_x formation • the methodology to be used to optimise reagent dosing for acid gas abatement • the methodology to be used to optimise reagent dosing for dioxin and heavy metal abatement 	<p>Within 5 months of completion of commissioning.</p>
IC5	<p>The operator shall submit a written report to the Agency demonstrating, by measurements made during commissioning, at appropriate locations, whether operation of the Installation has any significant adverse impact on noise levels.</p>	<p>Within 5 months of completion of commissioning.</p>
IC6	<p>The operator shall carry out a revised assessment of the impact of emissions to air through the use of monitoring data collected during the first year of operation and air dispersion modelling. The assessment shall include the impact of emissions to air of arsenic, nickel and chromium (VI) using the Environmental Assessment Level (EAL) for the metal compounds in the PM₁₀ fraction.</p> <p>A report on the revised assessment shall be submitted to the Agency.</p>	<p>Within 15 months of completion of commissioning.</p>

Table S1.4 Pre-operational measures

Reference	Requirement	Date
PO01	Prior to the commencement of commissioning; the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the 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 Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.	At least 3 months before treating any waste.
PO02	The operator shall submit a written plan to the Agency detailing the ash sampling protocol to be used for Air Pollution Control (APC) residues and bottom ash, in conformance to Agency Guidance.	At least 2 months before treating any waste.
PO03	The Operator shall update the Site Condition Report submitted with the Application to include site reference data once the site remediation programme is completed. A copy of the amended Site Condition Report shall be submitted to the Agency.	Within 2 months of the completion of the report
PO04	The Operator shall submit a written report to the Agency on the implementation of its Environmental Management System and the progress made in the accreditation of the system by an external body or if appropriate submit a schedule by which the EMS will be subject to accreditation.	At least 3 months before treating any waste

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil	Less than 0.1% sulphur

Table S2.2 Permitted waste types and quantities. Limited to a maximum of 200,000 tonnes per year to be treated by the plant		
EWC Code	Waste Description	Limitations
02 01 03	Plant-tissue waste	
02 01 04	Waste plastics (except packaging)	Only when contaminated and otherwise destined for landfill
02 01 07	Wastes from forestry	
02 02 03	Materials unsuitable for consumption or processing	
02 03 04	Materials unsuitable for consumption or processing	
02 05 01	Materials unsuitable for consumption or processing	
02 06 01	Materials unsuitable for consumption or processing	
02 06 02	Wastes from preserving agents	
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials	
02 07 02	Wastes from spirits distillation	
02 07 04	Materials unsuitable for consumption or processing	
15 01 01	Paper and cardboard packaging	Only when contaminated and otherwise destined for landfill
15 01 02	Plastic packaging	Only when contaminated and otherwise destined for landfill
15 01 03	Wooden packaging	Only when contaminated and otherwise destined for landfill
15 01 05	Composite packaging	
15 01 06	Mixed packaging	
15 01 09	Textile packaging	
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	
19 02 03	Premixed wastes composed only of non-hazardous wastes	
19 02 10	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09	
19 05 01	Non-composted fraction of municipal and similar wastes	
19 05 02	Non-composted fraction of animal and vegetable waste	
19 05 03	Off-specification compost	

Table S2.2 Permitted waste types and quantities. (continued)		
Limited to a maximum of 200,000 tonnes per year to be treated by the plant		
EWC Code	Waste Description	Limitations
19 12 01	Paper and cardboard	Only when contaminated and otherwise destined for landfill
19 12 04	Plastic and rubber	
19 12 07	Wood other than that mentioned in 19 12 06	Only when contaminated and otherwise destined for landfill
19 12 08	Textiles	Only when contaminated and otherwise destined for landfill
19 12 10	Combustible waste (refuse derived fuel)	
20 01 01	Paper and cardboard	Only when contaminated and otherwise destined for landfill
20 01 08	Biodegradable food waste	Only when contaminated and otherwise destined for landfill
20 01 10	Clothes	Only when contaminated and otherwise destined for landfill
20 01 11	Textiles	Only when contaminated and otherwise destined for landfill
20 01 38	Wood other than that mentioned in 20 01 37	
20 01 39	Plastics	Only when contaminated and otherwise destined for landfill
20 02 01	Biodegradable waste	
20 02 03	Other non-biodegradable wastes	
20 03 01	Mixed municipal waste	
20 03 02	Waste from markets	
20 03 03	Street-cleaning residues	
20 03 04	Septic tank sludge	
20 03 07	Bulky-waste	

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air except during WID abnormal operation– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Incineration gases via heat recovery boiler and APC plant	180 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit.	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Incineration gases via heat recovery boiler and APC plant	400 mg/m ³	½-hour mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit.	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Incineration gases via heat recovery boiler and APC plant	105 mg/m ³	Rolling Annual Average	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Particulate matter	Incineration gases via heat recovery boiler and APC plant	10 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Particulate matter	Incineration gases via heat recovery boiler and APC plant	30 mg/m ³	½-hour mean	Continuous	BS EN 15267-3

Table S3.1 Point source emissions to air except during WID abnormal operation– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Total organic carbon (TOC)	Incineration gases via heat recovery boiler and APC plant	10 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Total organic carbon (TOC)	Incineration gases via heat recovery boiler and APC plant	20 mg/m ³	½-hour mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Hydrogen chloride (HCl)	Incineration gases via heat recovery boiler and APC plant	10 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Hydrogen chloride (HCl)	Incineration gases via heat recovery boiler and APC plant	60 mg/m ³	½-hour mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Sulphur dioxide (SO ₂)	Incineration gases via heat recovery boiler and APC plant	50 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Sulphur dioxide (SO ₂)	Incineration gases via heat recovery boiler and APC plant	200 mg/m ³	½-hour mean	Continuous	BS EN 15267-3

Table S3.1 Point source emissions to air except during WID abnormal operation– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Carbon monoxide (CO)	Incineration gases via heat recovery boiler and APC plant	50 mg/m ³	Daily Mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Carbon monoxide (CO)	Incineration gases via heat recovery boiler and APC plant	100 mg/m ³	½-hour mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Hydrogen fluoride (HF)	Incineration gases via heat recovery boiler and APC plant	2 mg/m ³	Periodic - Mean over minimum 1 hour period	Quarterly in first year. Then Bi-annual	ISO 15713
A1, A2 and A3 from each process stream contained within a common stack , defined as A1 on site plan in Schedule 7 of this permit	Cadmium and thallium and their compounds (total)	Incineration gases via heat recovery boiler and APC plant	0.05 mg/m ³	Periodic- Mean over minimum 30 minutes maximum 8 hours period	Quarterly in first year. Then bi-annual	BS EN 14385
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Mercury and its compounds	Incineration gases via heat recovery boiler and APC plant	0.05 mg/m ³	Periodic- Mean over minimum 30 minutes maximum 8 hours period	Quarterly in first year, Then bi-annual	BS EN 13211
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds (total)	Incineration gases via heat recovery boiler and APC plant	0.5 mg/m ³	Periodic - Mean over minimum 30 minutes, maximum 8 hours period	Quarterly in first year. Then bi-annual	BS EN 14385

Table S3.1 Point source emissions to air except during WID abnormal operation– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxins / furans (I-TEQ)	Incineration gases via heat recovery boiler and APC plant	0.1 ng/m ³	Periodic- Mean over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then bi-annual	BS EN 1948 1-3

Table S3.1(a) Point source emissions to air during WID abnormal operation of incineration plant – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit) [Note 1]	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Particulate matter	Incineration gases via heat recovery boiler and APC plant	150 mg/m ³	½-hourly mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Total Organic Carbon (TOC)	Incineration gases via heat recovery boiler and APC plant	20 mg/m ³	½-hourly mean	Continuous	BS EN 15267-3
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Carbon monoxide (CO)	Incineration gases via heat recovery boiler and APC plant	100 mg/m ³	½-hourly mean	Continuous	BS EN 15267-3

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 emission to sewer	No parameters set	Uncontaminated Surface water from modular storage system	-	-	-	Permanent sampling access not required [Note 1]
S2 emission to sewer	No parameters set	Water, including boiler blow-down, air compressor condensate, drainage from storage areas and wash-down water.	-	-	-	Permanent sampling access not required [Note 1] [Note 2]

Note 1: Emission is subject to obtaining a discharge consent from the sewerage undertaker.

Note 2: Location of inspection chamber to be agreed with the Agency.

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Installation	Wind speed and direction	Continuous	Anemometer	
Secondary Combustion Chambers	Combustion temperature	Continuous	As agreed in writing with the Agency	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Exhaust gas temperature	Continuous	As agreed in writing with the Agency	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Exhaust gas pressure	Continuous	As agreed in writing with the Agency	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Exhaust gas water content	Continuous	BS EN 15267-3	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Exhaust gas oxygen concentration	Continuous	BS EN 15267-3	

Table S3.3 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Exhaust gas flow rate	Continuous	BS EN 15267-3	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Quarterly in first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3) and BS EN TS 1948-4	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxin-like PCBs (WHO-TEQ Fish)	Quarterly in first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3) and BS EN TS 1948-4	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxin-like PCBs (WHO-TEQ Birds)	Quarterly in first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3) and BS EN TS 1948-4	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Specific individual polycyclic aromatic hydrocarbons (PAHs), as defined in Schedule 6	Quarterly in first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	BS ISO 11338-1 and BS-ISO 11338-2	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxins / furans (WHO-TEQ Humans / Mammals)	Quarterly in the first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3)	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxins / furans (WHO-TEQ Fish)	Quarterly in first year. The bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3)	
A1, A2 and A3 from each process stream contained within a common stack, defined as A1 on site plan in Schedule 7 of this permit	Dioxins / furans (WHO-TEQ Birds)	Quarterly in first year. Then bi-annual. Mean value over minimum 6 hour, maximum 8 hour reference period	To be determined utilising sampling and analytical techniques developed for dioxins/ furans (BS EN 1948 1-3)	

Table S3.4 Ash quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method	Other specifications
Bottom Ash	Total Organic Carbon	3%	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency
Bottom Ash	Total heavy metal content (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency
Bottom Ash	Total dioxin/furan content	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency
Bottom Ash	Total dioxin-like PCBs content	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency

Table S3.4 Ash quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method	Other specifications
Bottom Ash	Total soluble fraction and heavy metal content of that fraction (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc)	Record	Before use of a new disposal or recycling route	Analysis for total soluble fraction using EA NEN 7371:2004 and PR/CEN/TS 14429.	Ash sampling protocol to be agreed in writing by the Agency
APC residues	Total heavy metal content (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency
APC residues	Total dioxin/furan content	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency
APC residues	Total dioxin-like PCBs content	Record	Monthly for the first year of operation and quarterly thereafter		Ash sampling protocol to be agreed in writing by the Agency

Table S3.4 Ash 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 heavy metal content of that fraction (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc)	Record	Before use of a new disposal or recycling route	Analysis for total soluble fraction using EA NEN 7371:2004 and PR/CEN/TS 14429.	Ash sampling protocol to be agreed in writing by the Agency

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air of NO _x , particulate matter, TOC, HCl, SO ₂ , CO, N ₂ O and NH ₃ continuous monitoring as required by condition 3.5.1.	A1, A2 and A3	Quarterly	From the first date that waste is treated in the installation
Emissions to air of HF, Cd/Tl, Hg, Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds (total), dioxins/ furans (I-TEQ), dioxin-like PCBs (WHO-TEQ Humans/ Mammals), dioxin-like PCBs (WHO-TEQ Fish), dioxin-like PCBs (WHO-TEQ Birds), specific individual polycyclic aromatic hydrocarbons (PAHs), dioxins/furans (WHO-TEQ Humans/Mammals), dioxins/furans (WHO-TEQ Fish), dioxins/furans (WHO-TEQ Birds) periodic monitoring as required by condition 3.5.1.	A1, A2 and A3	Quarterly for the first year of operation, and bi-annually thereafter.	From the first date that waste is treated in the installation
Exhaust gas temperature, pressure, oxygen content, water content and flow rate, continuous monitoring as required by condition 3.5.1	A1, A2 and A3	As requested by Agency site inspector. See Note 1.	From the first date that waste is treated in the installation
Secondary combustion chamber temperature continuous monitoring as required by condition 3.5.1	Secondary combustion chamber	As requested by Agency site inspector. See Note 1.	From the first date that waste is treated in the installation
Wind speed and direction continuous monitoring as required by condition 3.5.1	Installation	As requested by Agency site inspector. See Note 1.	From the first date that waste is treated in the installation
TOC of bottom ash as required by condition 3.5.1	Bottom ash	Monthly for the first year of operation, and quarterly thereafter.	From the first date that waste is treated in the installation
Content of heavy metals, dioxins/furans and dioxin-like PCBs of bottom ash as required by condition 3.5.1	Bottom ash	Monthly for the first year of operation, and quarterly thereafter.	From the first date that waste is treated in the installation
Content of heavy metals, dioxins/furans and dioxin-like PCBs of APC residues as required by condition 3.5.1	APC residues	Monthly for the first year of operation, and quarterly thereafter.	From the first date that waste is treated in the installation

Note 1: These parameters would not normally require to be reported, but would be available for inspection at the site. Only where there is an operational need for a report to be made should one be required.

Table S4.2: Annual treatment	
Parameter	Units
Total mass of waste received	tonnes
Total mass of municipal waste received	tonnes
Electricity generated	MWh
Electricity exported	MWh
Heat exported	MWh

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Number of WID abnormal operation events and total of WID abnormal operation hours	Quarterly	Number and hours
Water usage	Annually	m ³ /tonne waste treated
Energy usage	Annually	MWh/tonne waste treated
Auxiliary fuel oil consumption	Annually	kg/tonne waste treated
Hydrated Lime used	Annually	kg/tonne waste treated
Total activated carbon used	Annually	kg/tonne waste treated
Total Air Pollution Control residues disposed of	Annually	kg/tonne waste treated
Total bottom ash generated	Annually	kg/tonne waste treated
Total bottom ash recycled	Annually	kg/tonne waste treated
Total bottom ash disposed of	Annually	kg/tonne waste treated

Table S4.4 Reporting forms	
Media/parameter	Reporting format
Air – continuous/periodic monitoring	Form A1 or other form as agreed in writing by the Agency
Air – other periodic monitoring	Form A2 or other form as agreed in writing by the Agency
Residues – Bottom ash/APC	Form R1 or other form as agreed in writing by the Agency
Annual Treatment Parameters	Form T1 or other form as agreed in writing by the Agency
Performance Parameters	Form P1 or other form as agreed in writing by the Agency

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	EA/EPR/WP3133KP
Name of operator	United Utilities Waste Operations Limited
Location of Facility	Sinfin Lane, Derby, Derbyshire DE24 9GF
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

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

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

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

• ***Part B - to be submitted as soon as practicable***

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Sinfyn Lane Waste Treatment Facility

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.

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

"*annually*" means once every year.

"*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.

"*APC residues*" means air pollution control residues

"*authorised officer*" means any person authorised by the 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*" means best available techniques means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: "available techniques" means "those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the Operator"; "best" means "in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole" and "techniques" "includes both the technology used and the way in which the Installation is designed, built, maintained, operated and decommissioned".

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

"*bottom ash*" means ash falling through the grate or transported by the grate;

"*CEM*" Continuous emission monitor

"*CEN*" means Comité Européen de Normalisation

"*Commissioning*" will commence at the point at which waste is received at the site and end on completion of the commissioning plan.

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

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

"*disposal*" means any of the operations provided for in Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

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

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

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission limit.

"*Gas oil*" means low sulphur content hydrocarbon fuel oil, not arising as waste from some other process, used for furnace support and during start up procedures.

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

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

“ISO” means International Standards Organisation.

“I-TEF” means international toxic equivalence factors.

“I-TEQ” means international toxic equivalence concentration

“LOI” means loss on ignition a technique used to determine the combustible material by heating the ash residue to a high temperature

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“PAH” means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene

“PCB” means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed at the end of this schedule

“PM10, PM2.5, PM1.0” mean respectively the mass of particulate matter contained in particles of less than 10, 2.5 and 1.0 micrometres aerodynamic diameter.

“Primary gasification chamber (PGC)” means the gasification unit where the waste is charged.

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

“quarterly” for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

“recovery” means any of the operations provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“Rolling Annual Average” shall be taken to be the sum of the valid daily means over the previous 12 calendar months divided by 365.

“Secondary combustion chamber (SCC)” means the chamber where the syngas produced by the primary gasification chamber is combusted.

“shutdown” is any period where the plant is being returned to a non-operational state as described in the application.

“start-up” is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the incinerator to initiate steady-state conditions as described in the application.

“TOC” means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC. In respect of Bottom Ash, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

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

“Waste Incineration Directive or WID” means Directive 2000/76/EC on the incineration of waste (O.J. L 332, 28.12.2000

“WID abnormal operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices [other than continuous emission monitors for releases to air of particulates, TOC and/or CO], during which the concentrations in the discharges into air may exceed the normal emission limit values.

“WFD” means Waste Framework Directive (Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste).

“year” means calendar year ending 31 December.

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

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

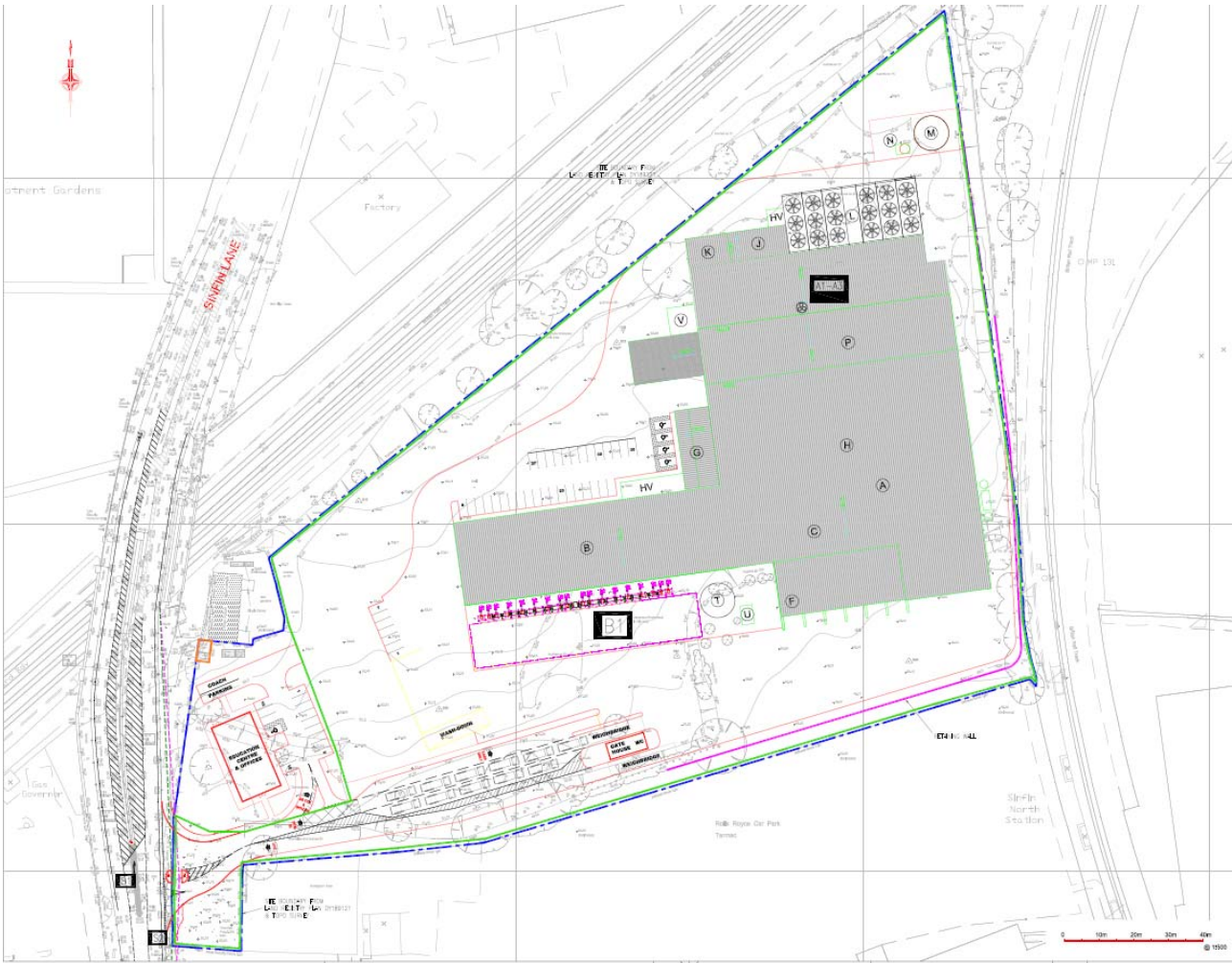
- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content
- (c) in relation to gases from incineration plants other than those burning waste oil, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 11% dry.
- (d) where hazardous wastes are burned in an incineration or co-incineration plant and the emissions of pollutants are reduced by gas treatment, standardisation of the gas with respect to oxygen content shall be carried out only if the oxygen concentration measured over the same period exceeds the relevant oxygen content defined in conditions [(a) – (c)] above. In other cases, the measured emissions shall be standardised only for moisture, pressure and temperature.

For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should be reported as a range based on: all congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

TEF schemes for dioxins and furans				
Congener	I-TEF(1990)	WHO-TEF (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	0.0001	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.05	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.5	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8_HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.001	0.0001	0.0001	0.0001

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

Schedule 7 - Site plan



END OF PERMIT