Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

MVV Environment Devonport Limited

Devonport Energy from Waste CHP
North Yard,
Devonport Dockyard,
Plymouth,
Devon,
PL5

Permit number

EPR/WP3833FT

Devonport Energy from Waste CHP
Permit Number EPR/WP3833FT

Introductory note

This introductory note does not form a part of the permit

This permit controls the operation of an installation, whose purpose is the disposal of waste with energy recovery in an incineration plant. The relevant listed activity is 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. The permit implements the requirement of the EU Directives on Integrated Pollution Prevention and Control and Waste Incineration.

The main features of the permit are as follows:

The installation is designed to dispose of residual municipal waste, and commercial and industrial waste of a similar nature to residual municipal waste, by incineration. These wastes are currently landfilled. Energy will be recovered from the incineration process in the form of electricity, which will be fed into the national grid, and steam, which will be used within the adjacent naval dockyard.

The installation is designed with a maximum operating capacity of 265,000 tonnes per year. The incinerator is of a mass burn design. Waste will be delivered by road and tipped within the main building in the Tipping Hall directly into the Waste Bunker. The waste is stored and mixed in the waste bunker prior to being burnt in a moving grate incinerator plant.

The installation includes baling equipment and a bale store. When the incinerator is not in operation, the incoming waste is compacted and sealed in a strong plastic film. It is then stored onsite until the incinerator plant is back in operation when it is re-introduced to the process.

Heat from the combustion process is used to generate steam at high pressure. The high pressure steam is fed to a steam turbine to generate electricity. Lower pressure steam is supplied to the Devonport dockyard. This replaces steam currently generated at the dockyard in a combustion plant burning natural gas. Heat not recovered in the form of electricity or steam is dissipated through air cooled condensers.

The installation uses a combination of techniques for treating emissions from the combustion process in order to prevent and minimise pollution. These are:

- Good combustion control
- Selective non catalytic reduction for NO_x control
- Dry scrubbing with sodium bicarbonate and activated carbon for the control of acid gases, metals and dioxins and furans
- Bag filters for particulate control
- A 95m chimney

The incineration process results in solid residues of incinerator bottom ash and air pollution control residues. Treatment for recovery or disposal of solid residues will take place away from the installation with only minimal storage occurring onsite.

The installation processes seek to reuse and recycle all its own water, which comprises that from periodic boiler blowdown and boiler feed water treatment waste water. However from time to time, disposal of waste water to sewer will be required.

The site is located in the northern section of Her Majesty's Naval Base, Devonport Dockyard in Plymouth.

The installation will receive primarily mixed residual municipal wastes, but will also be able to receive a range of commercial and industrial wastes which can be safely burnt in the incineration plant. Pre-treatment of waste will not be carried out, other than the shredding of some bulky items. However, the installation will not receive wastes intended to be recovered or recycled unless they are contaminated to the extent that they are unsuitable for recovery or recycling or would otherwise be destined for landfill.

The permit sets conditions controlling the management, operation and the control of emissions from the installation, including the monitoring and reporting of emissions to all environmental media.

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

Status Log of the permit		
Detail	**Date**	**Comments**
Application EPR/WP3833/A001	Duly made 07/06/2011	
Additional Information Received	29/07/2011	
Issue of Notice seeking further information.	17/08/2011	
Additional Information Received	29/09/2011	
Issue of Notice seeking further information.	28/10/2011	
Additional Information Received	14/11/2011	
Permit determined	06/03/2012	

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/WP3833FT

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

MVV Environment Devonport Limited ("the operator"),

whose registered office is

North Quay House,
Sutton Harbour,
Plymouth,
Devon,
PL4 0RA

company registration number **07412959**

to operate an installation at

Devonport Energy from Waste CHP
North Yard,
Devonport Dockyard,
Plymouth,
Devon,
PL5

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

Name	Date
Anne Nightingale	**06/03/2012**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

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

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

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

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

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

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

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

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

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

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

2 Operations

2.1 Permitted activities

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

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

2.2 The site

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

2.3 Operating techniques

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

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

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

2.3.3 Waste shall only be accepted if:

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

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

(c) it having been separately collected for recycling, it is contaminated or otherwise destined for landfill; or

(d) it is residue from a cleaning process, it has where practicable been dewatered to reduce the moisture content;

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

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

(b) the composition of the waste;

(c) the handling requirements of the waste;

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

(e) the waste code of the waste.

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

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

(a) the combustion chamber temperature is below, or falls below, 850^{o}C; or

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

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

(d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under 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 4 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;

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 Environment Agency;

(c) when a period of four 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 Environment Agency.

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

2.5 Pre-operational conditions

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3 except in “WID abnormal operation”, when there shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1(a), S3.2 and S3.3.

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

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

(a) disposal or recovery routes change; or

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

3.2 Emissions of substances not controlled by emission limits

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

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan;

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

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

3.3 Monitoring

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

(a) point source emissions specified in tables S3.1, S3.1(a) and S3.2;

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

(g) residue quality in table S3.4

3.3.2 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.

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

3.3.4 The provisions for monitoring shall meet the requirements of BS EN 15259. 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 [,S3.3 etc] unless otherwise agreed in writing by the Environment Agency.

3.3.5 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 & NO_2 expressed as NO_2) 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 3.3.5 (a);

(c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. The number of half-hourly averages so validated shall not exceed 5 per day;

(d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;

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

3.4 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.

3.5 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;

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

4 Information

4.1 Records

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

(a) be legible;

(b) be made as soon as reasonably practicable;

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

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

(i) off-site environmental effects; and

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

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

4.2 Reporting

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

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

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

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

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

(d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by 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 Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

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

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

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

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

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

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;

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

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

Where the operator is a registered company:

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

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

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

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

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

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

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

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

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

4.4 Interpretation

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

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

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	**Description of specified activity**	**Limits of specified activity**
S5.1 A1 (c)	The incineration of non-hazardous waste in an incineration plant with a capacity of 1 tonne per hour or more.	From receipt of waste to emission of exhaust gas and disposal of waste arising. Waste types and quantities as specified in Table S2.2 of this permit.
Directly Associated Activities		
Operation of Baling Equipment	Baling of waste for on site storage.	Limited to periods when the incineration plant is not operational. Such waste to be retained indoors on site.
Electricity Generation	Generation of electrical power using a steam turbine from energy recovered from the flue gases.	
Steam supply system	Supply of steam to neighbouring commercial clients.	Steam supply, condensate collection, water treatment (equipment and pipework within the installation boundary).
Back up diesel generator	For providing emergency electrical power to the plant in the event of supply interruption and for power to the emergency fire fighting systems.	

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Operating Techniques Document (03 Jun 2011) • Sections 3.3, 3.4, 4.4, 4.5, 4.6, 5.4, 5.5, 5.7, 5.12, 6.2, 6.3, & 6.4 Emissions Management (03 Jun 2011) • Sections 4.4, 5.2 Energy Management Report (06 Jun 2011) • Section 5.2 Odour Management Plan (03 Jun 2011)	7th June 2011

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System and the progress made in the accreditation of the system by an external body or if appropriate submit a schedule by which the EMS will be subject to accreditation.	Within 18 months of the date on which waste is first burnt.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC2	The Operator shall carry out the first review of energy recovery and efficiency required by condition 1.2.1 (b) after 2 years. That review shall include but not be limited to consideration of extending steam supply to the South Yard, and the establishment of a district heating system for neighbouring residential areas.	Within 2 years of the date on which waste is first burnt.
IC3	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of the flue gas abatement systems. The report shall provide details of : (i) combustion settings and the operation of the Selective Non Catalytic Reduction (SNCR) system to minimise oxides of nitrogen (NO_x) emissions within the emission limit values described in this permit with the minimisation of ammonia and nitrous oxide emissions. This shall include an assessment of the level of NO_x and N_2O emissions that can be achieved under optimum operating conditions. (ii) the optimisation (including dosing rates of sodium bicarbonate and activated carbon) for the control of acid gases and dioxins and furans	Within 4 months of the date on which waste is first burnt.
IC4	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency.	Within 4 months of the date on which waste is first burnt.
IC5	The Operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Within 4 months of the date on which waste is first burnt.
IC6	The Operator shall submit a written summary report to the Environment Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3. (i) Initial calibration report to be submitted to the Environment Agency (ii) Full summary evidence compliance report to be submitted to the Environment Agency	(i) Within 4 months of the date on which waste is first burnt. (ii) Within 18 months of the date on which waste is first burnt.
IC7	The Operator shall carry out the first review of techniques for the avoidance, recovery or disposal of wastes produced at the installation, required by condition 1.4.2, after 2 years. That review shall include but not be limited to consideration of recovery and recycling options for the treatment of air pollution control residues.	Within 2 years of the date on which waste is first burnt.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC8	The Operator shall carry out a review of the noise impact of the installation at the most sensitive receptors, once the plant is fully operational in its first year of operation. The scope of the review shall be agreed with the Environment Agency and shall compare the actual noise emissions from the installation and their impact with those predicted in the Application. The review shall include appropriate measurements to verify any modelling work undertaken and establish whether any of the noise emissions have a tonal quality (both during daytime and night-time operation) likely to give rise to nuisance or complaint. A report on the review shall be provided to the Environment Agency.	Within 12 months of the date on which waste is first burnt.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO1	Prior to the commencement of commissioning, the Operator shall send an updated summary of the site Environment Management System (EMS) to the Environment Agency and make available for inspection all documents and procedures which form part of the EMS, together with a list of amendments made from the Application.
PO2	Prior to the commencement of commissioning, the Operator shall include within their emergency plan, a procedure for the safe shut down of the incinerator plant as a result of an external incident at the naval dockyard. This plan shall form part of the EMS documentation made available for inspection under pre-operational measure PO1.
PO3	Prior to the commencement of commissioning, the Operator shall submit a written report to the Environment Agency detailing the waste acceptance procedure to be used at the site. The waste acceptance procedure shall describe the process and systems to demonstrate how compliance with condition 2.3.3 will be achieved. The waste acceptance procedure will also include a procedure for describing the quantity, content and origin of any waste received which is assigned the waste code 20 01 99 or 20 03 99. The waste acceptance procedure shall form part of the EMS documentation made available for inspection under pre-operational measure PO1.
PO4	Prior to the commencement of commissioning, the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of incinerator bottom ash for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.
PO5	After completion of furnace design and at least three calendar months before any furnace operation, the operator shall submit a written report to the Environment Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by the Waste Incineration Directive.
PO6	Prior to the commencement of commissioning; the Operator shall provide further written details of their commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO7	On completion of the final design of the installation, the Operator shall revise the Noise Assessment submitted in Appendix E – Noise Impact Assessment of the Application and re-submit the assessment to the Environment Agency. The revised assessment shall include the final design details for building, plant and equipment with respect to noise attenuation and shall demonstrate a level of performance at least as good as that shown in the Application.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Gas Oil	< 0.1% sulphur content

Table S2.2 Permitted waste types and quantities for incineration plant		
Maximum quantity		Maximum total throughput = 265,000 tonnes per year. The aggregated throughput of waste codes 15 01 04, 15 01 07, 19 04 01, 19 12 02, 19 12 03 and 19 12 09 shall not exceed 5% by weight of the total throughput. The aggregated throughput of waste codes 04 01 08, 09 01 07 and 19 10 04 shall not exceed 1% by weight of the total throughput.
Waste code		**Description**
02		**Wastes from Agriculture, Horticulture, Aquaculture, Forestry, Hunting & Fishing, Food Preparation & Processing**
02 01		**Wastes from agriculture, horticulture, aquaculture, forestry, hunting & fishing**
	02 01 02	Animal-tissue waste
	02 01 03	Plant-tissue waste
	02 01 04	Waste plastics (except packaging)
	02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated offsite
	02 01 07	Wastes from forestry
	02 01 09	Agrochemical waste other than those mentioned in 02 01 08
02 02		**Wastes from the preparation and processing of meat, fish & other foods of animal origin**
	02 02 02	Animal-tissue waste
	02 02 03	Materials unsuitable for consumption or processing
02 03		**Wastes from fruit, vegetables, cereals edible oils, cocoa, coffee, tea and tobacco preparation & processing; conserve production; yeast & yeast extract production, molasses preparation & fermentation**
	02 03 04	Materials unsuitable for consumption or processing
02 05		**Wastes from the dairy products industry**
	02 05 01	Materials unsuitable for consumption or processing
02 06		**Wastes from the baking and confectionery industry**
	02 06 01	Materials unsuitable for consumption or processing
	02 06 02	Wastes from preserving agents
02 07		**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea & cocoa)**
	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
03		**Wastes from Wood Processing and the Production of Panels and Furniture, Pulp, Paper and Cardboard**
03 01		**Wastes from Wood Processing and the Production of Panels and Furniture**
	03 01 01	waste bark and cork
	03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04

Table S2.2 Permitted waste types and quantities for incineration plant		
Maximum quantity		Maximum total throughput = 265,000 tonnes per year. The aggregated throughput of waste codes 15 01 04, 15 01 07, 19 04 01, 19 12 02, 19 12 03 and 19 12 09 shall not exceed 5% by weight of the total throughput. The aggregated throughput of waste codes 04 01 08, 09 01 07 and 19 10 04 shall not exceed 1% by weight of the total throughput.
Waste code		**Description**
03 03		**Wastes from Pulp, Paper and Cardboard production and processing**
	03 03 01	waste bark and wood
	03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
	03 03 08	wastes from sorting of paper and cardboard destined for recycling
04		**Wastes from the Leather, Fur and Textile Industries**
04 01		**Wastes from the Leather and Fur Industry**
	04 01 08	Waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
	04 01 09	Wastes from dressing and finishing
04 02		**Wastes from the Textile Industry**
	04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
	04 02 10	organic matter from natural products (for example grease, wax)
	04 02 21	Wastes from unprocessed textile fibres
	04 02 22	Wastes from processed textile fibres
09		**Wastes from the Photographic Industry**
09 01		**Wastes from the Photographic Industry**
	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 01	Paper and cardboard packaging
	15 01 02	Plastic packaging
	15 01 03	Wooden packaging
	15 01 04	Metallic packaging
	15 01 05	Composite packaging
	15 01 06	Mixed packaging
	15 01 07	Glass packaging
	15 01 09	Textile packaging
15 02		**Absorbents, wiping cloths, filter materials and protective clothing**
	15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
17		**Construction and Demolition Wastes (Including excavated soil from contaminated sites)**
17 02		**Wood Glass and Plastic**
	17 02 01	Wood
	17 02 03	Plastic
17 09		**Other Construction and Demolition Wastes**
	17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19		**Wastes from Waste Management Facilities, off-site Waste Water Treatment Plants & Preparation of Water intended for Human Consumption / Industrial Use**

Table S2.2 Permitted waste types and quantities for incineration plant		
Maximum quantity		Maximum total throughput = 265,000 tonnes per year. The aggregated throughput of waste codes 15 01 04, 15 01 07, 19 04 01, 19 12 02, 19 12 03 and 19 12 09 shall not exceed 5% by weight of the total throughput. The aggregated throughput of waste codes 04 01 08, 09 01 07 and 19 10 04 shall not exceed 1% by weight of the total throughput.
Waste code		**Description**
19 02		**Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
	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 04		**Vitrified waste and wastes from vitrification**
	19 04 01	Vitrified waste
19 05		**Wastes from aerobic treatment of solid wastes**
	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
19 06		**wastes from anaerobic treatment of waste**
	19 06 04	digestate from anaerobic treatment of municipal waste
	19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 08		**wastes from waste water treatment plants not otherwise specified**
	19 08 01	screenings
19 10		**wastes from shredding of metal-containing wastes**
	19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 12		**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
	19 12 01	Paper and cardboard
	19 12 02	Ferrous metal
	19 12 03	Non-ferrous metal
	19 12 04	Plastic and rubber
	19 12 07	Wood other than that mentioned in 19 12 06
	19 12 08	Textiles
	19 12 09	Minerals (for example sand, stones)
	19 12 10	Combustible waste (refuse derived fuel)
	19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20		**Municipal Wastes (Household 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 08	Biodegradable food waste
	20 01 10	Clothes
	20 01 11	Textiles
	20 01 25	edible oil and fat
	20 01 37*	Wood containing dangerous substances (content of dangerous substances not to exceed in threshold for classification as hazardous waste)
	20 01 38	Wood other than that mentioned in 20 01 37
	20 01 39	Plastics
	20 01 99	Other fractions not otherwise specified
20 02		**Garden and Park Wastes (including cemetery wastes)**
	20 02 01	Biodegradable waste

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	Maximum total throughput = 265,000 tonnes per year. The aggregated throughput of waste codes 15 01 04, 15 01 07, 19 04 01, 19 12 02, 19 12 03 and 19 12 09 shall not exceed 5% by weight of the total throughput. The aggregated throughput of waste codes 04 01 08, 09 01 07 and 19 10 04 shall not exceed 1% by weight of the total throughput.
Waste code	**Description**
20 02 03	Other non-biodegrable waste
20 03	**Other Municipal Wastes**
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 03	Street sweeping residues
20 03 04	Street cleaning residues
20 03 06	Waste from sewage cleaning
20 03 07	Bulky waste
20 03 99	Municipal wastes not otherwise specified

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location [1]	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Particulate matter	95m Stack	30 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Particulate matter	95m Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Total Organic Carbon (TOC)	95m Stack	20 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Total Organic Carbon (TOC)	95m Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Hydrogen chloride	95m Stack	60 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Hydrogen chloride	95m Stack	10 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Hydrogen fluoride	95m Stack	2 mg/m^3	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
A1	Carbon monoxide	95m Stack	100 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Carbon monoxide	95m Stack	50 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Sulphur dioxide	95m Stack	200 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Sulphur dioxide	95m Stack	50 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location [1]	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	95m Stack	400 mg/m^3	½-hr average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	95m Stack	200 mg/m^3	daily average	Continuous measurement	BS EN 15267- 3 BS EN 14181
A1	Cadmium & thallium and their compounds (total)	95m Stack	0.05 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Mercury and its compounds	95m Stack	0.05 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
A1	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	95m Stack	0.5 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Ammonia (NH_3)	95m Stack		periodic over minimum 1-hour period	For periodic measurement, quarterly in the first year of operation, then bi-annual	Procedural requirements of BS EN 14791
A1	Nitrous oxide (N_2O)	95m Stack		periodic over minimum 1-hour period	For periodic measurement, quarterly in the first year of operation, then bi-annual	BS EN ISO 21258
A1	Dioxins / furans (I-TEQ)	95m Stack	0.1 mg/m^3	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Humans / Mammals)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Fish)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location [1]	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Dioxins / furans (WHO-TEQ Birds)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Fish)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Birds)	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	95m Stack		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.

Note [1]: Location as described in the Application.

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

Emission point ref. & location [1]	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Particulate matter	95m Stack	150 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure
A1	Total Organic Carbon (TOC)	95m Stack	20 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure
A1	Carbon monoxide	95m Stack	100 mg/m^3	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure

Note [1]: Location as described in the Application.

Table S3.2 Point source emissions to sewer						
Emission point ref. & location [1]	**Parameter**	**Source**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
S1	Flow	Boiler sampling and blowdown	no limit	daily average	Continuous	
	pH		6-9	Instantaneous	Continuous	BS6068-2.50
	Temperature		no limit	Instantaneous	Continuous	

Note [1]: Location as described in the Application.

Table S3.3 Process monitoring requirements				
Location [1] 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	
Location close to the Combustion Chamber inner wall or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	
A1	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.

Note [1]: Location as described in the Application.

Table S3.4 Residue quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Bottom Ash	TOC	<3%	Monthly in the first year of operation. Then Quarterly	Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
Waste water from boiler blowdown and water treatment not sent to sewer.	Quantity and pH	pH 6 - 9	Each disposal.		

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

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
Emissions to sewer Parameters as required by condition 3.5.1	S1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
TOC Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	Bottom Ash	Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC Residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	APC Residues	Before use of a new disposal or recycling route	
Functioning and monitoring of the incineration plant as required by condition 4.2.2		Annually	1 Jan

Table S4.2: Annual production/treatment	
Parameter	**Units**
Total Municipal Waste Incinerated	tonnes
Total of all other Wastes Incinerated	tonnes
Electrical energy produced	KWhrs
Electrical energy exported	KWhrs
Electrical energy used on installation	KWhrs
Heat energy exported from the installation in the form of steam	KWhrs

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Electrical energy exported, imported and used at the installation	Quarterly	KWhrs / tonne of waste incinerated
Heat energy exported from the installation in the form of steam	Quarterly	KWhrs / tonne of waste incinerated
Fuel oil consumption	Quarterly	Litres / tonne of waste incinerated
Mass of Bottom Ash produced	Quarterly	Kgs / tonne of waste incinerated
Mass of APC residues produced	Quarterly	Kgs / tonne of waste incinerated
Urea consumption	Quarterly	Kgs / tonne of waste incinerated
Activated Carbon consumption	Quarterly	Kgs / tonne of waste incinerated
Sodium Bicarbonate consumption	Quarterly	Kgs / tonne of waste incinerated
Water consumption	Quarterly	m^3 / tonne of waste incinerated
Periods of WID abnormal operation	Quarterly	No of occasions and cumulative hours for current calendar year.

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Forms Air 1 – 7 or other forms as agreed in writing by the Environment Agency	06/03/12
Sewer	Form Sewer 1 or other form as agreed in writing by the Environment Agency	06/03/12
Residues	Form Residues1 or other form as agreed in writing by the Environment Agency	06/03/12
Energy usage	Form Energy 1 or other form as agreed in writing by the Environment Agency	06/03/12
Other performance indicators	Form Performance 1 or other form as agreed in writing by the Environment Agency	06/03/12

Schedule 5 - Notification

These pages outline the information that the operator must provide.

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

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	**EPR/WP3833FT**
Name of operator	**MVV Environment Devonport Limited**
Location of Facility	**Devonport Energy from Waste CHP**
Time and date of the detection	

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

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

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

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

Part B - to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of MVV Environment Devonport Limited

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.

"APC residues" means air pollution control residues

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

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

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

"bottom ash" means ash falling through the grate and transported by the grate.

"CEM" Continuous emission monitor

"CEN" means Commité Européen de Normalisation

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

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

"disposal" means any of the operations provided for in Annex IIA to Directive 2008/98/EC of the Waste Framework Directive.

"emissions to land" includes emissions to groundwater.

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

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

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

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

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

"ISO" means International Standards Organisation.

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

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

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

"PCB" means *Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in the table below.*

"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 2008/98/EC of the Waste Framework Directive.

"*shut down"* is any period where the plant is being returned to a non-operational state as described in the application or agreed in writing with the Environment Agency.

"start up" is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the plant in sufficient quantity to cover the grate and to initiate steady-state conditions.

"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" means Directive 2000/76/EC on the incineration of waste (O.J. L 332, 28.12.2000).

"WFD" means Waste Framework Directive (Directive 2008/98/EC of the European Parliament and Council).

"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 and the purified waste water of the regulated substances may exceed the normal emission limit values.

"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 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.

(b) in relation to gases from incineration and co-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.

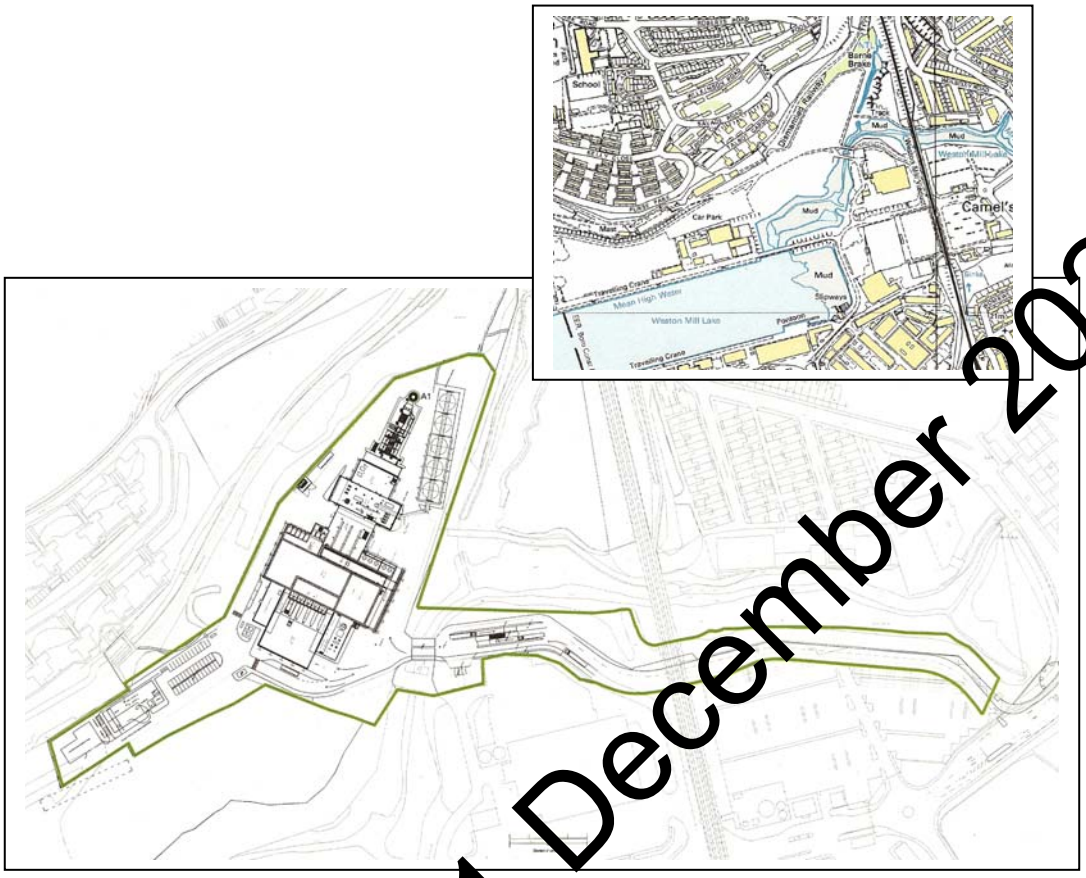
For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their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

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

TEF schemes for dioxin-like PCBs			
Congener	***WHO-TEF***		
	2005	**1997/8**	
	Humans / mammals	***Fish***	***Birds***
Non-ortho PCBs			
3,4,4',5-TCB (81)	*0.0001*	*0.0005*	*0.1*
3,3',4,4'-TCB (77)	*0.0003*	*0.0001*	*0.05*
3,3',4,4',5 - PeCB (126)	*0.1*	*0.005*	*0.1*
3,3',4,4',5,5'-HxCB(169)	*0.03*	*0.00005*	*0.001*

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

Schedule 7 - Site plan



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