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INTERPRETATION OF TERMS

For the purposes of this Permit, and unless the context requires otherwise, the following definitions shall apply:

Any term or expression already defined in the Regulations shall be taken to have the same meaning as provided in the Regulations;

"Abnormal Operation", for the purposes of Schedule 5 of this Permit, means any technically unavoidable stoppages, disturbances or failures of the plant or measurement devices which results in, or may result in, any ELV specified in Table 6.2 in this Permit being exceeded.

"AMS" for the purposes of Schedule 7 of this Permit, means Automated Measurement Systems;

"Another Relevant Person" in relation to relevant convictions is as defined in Section 74(7) of the Environmental Protection Act 1990;

"APCr" means Air Pollution Control residue and consist of residues from the flue gas treatment process, including reaction products from the acid gas scrubbing reactor, PAC with adsorbed metals and organic compounds and residue from the bag filter;

"Authorised Person" means a person who is authorised in writing under Section 108 of the Environment Act 1995 to carry out duties on behalf of SEPA;

"BAT – AEL" means Best Available Technique – Associated Emission Level;

"Boiler Ash" means ash collected from the boiler as described in Paragraph 1.1.4 (i);

"Breakdown" for the purposes of Schedule 5 of this Permit, means, a stoppage, disturbance or failure of any piece of plant or equipment which forms part of the incineration plant which may cause a breach of any condition of this Permit;

"British Standard 4142: 2014" or "BS4142: 2014" means the BS 4142: 2014 on "Methods for rating and assessing industrial and commercial sound" or any revision of those guidelines as subsequently published by the British Standards Institute;

"CEMS" means Continuous Emission Monitoring Systems;

"Cessation of Commissioning" means the earliest to occur of either (a) the date of the completion of the final Commissioning test referred to in the commissioning plan required by Condition 2.8.3, or (b) the 31 December 2022 or a date as otherwise agreed in writing by SEPA;

"Commencement of Commissioning" for the purposes of this Permit, means the earliest date on which the incinerator is first fired on non-waste or waste fuel at the Permitted Installation, this is known as "hot commissioning";

"CHPQA" means the relevant Combined Heat and Power Quality Assurance methodology as published at. https://www.gov.uk/guidance/combined-heat-power-quality-assurance-programme ;

"Climate Change Agreement" has the same meaning as in Section 46 of the Finance Act 2000;

"Co-incineration" and "Co-incineration plant" have the same meaning as in the Regulations;

"Commissioning" means the period between the Commencement of Commissioning and the Cessation of Commissioning;

"De-commissioning" means ceasing the use of the Permitted Installation, or part thereof, including decontaminating and dismantling the equipment to such an extent that it can no longer be used;

"ELV" means Emission Limit Value;

"Emission" has the same meaning as in the Regulations;

"European Waste Catalogue" ("EWC") means the list of wastes pursuant to Article 1(a) of Directive 75/442/EEC on waste and Article 1(4) of Directive 91/689/EEC on hazardous waste contained in Council Decision 2000/532/EC (OJ L 226, 6.9.2000, p.3) as amended by Council Decisions 2001/118/EC (OJ L 47 16.2.2001, p.32) and 2001/119/EC (OJ L 203, 28.7.2001, p. 18) (or any subsequent amendments to the same);

"FDBR" means Fachverband Dampfkessel, Behälter und Rohrleitungsbau, the German: Association of Steam Boiler, Tank and Pipeline Construction);

"First Operation" means the first date of receipt of waste for incineration, after Cessation of Commissioning;

"First Year of Operation" means the first year of operation of the Co-incineration plant commencing after First Operation, the date of which shall be specified in writing by SEPA;

"Hazardous Substance" means substances or mixtures as defined in Article 3 of Regulation (EC) No 1272/2008 of the European Parliament on classification, labelling and packaging of substances and mixtures;

"Heat and Power Plan" means the plan that contains as a minimum, the information specified in Annex 2 of SEPA's Thermal Treatment of Waste Guidelines;

"High level of efficiency" means compliance with The Energy Recovery Efficiency Targets in Annex 1 of the TTWG;

"IBA" means Incinerator Bottom Ash and consist of ash and solid residues collected from the bottom of the combustion grate system;

"IED Chapter IV" means Chapter IV "Special provisions for waste incineration plants and waste co-incineration plants" of the Industrial Emissions Directive (IED);

"Incident" means any of the following situations:

- where an accident occurs which has caused or may have the potential to cause pollution;
- where any malfunction, breakdown or failure of plant or techniques is detected which has caused or may have the potential to cause pollution;
- where any substance, vibration, heat or noise specified in any condition of this Permit is detected in an emission from a source not authorised by a condition of this Permit and in a quantity which may cause pollution;
- where an emission of any pollutant not authorised to be released under any condition of this Permit is detected; or,

- where an emission of any substance, vibration, heat or noise is detected that has exceeded, or is likely to exceed, or has caused, or is likely to cause to be exceeded any limit on emissions specified in a condition of this Permit;

"Incinerator" means the furnace and combustion chamber in which waste incineration takes place as opposed to the "Waste Incineration Installation" which has wider coverage across the Permitted Installation.

"Incineration" and "Incineration Plant" have the same meaning as in the Regulations;

"Industrial Emissions Directive" or "IED" means Directive 2010/75/EU on Industrial Emissions (Integrated Pollution Prevention and Control) (Recast);

"Location Plan" means the plan attached at Figure 2 in Schedule 1;

"LOI" means Loss on Ignition;

"mAOD" means metres Above Ordnance Datum;

"mBGL" means metres Below Ground Level;

"Medium Combustion Plant", or "MCP", means a combustion plant with a net rated thermal input between 1-50 MW;

"MSW" means source segregated municipal solid waste from a scheme that has received approval by SEPA and commercial and industrial waste of a similar nature;

"NCV" means Net Calorific Value;

"NO_X" means Oxides of Nitrogen (NO and NO_2 expressed as NO_2);

"Operator" means the person who has control over the operation of the installation;

"Operation" has the same meaning as in The Pollution Prevention and Control (Scotland) Regulations 2012, A Practical Guide (Part A Activities);

"Other Than Normal Operating Conditions" or "OTNOC" means the scenarios considered to represent OTNOC for the Permitted Installation, as identified in the OTNOC Management Plan required by Condition 5.4.6 and comprise:
a) abnormal operation; and
b) start-up and shut-down periods.

"PAH" means Polycyclic Aromatic Hydrocarbons;

"PAC" means powdered activated carbon;

"the Permitted Activities" are defined in Schedule 1 of this Permit;

"the Permitted Installation" is defined in Schedule 1 of this Permit and includes references to parts of the Permitted Installation;

"Pollutant" and "Pollution" have the same meaning as in the Regulations;

"QAL" means Quality Assurance Level;

"Quality Index value" has the same meaning as defined in the relevant CHPQA guidance method as published at https://www.gov.uk/guidance/combined-heat-power-quality-assurance-programme;

"the Regulations" means The Pollution Prevention and Control (Scotland) Regulations 2012, SSI 2012 No. 360, as amended;

"Relevant Hazardous Substances" (RHS) are those hazardous substances that are capable of contaminating soil and groundwater based upon consideration of the chemical and physical properties of the substance.

"Residues" has the same meaning as in Article 43 of the Industrial Emissions Directive and the WI BATCs;

"SCR" means Selective Catalytic Reduction;

"Secondary Containment System" means a drip tray, an area surrounded by a bund or catchpit, or any other system for preventing any liquid chemical or fuel which is no longer in its container from escaping from the place where it is stored;

"SEPA" means the Scottish Environment Protection Agency;

"separately collected waste" has the same meaning as in the Regulations;

"SEPA Odour Guidance" means the guidance entitled "SEPA Odour Guidance 2010" or any revision of that guidance as subsequently published on SEPA's website at www.sepa.org.uk;

"the Site" is defined in Schedule 1 of this Permit and 'on-site' and 'off-site' shall be interpreted accordingly;

"the Site Boundary" means the boundary of the site as shown in red in the Site Plan;

"Site Plan" means the plan attached at Figure 1 in Schedule 1;

"specified waste management activity" means an activity comprising—

(a) the disposal of waste in a landfill, whether or not the disposal falls within Section 5.2 of Part 1 of Schedule 1,

(b) the disposal or recovery of waste falling within Sections 5.3, 5.4 or 5.6 of that Part of that Schedule, or

(c) the disposal or recovery of waste in a Waste Incineration Installation;

"SNCR" means Selective Non-Catalytic Reduction;

"Start-up" means the restarting of the Permitted Installation or part thereof following any shutdown for any reason, it includes partial shutdowns, for example to repair equipment necessary to ensure compliance with the conditions in this Permit;

"Start-up period" means the period between igniting the burners until the temperature reaches that specified in Condition 5.1.1c).

"Shut-down" means the cessation of the incineration of waste and can include the cooling of the incineration plant to ambient temperature; Shutdown begins after the last waste has been burned out following cessation of waste feed;

"Shut-down period" means the period of time taken to shut down the incinerator from completion of waste burn-out;

"Thermal Treatment of Waste Guidelines" or "TTWG" means the guidelines entitled "SEPA's Thermal Treatment of Waste Guidelines 2014", May 2014 published on SEPA's website at www.sepa.org.uk;

"TOC" means Total Organic Carbon;

"Waste" has the same meaning as in the Regulations;

"Waste Incineration BAT Conclusions" or "WI BATCs" means the Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration (notified under document C (2019) 7987) published in the Official Journal of the European Union on 3 December 2019;

"Waste Incineration Installation" has the same meaning as in the Regulations;

"Waste oil" has the same meaning as in the Regulations;

"Water Environment" has the same meaning as in the Water Environment and Water Services (Scotland) Act 2003 that is all surface water, groundwater and wetlands; and "surface water", "groundwater" and "wetlands" shall have the same meanings as in the Act;

Any reference to a group of conditions, numbered condition, schedule, table, appendix, figure or paragraph is a reference to a group of conditions, numbered condition, schedule, table, appendix, figure or paragraph bearing that number in this Permit.

Except where specified otherwise in this Permit:

- "day" means any period of 24 consecutive hours;
- "week" means a period of 7 consecutive days;
- "month" means a calendar month;
- "quarter" means a calendar quarter
- "year" means any period of 12 consecutive months;

and any derived words (e.g. "monthly", "quarterly") shall be interpreted accordingly.

Except where specified otherwise in this Permit, any reference to an enactment or statutory instrument includes a reference to it as amended (whether before or after the date of this Permit) and to any other enactment, which may, after the date of this Permit, directly or indirectly replace it, with or without amendment.

1 THE PERMITTED INSTALLATION

1.1 Description of Permitted Installation

1.1.1 The permitted installation to which this Permit applies ("the Permitted Installation") is:

a) the stationary technical unit specified in paragraph 1.1.4 ("the Stationary Technical Unit"), where the activities specified in paragraph 1.1.3 are carried out ("the Activity"), together with the directly associated activity specified in paragraph 1.1.5 ("the Directly Associated Activity"); and

b) the site ("the Site") of the Permitted Installation is delineated in red on the Site Plan (Figure 1).

1.1.2 The general location of the Site is as shown on the Location Plan (Figure 2).

1.1.3 The Activities carried out at the Stationary Technical Unit are:

a) the incineration of source segregated municipal solid waste (MSW) and commercial and industrial (C&I) waste of a similar nature, in a single line moving grate Incinerator with an operational capacity of 150,000 tonnes of waste per year and a combustion design capacity 49.1 MWth per hour of waste feed at 100% thermal capacity being an activity described in Part A (b) Section 5.1 of Chapter 5, of Part 1 of Schedule 1 of the Regulations as the incineration of non-hazardous waste with the exception of waste which is biomass or animal carcasses in an incineration or co-incineration plant; and,

b) the combustion of liquid fuel in an emergency diesel generator with a net rated thermal input of around 3.5 MW, being an activity described in Part B (d) Section 1.1 of Chapter 1, Part 1 of Schedule 1 of the Regulations as the burning any fuel in a medium combustion plant with a rated thermal input equal to or greater than 1 megawatt and less than or equal to 20 megawatts.

1.1.4 The Stationary Technical Unit comprises the following units:

a) a waste reception, inspection and storage area that:

(i) is located within an enclosed building, maintained under negative pressure and served by fast acting roller doors on the two-vehicle access points and self-closing doors on pedestrian access;

(ii) includes a segregated tipping hall served by separate extraction and six tipping gates which feed a single waste storage bunker, capable of holding 8700 tonnes of waste, with automated overhead grab cranes, that can also be operated manually, for mixing waste within the bunker and loading of the waste feed hopper; and

(iii) includes a quarantine area for the collection and inspection of non-compliant waste.

b) A waste feed delivery system comprising of:

(i) a water-cooled waste feed chute located below the waste feed hopper that is automatically monitored and fed to ensure it is kept full to avoid potential air ingress and served by a dust tight shut-off flap that is closed automatically during start up, shut down and when waste within the chute has reached its minimum level to provide an air-tight seal and prevent air ingress; and

(ii) a feeding table extending across the width of the grate to ensure uniform delivery of waste to the combustion grate.

c) a single line, inclined reciprocating multistage, air-cooled combustion grate and associated combustion chamber capable of incinerating source segregated municipal solid waste (MSW) and commercial and industrial (C&I) waste of a similar nature at:

(i) a temperature above 850°C with a 2 second residence time;

(ii) a rate of 150,000 tonnes per year based on 8,000 hours operation and a throughput of around 19 tonnes per hour with a Net Calorific Value (NCV) of 9.3 MJ/Kg; and

(iii) a maximum throughput of 23.01 tonnes per hour with a NCV of 7.5 MJ/Kg.

and consisting of:

(iv) the preheating and injection of primary air from below the combustion grate which is split into 12 zones, six along both the length and width of the combustion grate respectively, each of which equipped with its dedicated air supply and control system;

(v) the injection of secondary air above the combustion grate in the post-combustion chamber at the inlet of the first empty pass at an elevation of approximately +14.5m, through a series of horizontally arranged injectors with 13 located in the front side wall and 14 in the rear sidewall; and

(vi) the injection of the recirculated flue gas immediately below the secondary air injection through a series of horizontally arranged injectors with 13 located in the front side wall and 14 in the rear sidewall.

d) two auxiliary low NOx burners, fired on fuel oil and installed above the secondary air injection level, provided to ensure:

(i) a temperature of at least 850°C for 2 seconds is reached and maintained within the combustion chamber; and

(ii) the complete combustion of flue gases during shutdown.

e) an integral waste heat recovery boiler to recover heat from combustion gases and generate superheated steam on exit at 64 bara and 425°C and comprising of;

(i) three vertical passes for the transfer of radiant heat the first of which will be partially covered with refractory lining up to the where two seconds residence time will be reached at the deigned load point; and

(ii) One horizontal convective pass with evaporators and superheaters.

f) boiler water treatment comprising reverse osmosis and electrodeiionisation plant as well as chemical dosing;

g) a condensing steam turbine for the generation and export of electrical energy as well as allowing for the export of heat and associated air-cooled condenser. Depending on the operational mode selected the facility can generate around 12.8 to 14.3 MWe with an associated export of around 10.6 to 12.2 MWe and 0 and 10 MWth of heat respectively;

h) equipment for the collection, transfer, cooling, and storage of IBA comprising of:

(i) a steel conveyor at the bottom of the combustion grate to collect the IBA and transfer the ash to the IBA extractor where the ash enters into a water trough at the base of the extractor and is allowed to cool to below 60°C; and

(ii) transfer by conveyor belt to the fully enclosed IBA Storage Hall with a capacity of 450 tonnes, prior to being transferred into open top trucks within the hall and sheeted for transfer off-site.

i) equipment for the collection, transfer and storage of Boiler ash comprising of the collection of boiler ash from the second and third empty passes and remaining boiler passes:

(i) which is then transferred, during normal operation, via an enclosed pneumatic conveyor to either a 150 m^3 boiler ash silo or diverted for mixing with the IBA;-and

(ii) which can be transferred to an enclosed collection and bagging system where the route described in Paragraph 1.1.4 i) (i) is unavailable, or when facilitating boiler cleaning activities during outages;

j) equipment for the collection, transfer and storage of APCr comprising of a hopper located below bag filter housing to collect the APCr and storage in two 170 m^3 silos;

k) Selective Non-Catalytic Reduction (SNCR) with the injection of urea solution into the combustion chamber alongside incorporation of flue gas recirculation injected below the secondary air inlet to reduce the generation of and emissions of NOx;

l) Combined injection of powdered activated carbon (PAC) and Hydrated Lime in the flue gas reactor tower upstream of the fabric bag filter for the abatement of dioxins/furans, other volatile organic compounds, and heavy metals as well as acid gases respectively;

m) a fabric bag filter system for the collection and removal of particulate matter, heavy metals consisting of six compartments each housing a set of 576 reverse air injection filter bags and the ability to isolate one filter compartment to enable emergency maintenance whilst maintaining adequate particulate removal efficiency;

n) the partial recirculation of residues from the bag filter to the reactor tower to minimises the consumption of Hydrated Lime;

o) dispersion of emissions within the flue gas via an induced draft fan and an 80 metre high stack;

p) Under normal operation, extraction of potentially odorous air from with the process buildings to provide combustion air to the furnace where odour compounds will be destroyed;

q) Provision of a ground mounted carbon filter bed, served by a 25 metre high stack, for the treatment of odour during planned and unplanned stoppages; and

r) Facilities for the provision of emergency power consisting of an emergency diesel generator with a net rated thermal input of around 3.5 MW, as described in Paragraph 1.1.3 b).

1.1.5 The following Directly Associated Activity is carried out on the Site:

a) a weighbridge complex comprising:

(i) two weighbridges at the entrance of the site to weigh incoming waste to be incinerated, with additional space to allow for the stacking of vehicles and emergency access; and

(ii) a separate weighbridge situated at the exit of the site to weigh any generated waste streams;

b) Facilities for the reception storage and distribution of PAC and hydrated lime for use in gas cleaning and conditioning described in Paragraph 1.1.4 (k)(ii), including associated storage silos fitted with its own dust filter and fill points located inside the flue gas treatment hall;

c) Facilities for the reception, storage, distribution and dispatch of raw materials, wastes and residues to and from the Site not otherwise described;

d) Facilities for the harvesting of rainwater from the main building roof collected in a dedicated rainwater pit for use as service water;

e) Facilities for the collection, storage, distribution, and reuse of produced water and run off from potentially contaminated site areas in order to minimise water consumption and meet the design criteria of a zero liquid discharge. Facilities consist of:

(i) An oil interceptor;

(ii) Collection in a 100m^3 waste water pit;

(iii) Slag extractor cooling; and

(iv) Collection in a 150m^3 process water pit.

f) a surface water collection and treatment system for the uncontaminated surface water runoff in the form of a Sustainable Urban Drainage System (SUDS) comprising of an oil interceptor, a vortex separator, a storm water basin (retention pond) equipped with an isolation valve, an abatement flood pond (retention basin) and discharge to the east Tullos Burn Culvert via a final isolation valve that will automatically close in the event of a fire or breach of a pre-set discharge parameter;

g) Facilities for the export of electricity to the national grid;

h) Facilities to allow the export of heat off site; and

i) A fire water system consisting of fire detection, a fire water tank, hydrants, deluge sprinkler systems, a firewater pump house and facilities for the collection fire water runoff.

1.1.6 The offices, stores, staff visitor car park, engineering and maintenance workshops as well as the interception drainage at the perimeter of the site, including the storage or treatment of any intercepted groundwater, are not part of the Permitted Installation.

1.1.7 For the purposes of this Permit, the Activity and Directly Associated Activity shall be known together as “the Permitted Activities”.

1.2 Figure 1 - Site Plan

1.3 Figure 2 - Site Location

EFW Ness Limited, NESS EFW Facility, Greenbank Crescent, East Tullos Industrial Estate, Aberdeen, Scotland, AB12 3BG

2 GENERAL MANAGEMENT CONDITIONS

2.1 Administration

2.1.1 The Operator shall have an appropriate person (and deputy) as the primary point of contact with SEPA and shall notify SEPA in writing of the name of the appointed person (and deputy) within 4 weeks of the date of this Permit.

2.1.2 In the event of a different person being appointed to act as primary point of contact (or deputy), the Operator shall notify SEPA in writing of the name of the appointed person or deputy without delay.

2.1.3 A copy of this Permit shall be kept at the Permitted Installation and shall be made readily accessible for examination by all staff.

2.1.4 Any systems or procedures used by the Operator to demonstrate compliance with a condition of this Permit shall be recorded.

2.2 Records

2.2.1 All records made in compliance with this Permit shall be kept in a systematic manner.

2.2.2 Unless otherwise specified in a condition of this Permit, every record made in compliance with a condition of this Permit shall be preserved for not less than 5 years from the date of its being made. Every such record shall be kept at the Permitted Installation for not less than one year from the date of it's being made, and thereafter preserved at a location previously notified to SEPA in writing, if that location is not the Permitted Installation.

2.2.3 All records shall be legible, and any amendment made to any record made in compliance with a condition of this Permit shall be made in such a way as to leave the original entry clear and legible. The reason for each amendment shall be explained in the said record.

2.2.4 Without prejudice to Condition 2.2.2, all Operators' records relevant to the operation and maintenance of the Permitted Installation shall be kept at the Permitted Installation for not less than one year from the end of the period to which they apply.

2.2.5 Where any condition of this Permit requires information to be recorded a record shall be maintained and, where appropriate, reviewed by the date(s) specified in Table 2.1.

2.2.6 Without prejudice to Condition 2.2.2, any data required by any condition of this permit shall be stored in a permanent and secure way.

2.3 Reporting

2.3.1 Where any condition of this Permit requires information to be reported, a report shall be forwarded to SEPA by the date(s) or within the period or at the frequency specified in Table 2.1, and, where appropriate, the first report shall be due on the date specified in that Table. All such reports shall include the Permit number, Permit Condition number and the name of the Operator.

2.3.2 The reports referred to in Condition 2.3.1 shall be forwarded to SEPA to the email or postal address specified by SEPA in the explanatory notes attached to this Permit.

2.3.3 Where the Permitted Installation has not operated for the duration of any relevant reporting period specified in Table 2.1, the Operator shall provide written notification to SEPA. This shall confirm that no relevant reports have been made in terms of Condition 2.3.1, because the Permitted Installation has not operated during the said period. Such notifications shall be submitted within one month of the end of the reporting period concerned.

2.3.4 All notifications required by any condition of this Permit shall be made to SEPA in the manner specified in that condition to the address specified in the explanatory notes attached to this Permit by the date/ period specified in Table 2.1. All such notifications shall include the Permit number, Permit Condition number and the name of the Operator.

2.3.5 Any reference within this permit to reports or notifications to be made to SEPA in writing shall be read as to include by email, at the email addresses specified in the explanatory notes attached to this permit.

2.4 Data Reporting

2.4.1 The Operator shall complete a quarterly waste data report, the "Licensed/Permitted Site Returns Form" located on SEPA's website at www.sepa.org.uk. This form shall be completed and submitted to the address specified by SEPA within 28 days of the last day of March, June, September and December each year.

2.4.2 The Operator shall provide an annual summary report to SEPA containing:

a) the results of all monitoring carried out in compliance with Conditions 6.3.9, 6.4.5, 7.3.3, 7.4.2, 8.1.5, 8.1.6 and 10.3.4;

b) all notifications and reports provided under Condition 2.5.4, 5.4.3, 6.1.12 and 6.2.10; and

c) an account of the functioning and running of the incineration plant including the reports required under Condition 5.2.5, 5.4.3 and 7.1.7.

This report shall give an explanation and interpretation of any trends or exceedances in the information submitted and an account of hours of Abnormal Operation under Condition 5.4.4.

2.5 Incidents

2.5.1 In the event of an Incident, all necessary measures shall immediately be taken:

a) to prevent, or where that is not practicable, to reduce emissions from the Permitted Installation;

b) to limit the environmental consequences as a result of that Incident; and

c) to prevent further possible Incidents.

2.5.2 Without prejudice to the requirements of condition 2.5.1, in the event of a breach of any condition of this Permit the operator shall immediately take the measures necessary to ensure that compliance is restored in the shortest possible time.

2.5.3 Notwithstanding the requirements of Condition 2.5.1 and 2.5.2 where a breach of any condition of this Permit poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator shall suspend operation of the Permitted Installation or relevant part thereof until such time as it can be operated in compliance with this Permit.

2.5.4 In the event of an Incident and/or a breach of any condition of this Permit, the Operator shall notify SEPA by telephone without delay to 0800 80 70 60. A notification that relates to an incident shall include, as far as practicable, the information specified in Condition 2.5.5.

2.5.5 The Operator shall confirm any Incident to SEPA in writing to the address specified by SEPA by the next working day after identification of the Incident. This confirmation shall include: the time and duration of the Incident; the receiving environmental medium or media where there has been any emission as a result of the Incident; an initial estimate of the quantity and composition of any emission; the measures taken to prevent or minimise any emission or further emission; and a preliminary assessment of the cause of the Incident.

2.5.6 Any Incident notified to SEPA shall be investigated by the Operator, and a report of the investigation sent to SEPA. The report shall detail, as a minimum: the circumstances of the Incident; an assessment of any harm to the environment; and, the steps taken by the Operator to bring the Incident to an end. The report shall also set out proposals for remediation, where necessary, and for preventing a repetition of the Incident.

2.5.7 By 3 months prior to Commissioning of the Installation or part thereof, the Operator shall prepare, implement and maintain an "Incident Prevention and Mitigation Plan". This plan shall set out the steps to be taken by the Operator to ensure that all preventative measures are in place to avoid an Incident to any medium, and that any Incident that does occur is mitigated in the most appropriate manner.

2.5.8 At least every 2 years the Operator shall review the Incident Prevention and Mitigation Plan required under Condition 2.5.7. Each review of the Incident Prevention and Mitigation Plan shall be recorded and where the Operator makes any revisions to the said plan said revisions shall be recorded.

2.6 Resource Utilisation

2.6.1 Over the specified 4 year period, the Operator shall carry out a systematic assessment to determine:-

a) how and where raw materials (including water and fuel) and energy are used within the Permitted Installation;

b) the quantities of raw materials (including water and fuel) and energy that are used within the Permitted Installation;

c) how and where emissions and wastes are generated within the Permitted Installation;

d) the quantities of emissions and wastes generated within the Permitted Installation;

e) how and where raw materials (including water) and energy can be utilised more efficiently within the Permitted Installation to minimise emissions and waste; and

f) which identified opportunities/projects, within a specified timeframe, will be implemented at the Permitted Installation.

2.6.2 The objective of this systematic assessment is to identify and implement any opportunities and / or projects, on an on-going basis, to:-

a) increase the efficiency of raw materials (including water and fuel) and energy;

b) prevent, or where that is not practicable, minimise emissions and wastes generated through the inefficient operation of the Permitted Installation or associated processes; and

c) reuse by-products (including heat and power) generated, where applicable, either from the Permitted Installation or from other activities

When submitting the findings of the assessment, a summary of the progress of each of the opportunities / projects identified from the systematic assessment must be included. SEPA reserve the right to periodically review progress of these opportunities and projects during inspections of the Permitted Installation undertaken throughout the 4 year assessment period.

2.6.3 The assessment required by Condition 2.6.1 shall be recorded using the "systematic assessment of resource use and efficiency template", (IED-T-04 available at www.sepa.org.uk) or equivalent format as agreed by SEPA, and reported to SEPA at the end of the 4 year assessment cycle as specified in Table 2.1 and Table 2.2.

2.6.4 Annual data totals of raw materials (including water and fuel consumed) energy utilised, emissions and waste produced within the Permitted Installation, shall be recorded by the Operator annually in the relevant section of the "systematic assessment of resource utilisation" template. The Operator shall report that data to SEPA within 28 days of the end of the 4 year assessment cycle.

2.6.5 For the purposes of Conditions 2.6.1 and 2.6.2, "raw materials, energy and fuel" shall mean the materials listed in Table 2.2.

2.7 Heat and Power Conditions

2.7.1 The Operator shall, no later than the Cessation of Commissioning, operate the Permitted Installation in such a manner as to ensure that the recovery of energy takes place with a high level of energy efficiency.

2.7.2 The Operator shall maintain a Heat and Power Plan. Following Cessation of Commissioning the Heat and Power Plan will be reviewed and updated annually, with a report submitted to SEPA no later than 31 January of each year.

2.7.3 The reviewed and updated Heat and Power Plan shall contain as a minimum the information as specified in Annex 2 of the TTWG and shall:

a) demonstrate how the plant is moving towards good quality combined heat and power status;

b) demonstrate how the plant is working towards complying with the criteria for achieving certification under the CHPQA standard; and

c) include calculations to report the CHPQA Quality Index value and indicative efficiency for the reporting year and an assessment of that performance.

2.7.4 Within 7 years from the date of First Operation of the Permitted Installation, the total quantity of energy recovered in the form of electrical or heat energy or a mix of electrical and heat energy shall exceed the amount of energy equivalent to a CHPQA Quality Index value of 93 or an indicative efficiency of 35%

2.7.5 In the event that the operator considers that compliance with condition 2.7.4 is not likely, due to circumstances out with its control, the operator shall submit to SEPA in writing the details of those circumstances and the reasons for the likely non-compliance, with reference to the provisions of the Thermal Treatment of Waste Guidelines and the most recently agreed Heat & Power Plan. Such notification shall be provided to SEPA at least 3 months prior to the deadline for compliance with condition 2.7.4, together with information on the Operators proposals on how and when the requirements of condition 2.7.4 will be met.

2.7.6 Where the operator complies with condition 2.7.5, the requirements of condition 2.7.4 will be dis-applied until such time as the operator has received written confirmation from SEPA (which refers to the provisions of the Thermal Treatment of Waste Guidelines and the most recently agreed Heat & Power Plan) that either (a) the requirements of condition 2.7.4 continue to apply, or (b) condition 2.7.4 is varied by issue of a variation notice by SEPA under regulation 46.

2.7.7 The gross electrical energy efficiency, the gross energy efficiency or the boiler efficiency of the waste incineration plant shall be tested, at full load and according to EN standards, during commissioning and after any modification that could significantly affect the energy efficiency, the gross electrical energy, the gross energy efficiency or the boiler efficiency. For the determination of boiler efficiency, the proposed methodology should be based on the guidance provided in the Fachverband Dampfkessel, Behälter und Rohrleitungsbau (the German: Association of Steam Boiler, Tank and Pipeline Construction, or FDBR) Guideline RL 7 'Acceptance Testing of Waste Incineration Plants with Grate Firing Systems' 2013, or as otherwise agreed in writing with SEPA. The results of any test shall be reported to SEPA within 3 months of being carried out.

2.8 Prior Commissioning Conditions

2.8.1 The Operator shall not proceed with the Commencement of Commissioning until:

a) Conditions 2.8.2 to 2.8.16 inclusive have been complied with; and

b) The Operator has received confirmation from SEPA in writing that those conditions have been complied with.

2.8.2 By 2 months following permit issue, the Operator shall provide SEPA with a plan of the implementation programme from Construction through to Commissioning (the "Construction and Commissioning Plan"). Said plan should include the best estimates of the start date and duration for each major stage of construction and commissioning, and the key steps involved. An update of progress against the Construction and Commissioning Plan shall be provided to SEPA on a quarterly basis.

2.8.3 Without prejudice to Condition 2.8.2, at least 2 months, or such period as otherwise agreed in writing with SEPA, prior to the Commencement of Commissioning, the Operator shall notify SEPA in writing of a detailed Commissioning Plan to include the following:

a) details of the work to be carried out including each test required by Condition 2.9.2;

b) the proposed dates on which the said work or test in Condition 2.8.3 a) will be started and completed; and

c) the criteria for determining when the Commissioning has ceased.

2.8.4 No later than 1 month prior to the Commencement of Commissioning, the Operator shall provide SEPA with a report containing the details of proposals for any temporary Emission Limit Values (ELVs) for emissions to air to apply during Commissioning ("Commissioning ELVs"). The report shall include the following information:

a) for each separate stage of commissioning where a Commissioning ELV is proposed:

(i) identification of the specific stage of Commissioning and an explanation of what this involves; and

(ii) the proposed ELV. This should include a lower ELV requiring action, and a higher ELV requiring a notification to SEPA and incinerator shut-down, and a justification and air quality impact assessment for those ELVs.

b) proposals for notification of non-compliance with any of the Commissioning ELVs; and

c) how compliance with the ELVs in Table 6.2, and 6.2a in Schedule 6 of the Permit will be achieved in the shortest possible time.

2.8.5 At least 1 month prior to the Commencement of Commissioning, the Operator shall submit a report to SEPA confirming the methodology to be employed to carry out a systematic assessment of noise and vibration emissions associated with the Permitted Activities, the purpose of which shall be to confirm that the specific sound level of the facility (dB LAeq,Tr), rated to take account of any character corrections specified by BS 4142, does not exceed those predicted at the identified receptors in report AAc/256683-32/003/ISSUE.

2.8.6 At least 1 month prior to the Commencement of Commissioning, the Operator shall submit a method statement to SEPA confirming the methodology to be employed to carry out verification odour modelling from the odour stack, emission point A2, serving the odour treatment plant as described in Paragraph 1.1.4 q).

2.8.7 No later than 1 month prior to the first introduction of chemicals, fuels or other raw materials or wastes at the Permitted Installation, the Operator shall submit to SEPA the Soil and Groundwater Monitoring Plan required by Condition 7.6.7, for agreement. Said plan shall include the following:

a) A drawing of the Permitted Installation showing the exploratory locations (trial pits and boreholes) and justification for location selection, a timeframe for undertaking and completion of the exploratory works, details of proposed depths for trial pits and boreholes with justification for depth proposals relevance, trial pit and borehole exploratory logs presenting information in metres Above Ordnance Datum (mAOD) and metres below ground level (mBGL), details of the selection for soil sampling depth and relevance for chemical testing.

b) A drawing of the Permitted Installation showing the borehole locations and justification for location selection, a timeframe for undertaking and completion of the exploratory works, details of proposed depths for boreholes with justification for depth proposals, boreholes exploratory logs presenting information in mAOD and mBGL, details of the selection for groundwater sampling depth and relevance for chemical testing.

c) The information recorded during the monitoring events proposed to determine groundwater levels should be reported in a table in mAOD and mBGL and in a drawing showing groundwater contours. A discussion should be provided on the inferred groundwater flow regime based on this information; the discussion information should confirm whether the groundwater monitored represents a groundwater body (superficial or bedrock).

2.8.8 No later than 1 month prior to the first introduction of chemicals, fuels or other raw materials or wastes at the Permitted Installation and following SEPA's agreement of the Soil and Groundwater Monitoring Plan locations referred to in Condition 2.8.7, the groundwater monitoring boreholes and trial pits referred to in Condition 2.8.7 shall be commissioned as agreed. In addition to the soil samples from trial pits referred to in Condition 2.8.7, soil samples shall also be collected from all of the said boreholes during their construction, for subsequent analysis, as required by Condition 2.8.7.

2.8.9 Within 1 month of completion of the boreholes and trial pits required by Conditions 2.8.7 and 2.8.8, a report shall be submitted to SEPA with details of their construction. Said report shall include all borehole and trial pit construction logs and the depth of all soil samples and groundwater encountered during their installation. All depths are to be recorded in mAOD and mBGL.

2.8.10 No later than 1 month prior to the first introduction of chemicals, fuels or other raw materials or wastes at the Permitted Installation, the first assessment of the Relevant Hazardous Substances (RHS) in the groundwater, as required by Condition 7.6.5, and in the soil, as required by Condition 7.6.6, shall be submitted to SEPA and will be considered as Baseline.

2.8.11 Prior to the Commencement of Commissioning, the design features necessary to ensure compliance with any condition of this Permit shall be checked to ensure they have been completed and installed as per design and signed off by a relevant qualified engineer. The scope and outcome of said checks shall be reported to SEPA.

2.8.12 No later than 1 month prior to the Commencement of Commissioning, the Operator shall submit to SEPA a report outlining the proposed methodology to verify compliance with Condition 5.1.1 (b), (c) and (d) on Commissioning. Said methodology shall make reference to the requirements set out in Environment Agency R&D Technical Report P4-100/TR Part 2 (Validation of Combustion Conditions) November 2001, include justification for alternative techniques, and explain how the validity of the CFD model provided, 'CFD Study Boiler, Document Code - NSS02MESSSBG0001' will be demonstrated.

2.8.13 No later than 1 month prior to the Commencement of Commissioning, the Operator shall submit to SEPA a report outlining the proposed methodology to be used during Commissioning to confirm the gross electrical efficiency of the incineration plant at full load. The proposed methodology should be based on the guidance provided in the Fachverband Dampfkessel, Behälter und Rohrleitungsbau (the German: Association of Steam Boiler, Tank and Pipeline Construction, or FDBR) Guideline RL 7 'Acceptance Testing of Waste Incineration Plants with Grate Firing Systems' 2013.

2.8.14 No later than 2 months prior to the Commencement of Commissioning, the Operator shall submit a report to SEPA to confirm the proposals for monitoring of mercury as required by Condition 6.5.1.

2.8.15 No later than 2 months prior to the Commencement of Commissioning, the Operator shall submit a report to SEPA to confirm the proposals for sampling of dioxins and furans and dioxin-like PCBs as required by Condition 6.5.2.

2.8.16 Without prejudice to Condition 8.1.1, no later than 2 months prior to the Commencement of Commissioning, the Operator shall submit to SEPA for approval a procedure for the accelerated start up sampling and testing of Incinerator Bottom Ash for the purposes of assessing the hazard status and, the Waste Acceptance Criteria (WAC), if goes to landfill, and for reporting of the results of said sampling and testing and the outcome of the hazard status and WAC tests. The procedure shall make reference to the following documents:

a) Guidance for the Assessment and Classification of Waste, Technical Guidance WM3, UK Environment Agencies, 1st edition v1.1, as amended; and,

b) A Sampling and Testing Protocol to Assess the Status of Incinerator Bottom Ash, Document reference WRc Report Reference UC 9390.05, published by the Environmental Services Association, January 2018, as amended.

2.9 Commissioning Conditions

2.9.1 The Operator shall not carry out any Permitted Activities, or any new or substantially changed activities following on from a significant modification or change to the Permitted Installation, except as part of Commissioning notified to SEPA in compliance with Condition 2.8.3 until:

(a) Conditions 2.9.2 to 2.9.6 inclusive have been complied with; and

(b) the Operator has received confirmation from SEPA in writing that those conditions have been complied with.

2.9.2 When carrying out any Commissioning the Operator shall carry out tests to:

a) demonstrate that the Permitted Installation can be operated in compliance with the conditions of this Permit;

b) demonstrate that the furnace residence time, secondary combustion zone temperature and minimum oxygen content are consistent with the requirements of Condition 5.1.1(b), (c) and (d) under the most unfavourable operating conditions anticipated in accordance with the methodology submitted under Condition 2.8.12;

c) demonstrate the operation of the controls and interlocks installed to ensure compliance with condition 5.3.1 to 5.3.3;

d) demonstrate that the quality of the ash residues comply with the requirements of Table 8.1 and Condition 5.1.1(a) and to complete a WM3 assessment for IBA, as agreed in writing with SEPA;

e) confirm compliance with the ELVs specified in Table 6.2, Table 6.2a and Table 7.1, and any Commissioning ELVs proposed under Condition 2.8.4 and agreed in writing with SEPA;

f) demonstrate the 95% confidence levels of the CEMS comply with the criteria specified in paragraph 1.3 of Part 6, Annex VI of IED;

g) confirm compliance with Quality Assurance Level (QAL) 1, 2 & 3 as specified in British Standard BS EN 14181 for continuous emissions monitoring systems (CEMS);

h) confirm the gross electrical efficiency in accordance with the methodology in Condition 2.8.13;

i) confirm through a programme of monitoring including at the inlet and outlet of the Odour Extraction and Abatement System, as described in Paragraph 1.1.4 q), that the abatement efficiency and the emitted odour concentrations at Emission Point A2 are sufficient to meet the significance criterion of 1.5 OUE/m3 significance criterion in the SEPA Odour Guidance beyond the boundary of Permitted Installation;

j) confirm though the provision of an odour model, as agreed by Condition 2.8.6, that the odour emissions at the site boundary and sensitive receptors are below the 1.5 OUE/m^3 significance criterion in the SEPA Odour Guidance beyond the boundary of Permitted Installation;

k) confirm through a programme of monitoring, as agreed by Condition 2.8.5, that the specific noise levels of the facility (dB $L_{Aeq,Tr}$) does not exceed those predicted at the identified receptors in report AAc/256683-32/003/ISSUE; and

l) confirm the time required to achieve full burn out of waste when the incinerator is shutting down.

2.9.3 For the period of any Commissioning the Operator shall submit a monthly report containing a summary of:

a) the Commissioning undertaken during the preceding month, the phase of Commissioning this relates to and any associated Commissioning ELVs agreed in response to Condition 2.8.4;

b) an update of the detailed Commissioning Plan required by Condition 2.8.3;

c) details of all tests carried out under Condition 2.9.2 during the preceding month;

d) the results of any such tests received during the preceding month;

e) the justification for any delays from the dates notified under Condition 2.8.3 b);

f) where appropriate, confirmation that the criteria detailed in the notification required by Condition 2.8.3 b) have been met; and

g) notification of the time and date when the specific phase of commissioning is expected to change, or has already changed during the preceding month, to confirm which ELVs specified in Condition 2.9.2 e) apply.

2.9.4 Notwithstanding any other condition in this Permit, should any test required by Condition 2.9.2 indicate that the conditions of this Permit have not or cannot be complied with; the Operator shall cease carrying on that part of the Commissioning which is the subject of the test, until either:

a) SEPA has given written permission for said part of the Commissioning to continue; or

b) the Operator has proposed in writing to SEPA remedial action to ensure compliance with the conditions of this Permit;

(i) those actions have been agreed with SEPA in writing; and

(ii) those actions have been implemented.

2.9.5 Where Condition 2.9.4 applies, the Operator shall notify SEPA within 24 hours. Said notification shall include the following information:

a) Time and date that Commissioning was ceased;

b) Identification of the reason why Commissioning was ceased;

c) Proposals to restore compliance with the Permit; and

d) An expected timescale for implementation of the proposals identified in 2.9.5 c).

2.9.6 Within one month of Cessation of Commissioning, the Operator shall prepare and submit to SEPA a written report which demonstrates that all of the conditions of the permit can be complied with in full.

2.10 Start-up and Shut-down

2.10.1 By 3 months prior to Commissioning of the Installation or part thereof, the Operator shall prepare, implement and maintain a plan ("the Start-up and Shut-down Plan") setting out the necessary steps to be taken by the Operator prior to start-up or shut-down of operations of the Permitted Installation, or part thereof, to ensure that all appropriate preventative measures are taken against pollution and that no significant pollution is caused.

2.10.2 At least every 2 years the Operator shall review the Start-up and Shut-down Plan required under Condition 2.10.1. Each review of the plan shall be recorded and where the Operator makes any revisions to the plan, these revisions shall be recorded.

2.11 De-commissioning

2.11.1 By 3 months after the first operation of the Installation, the Operator shall prepare and maintain a plan ("the De-commissioning Plan") for the de-commissioning of the Permitted Installation. The De-commissioning Plan shall set out the steps to be taken by the Operator after final cessation of the Permitted Activities.

2.11.2 The Operator shall notify SEPA in writing of its intention to cease the Permitted Activities, or any part thereof, for any period exceeding 12 months, no later than one month prior to the proposed date of cessation.

2.11.3 The Operator shall implement the De-commissioning Plan on final cessation of the Permitted Activities or any part thereof.

2.11.4 The Operator shall review, record and, where necessary, update the De-commissioning Plan:

a) at least every 4 years; and

b) where the Operator plans to make a substantial change in the extent or nature of the Permitted Installation.

2.12 Technical Competence and Staffing

2.12.1 All staff or persons engaged in carrying on the Permitted Activities shall be provided with adequate professional and technical development; training and written operating instructions to enable them to carry on their duties, and to ensure they are fully conversant with those aspects of the Permit Conditions which are relevant to those duties.

2.12.2 The Operator shall maintain a record of the skills and training requirements for each job and shall keep records of all relevant training.

2.12.3 The Permitted Installation shall be managed and supervised by a designated technically competent person to ensure that the conditions of the Permit are complied with.

2.12.4 The Operator shall inform SEPA in writing of all persons, and their qualifications, engaged in the operation or management of the Permitted Installation who are designated as technically competent.

2.12.5 Where the Operator or Another Relevant Person is convicted of an offence prescribed under section 74(6) of the Environmental Protection Act (EPA) 1990 for the purposes of section 74(3)(a) of EPA 1990 the Operator shall notify SEPA within 7 days of the conviction, whether or not the conviction is subsequently appealed.

2.12.6 The Operator shall notify SEPA within 7 days of any changes to the designated technically competent persons identified in Condition 2.12.4 and required by Condition 2.12.3.

2.13 Financial Provision

2.13.1 The Operator shall ensure that the financial provision as required by Regulation 18(4)(b) of the Regulations is maintained until the Permit is surrendered.

2.13.2 No later than three months prior to a proposed change to any material particular of the financial provision set in place under Condition 2.13.1, the Operator shall notify SEPA of the details of that proposed change.

2.13.3 For the purposes of Condition 2.13.2, material particulars of the financial provision used to satisfy Condition 2.13.1 shall include but not be limited to:

a) The provider of the financial instrument;

b) The type and form of financial provision; and

c) A change in any condition in relation to the financial provision including its determined value

2.13.4 The Operator shall not proceed with any proposed change to the financial provision until they have received agreement in writing from SEPA.

Table 2.1: Recording, Reporting and Notification Requirements

Required by Condition 2.2.5 and 2.3.1

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Primary and deputy point of contact with SEPA	2.1.1 2.1.2	Without delay where there is a change of contact	As right	Within 4 weeks of date of Permit
Systems or procedures used to demonstrate compliance with a Condition of this Permit	2.1.4	As determined by variations, reviews and consolidation of permit	2 months prior to Commissioning	NA
Non-operation during any relevant reporting period in Table 2.1	2.3.3	As required	As right	Within 1 month of end of the reporting period concerned
Waste Data Returns	2.4.1	Every 3 months 28 days from the end of each quarter	As right	First date of 28 January, 28 April, 28 July or 28 October from Commencement of Commissioning
Annual Report	2.4.2	Annually by 31 January each year	As right	31 January following First Operation
Incident initial report	2.5.5	N/A	As right	By next working day after identification of the Incident
Incident investigation report	2.5.6	N/A	As right	Within 14 days of incident date unless otherwise agreed in writing with SEPA
Incident Prevention and Mitigation Plan and review thereof	2.5.7 and 2.5.8	2 years	3 months prior to Commissioning	N/A
Resource utilisation systematic assessment and review and summary report of summary of raw material consumption efficiency / waste minimisation projects	2.6.3	4 years	Annually from first operation	Every 4 years from issue date of permit
Heat and Power Plan	2.7.2	Annually by 31 January each year	As right	1 month from the cessation of commissioning and thereafter annually by 31 January

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Non-compliance with thermal treatment of waste targets in Condition 2.7.4	2.7.5	Single report	As right	3 months prior to deadline required by Condition 2.7.4
Construction and Commissioning Plan	2.8.2	Every 3 months	As right	By 2 months from permit issue and every 3 months thereafter until the commencement of commissioning.
Detailed Commissioning Plan	2.8.3	Every month	As right	2 months prior to Commencement of Commissioning and then monthly as required by Condition 2.9.3
Report on proposals for Commissioning ELVs	2.8.4	Single report	As right	1 month prior to Commencement of Commissioning
Noise Assessment Methodology	2.8.5	Single report	As right	1 month prior to Commencement of Commissioning
Odour Modelling Method Statement	2.8.6	Single report	As right	1 month prior to Commencement of Commissioning
Groundwater borehole and trial pit (location with design and construction details) as part of soil and groundwater monitoring plan (for whole site)	2.8.7	Single report	As right	1 month prior to first introduction of chemicals, fuels or other raw materials or wastes
Borehole and trial pit construction & soil sample collection	2.8.8	Single report	As right	1 month prior to first introduction of chemicals, fuels or other raw materials or wastes
Borehole and trial pit construction report & sampling log	2.8.9	Single report	As right	1 month after completion of the boreholes and trial pits required by Condition 2.8.7 & 2.8.8

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Groundwater and soils monitoring assessment	2.8.10	Single report	As right	1 months prior to first introduction of chemicals, fuels or other raw materials or wastes
Design features necessary to ensure compliance	2.8.11	Single report	As right	1 month prior to Commencement of Commissioning
Compliance methodology report to verify minimum temperature, residence time and oxygen requirements; confirm optimal position for SNCR dosing points and confirm sufficient monitoring ports	2.8.12	Single report	As right	1 month prior to Commencement of Commissioning
Report on methodology to confirm gross electrical efficiency at full load during commissioning	2.8.13	Single report	As right	1 months prior to Commencement of Commissioning
Report on proposals for mercury monitoring to meet requirements of BAT 4	2.8.14	Single report	As right	2 months prior to Commencement of Commissioning
Report on proposals for sampling of dioxins and furans and dioxin-like PCBs to meet requirements of BAT 4	2.8.15	Single report	As right	2 months prior to Commencement of Commissioning
Accelerated start up sampling and testing of Incinerator Bottom Ash Procedure	2.8.16	Single report	As right	2 months prior to Commencement of Commissioning
Commissioning progress report	2.9.3	Monthly during Commissioning	As right	One month after Commencement of Commissioning and monthly thereafter within 1 week of the end of each month
Commissioning condition 2.9.4 notification that permit conditions cannot be complied with	2.9.5	As required	As right	Within 24 hours

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Final Commissioning report	2.9.6	N/A	As right	Within 1 month of Cessation of Commissioning
Start-up and Shut-down Plan	2.10.1 & 2.10.2	2 years	3 months prior to Commissioning	N/A
Decommissioning Plan	2.11.1 & 2.11.4	4 years	3 months after completion of Commissioning	N/A
Notification of Permanent cessation of Permitted Activities	2.11.2	N/A	As right	1 month prior to cessation
Skills and training requirements	2.12.2	As required	3 months prior to Commissioning	N/A
Persons engaged in the operation or management of the installation	2.12.4	As required	As right	Prior to First Operation
Conviction of a Relevant Offence	2.12.5	As required	As right	Notification within 7 days of conviction
Notification of change in designated technically competent person(s)	2.12.6	As required	As right	Within 7 days of change
Notification of proposed change to financial provision	2.13.2	As required	As right	3 months prior to change
Systematic noise assessment and record of action taken	3.1.1	2 years or whenever equipment with a noise output which could have an impact on noise sensitive receptors is replaced, installed or relocated	As right	Within 3 months of the cessation of commissioning and every two years thereafter
Noise and Vibration Management Plan	3.1.2 & 3.1.3	2 years or whenever there is a change which could impact emissions	As right	3 months prior to Commencement of Commissioning
Odour Management Plan	3.2.2 & 3.2.5	2 years or whenever there is a change which could impact emissions	As right	3 months prior to the first acceptance of waste at the Permitted Installation and every 2 years thereafter

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Olfactory surveys; the results of investigations and remedial action and the results of inspections and maintenance	3.2.4	As required	From first acceptance of waste at the Permitted Installation	N/A
Weighbridge records	3.3.2 & 3.3.3	Daily	From first acceptance of waste at the Permitted Installation	N/A
Pest control inspection and details of any subsequent treatment	3.5.2	Daily inspections and as required for subsequent treatment	From first acceptance of waste at the Permitted Installation	N/A
Dust Management Plan	3.6.2 & 3.6.3	2 years or whenever there is a change which could impact emissions	As right	3 months prior to the Commencement of Commissioning and every 2 years thereafter
Record of operational management and maintenance system	3.8.1	Every 4 years	Within 6 months of First Operation,	N/A
Maintenance records	3.8.2	As required	From date of First Operation	N/A
Quantity of waste incinerated	4.2.3	Daily & Monthly	From first acceptance of waste	See Condition 2.4.1
Monitoring, recording and where practicable inspection of waste deliveries	4.3.1 4.3.2	Each delivery	From first acceptance of waste	N/A
Refusal to accept waste load	4.3.3	As required	As right	Within14 days unless otherwise agreed in writing with SEPA
Quarantined waste	4.3.4	As required	From first acceptance of waste	N/A
Off-site waste disposal	4.3.5	As required	From first acceptance of waste	N/A
Notification of intention to bring on permitted waste type for the first time	Table 4.1	N/A	As right	Within 10 days prior to first receipt on to site

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Rate at which the waste is fed into the incineration plant.	5.2.1	Hourly	From first addition of waste during Commissioning	N/A
Oxygen and temperature monitoring records	5.2.2 b)	Continuous	From first addition of waste during Commissioning	N/A
Non-utilisation of heat recovery system	5.2.5	As required	From date of First operation	Within 1 month of end of first calendar quarter following First Operation
Recording and Reporting of periods of abnormal operation	5.4.3	As required	From first operation following cessation of commissioning	Without delay as per 2.5.5 and 2.5.6
OTNOC Management Plan	5.4.6 & 5.4.7	2 years or whenever there is a change which could impact emissions	As right	3 months prior to the Commencement of Commissioning and every 2 years thereafter
Recording and Reporting of periods of OTNOC	5.4.8	As required	From first operation following cessation of commissioning	Without delay as per 2.5.5 and 2.5.6
Recording of tests and data used in emission correction	6.1.4	As required	From issue date of permit	N/A
Mass emissions to air	6.1.12	Annually	From issue date of permit	31 January following First Operation
Information used to estimate mass emissions to air	6.1.13	Annually	From issue date of permit	N/A
Public reporting of CEM data on internet	6.1.14	Continuous	As right	From first operation following cessation of commissioning
Results of AST & QAL 2 Tests	6.2.7	Annually within 3 months of completion	As right	Within 6 months of the start of commissioning of the co-incineration plant

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
QAL 3 procedure and associated records	6.2.8	As required	One month prior to commissioning of the CEMS	N/A
Monitoring equipment calibration inaccuracies	6.2.10	As required	N/A	Within one day of identification
Continuous monitoring of emissions to air	6.3.1 & 6.3.9	Quarterly reporting within one month of the end of each quarter.	From first addition of waste during Commissioning	First date of 31 January, 30 April, 31 July or 31 October following first operation following cessation of commissioning
Operational details during periodic monitoring	6.4.1	As required	As right	As required
Periodic monitoring	6.4.5	Every 6 months	From first report received	Within six weeks of completion of each set of monitoring or within one month of the end of the relevant 6 month period, whichever is sooner
Programme of mercury monitoring to determine whether emissions are low & stable	6.6.1	Single report	As right	Within 6 months of First Operation
Programme of dioxin/furan and dioxin-like PCB monitoring to determine whether emissions are stable	6.6.2	Single report	As right	Within 6 months of First Operation
Report on proposals for the frequency of monitoring of odour at Emission point A2 when the incinerator is shut down.	6.6.3	Single report	As right	Within 3 months of First Operation
Emissions to water sampling plan	7.1.6	Annually for forthcoming reporting period 1 January to 31 December	N/A	3 months prior to First Operation
Mass emissions to water	7.1.7	Annually for the calendar year	As right	31 January from Commencement of Commissioning

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Information used to estimate mass emissions to water	7.1.10	Annually	As right	31 January from Commencement of Commissioning
Calibration and maintenance of AMS	7.2.3	As required	From issue date of permit	N/A
Electronic recording of continuously monitored effluent data	7.3.1	Continuous	From first addition of waste during Commissioning	First date of 31 January, 30 April, 31 July or 31 October following first operation following cessation of commissioning
Reporting of continuous effluent monitoring data	7.3.3	Quarterly reporting within one month of the end of each quarter.	From first addition of waste during Commissioning	First date of 31 January, 30 April, 31 July or 31 October following first operation following cessation of commissioning
Periodic effluent monitoring reports	7.4.1 & 7.4.2	As detailed in Table 7.2	From issue date of permit	Within one month of end of relevant reporting period
Surface Water, Drainage and Spillage Plan	7.5.2 & 7.5.5	4 years	Commencement of Commissioning	3 months prior to the Commencement of Commissioning and every 4 years thereafter
Site Drainage Plans	7.5.6	As required	From issue date of permit	N/A
Civils Inspection	7.5.9 & 7.5.10	Monthly	Commencement of Commissioning	N/A
Soil and groundwater incidents	7.6.2 & 7.6.3	As required	From issue date of permit	N/A
Assessment of measures to prevent emissions to soil and groundwater	7.6.4	4 years	From issue date of permit	3 months prior to the Commencement of Commissioning and every 4 years thereafter

Summary of information to be recorded/ reported	Condition	Review Frequency	Date first record due to be completed	Date reports due
Groundwater monitoring	7.6.5	5 years	Date	Within 1 year of date of issue of permit or as agreed in writing with SEPA
Soil monitoring	7.6.6	10 years	Date	Within 1 year of date of issue of permit or as agreed in writing with SEPA
Detailed methodology for groundwater and soil monitoring	7.6.7	As required	N/A	Within 1 month prior to the introduction of raw materials/waste and thereafter at least 6 months in advance of carrying out the monitoring
Preparation & Review of Residue management Plan	8.1.1 & 8.1.2	2 Years	From issue date of permit	3 months prior to the Commencement of Commissioning and every 2 years thereafter
TOC or LOI of bottom ash	8.1.5	Weekly for first 3 months of operation then quarterly	N/A	Within one month of the analysis being completed
Chemical composition of fly ash	8.1.6	Weekly for first 3 months of operation then quarterly	N/A	Within one month of the analysis being completed
Residue dispatches	8.1.7	Daily	From issue date of permit	N/A
Proposals for Environmental Monitoring Programme	9.1.1	Single Report	As right	3 months prior to the Commencement of Commissioning
Results of environmental monitoring	9.1.2	As detailed in Table 9.1	As right	6 weeks following completion of the monitoring
Periodic monitoring of emissions from standby generator	10.3.1 & 10.3.4	At the most frequent interval of a) after 1,500 hours of operation, or b) every 5 years	As right	As required

Table 2.2: Raw Materials

Required by Condition 2.6.5

Raw material, Energy or Fuel	Unit of Measurement
Water treatment chemicals for use in Boiler(s) speciated by chemical	(litres)
Flue Gas treatment dosing chemicals speciated by chemical	(m^3)
Water (from mains)	(m^3)
Water (harvested)	(m^3)
Fuel Oil	(m^3 and MWh)
Electricity (from National Grid)	MWhe
Electricity generated (parasitic loading)	MWhe
Electricity generated (exported)	MWhe
Total steam generated	MWhth
Total steam generated (parasitic loading) speciated by use	MWhth
Total steam generated (exported) speciated by use	MWhth

3 CONDITIONS APPLYING TO THE PERMITTED INSTALLATION AS A WHOLE

3.1 Noise and Vibration

3.1.1 Subject to Condition 3.1.2, at least every 2 years, or whenever any equipment with a noise output which could have an impact on noise sensitive receptors is replaced, installed or relocated, the Operator shall carry out a systematic assessment of noise and vibration emissions associated with the Permitted Activities, the purpose of which shall be to identify methods of preventing and reducing noise and vibration emissions. Each assessment, including any action taken, shall be recorded and reported.

3.1.2 No later than 3 months prior to the Commencement of Commissioning, the Operator shall prepare, implement, maintain and submit to SEPA a plan ("The noise and vibration management plan or NVMP"). The NVMP shall, set out the steps to be taken by the Operator to;

a) prevent and reduce emissions of noise and vibration at all times;

b) to ensure that Conditions 3.1.1, 3.1.3 and 3.1.4 are complied with; and

c) identify the measures in place to ensure that no significant noise and vibration pollution is caused.

3.1.3 At least every 2 years or whenever there is a change which could have an impact on Emissions of noise and vibration, the Operator shall review the NVMP required under Condition 3.1.2. Each review of this plan and any revisions shall be recorded and the revised NVMP shall be reported to SEPA.

3.1.4 Waste shall only be accepted at the Permitted Installation during the following hours, unless otherwise agreed in writing by SEPA:

Monday to Friday	07:00 hours to 19:00 hours
Saturday	07:00 hours to 13:00 hours

3.2 Odour Conditions

3.2.1 All emissions to air from the Permitted Installation shall be free from offensive odour, as perceived by an Authorised Person, outside the Site Boundary.

3.2.2 By 3 months prior to the first acceptance of waste for Commissioning of the Installation or part thereof, the Operator shall prepare, implement, maintain and submit to SEPA an Odour Management Plan ("OMP"). The OMP shall set out the steps to be taken by the Operator to prevent and reduce emissions of odour at all times and to ensure that Conditions 3.2.3 to 3.2.6 inclusive are complied with. Further guidance is provided in the SEPA Odour Guidance at www.sepa.org.uk.

3.2.3 The OMP shall be based on SEPA Odour Guidance and shall include as a minimum:

a) identification of those process operations which have the potential to be odorous;

b) identification of techniques to ensure all sources of potentially offensive odours are, as far as practicable, enclosed;

c) procedures for managing odour particularly when parts of the process are shutdown;

d) a methodology for undertaking an olfactory survey of the Permitted Installation daily with a site plan to identify locations for odour checks; and

e) procedures for investigation, recording and subsequent remedial action following odour complaints or detection of odour during olfactory surveys.

3.2.4 The Operator shall record:

a) the results of each olfactory survey; and

b) the results of each investigation and any remedial action undertaken in compliance with Condition 3.2.3e).

3.2.5 At least every 2 years, or whenever there is a change which could have an impact on emissions of odour, the Operator shall review the OMP required under Condition 3.2.1. Each review of this plan and any revisions shall be recorded and the revised OMP shall be reported to SEPA.

3.2.6 All doors and openings to the tipping hall and areas where odour is likely to be generated shall be kept closed at all times other than:

a) to allow entry and exit of vehicles and personnel; or

b) where fitted with a louvre to allow the ingress of air to maintain a negative pressure within the tipping hall.

3.3 Weighbridge

3.3.1 A calibrated weighbridge shall be provided at the permitted installation.

3.3.2 On arrival at site all waste loads shall be weighed at the weighbridge required by Condition 3.3.1 and a record of the weight maintained.

3.3.3 On exit from the site all waste loads shall be weighed at the weighbridge required by Condition 3.3.1 and a record of the weight maintained.

3.4 Roads and Traffic Control

3.4.1 To prevent vehicles queuing on the public highway, waiting areas shall be maintained for vehicles delivering waste to or removing waste from the Permitted Installation.

3.4.2 The Operator shall ensure that all roads and surfaces within the Permitted Installation are kept free from mud and other debris to the extent necessary to prevent fouling of the public highway.

3.5 Litter and Vermin

3.5.1 All operations shall be carried out to prevent and minimise the potential escape of litter from the Permitted Installation. Any litter lying within the Permitted Installation shall be removed on a daily basis.

3.5.2 All operations shall be carried out so as to minimise the potential presence of insects, birds and vermin. The Permitted Installation shall be inspected at least once per week for the presence of insects, birds or vermin, and a treatment programme shall be undertaken without delay to deal with any identified infestation. The results of each inspection and details of any subsequent treatment shall be recorded.

3.6 Dust Conditions

3.6.1 All operations shall be carried out to prevent and minimise the potential escape of dust from the Permitted Installation.

3.6.2 No later than 3 months prior to the Commencement of Commissioning the Operator shall implement and thereafter maintain a Dust Management Plan setting out the steps to be taken by the Operator to ensure that all appropriate measures are taken to prevent fugitive dust emissions from the site.

3.6.3 At least every 2 years, the Operator shall review the Dust Management Plan required by Condition 3.6.2. Each review of this plan shall be recorded and where the Operator revises the said plan, these revisions shall be recorded.

3.7 Burning

3.7.1 No waste shall be burnt within the Site Boundary except within the incineration plant as part of the Permitted Activities.

3.8 Environmental Management and Maintenance

3.8.1 The Operator shall define, record and implement such operational management and maintenance systems as are necessary for compliance with the Conditions of this Permit. The systems shall be subject to documented review at intervals of not more than 4 years.

3.8.2 All plant, instrumentation and buildings used in carrying on the Permitted Activities shall be properly maintained and the maintenance recorded.

3.8.3 The systems required to comply with Condition 3.8.1 shall include details showing how the maintenance required, whether under a scheme of planned maintenance or consequent to a breakdown, is to be organised to ensure that emissions of potentially polluting substances are prevented or, where that is not practicable, minimised

3.9 Sampling and Monitoring Facilities

3.9.1 Provisions for sampling measurement and monitoring at the Permitted Installation shall meet the requirements of BS EN 15259 and Environment Agency Technical Guidance Note M1.

3.9.2 Permanent means of access shall be provided to enable monitoring to be carried out in relation to the emission points specified in Table 6.1 in Schedule 6, Table 7.1 in Schedule 7 and Table 10.1 in Schedule 10.

4 CONDITIONS APPLYING TO WASTE RECEPTION, INSPECTION AND STORAGE

4.1 Permitted Types of Waste

4.1.1 Subject to any exclusions identified in Column 2 of Table 4.1 and Conditions 4.1.2 to 4.1.6 inclusive, no waste shall be accepted in the Permitted Installation other than the wastes specified in Table 4.1.

4.1.2 Notwithstanding Condition 4.1.1, no separately collected waste shall be mixed with any other waste or any material, to the extent that mixing would hamper further recycling.

4.1.3 Notwithstanding Condition 4.1.1, no separately collected waste capable of being recycled shall be incinerated.

4.1.4 Notwithstanding Condition 4.1.1, and as far as practicable, no waste containing non-ferrous metals or hard plastics shall be incinerated.

4.1.5 Notwithstanding Condition 4.1.1 and 4.1.4, subject to condition 4.1.6, the incineration of waste industrial and automotive batteries is prohibited.

4.1.6 Where permitted by Condition 4.1.1, the incineration of residues of any batteries that have undergone both treatment and recycling is not prohibited provided that the treatment and recycling:

a) used best available techniques, in terms of protection of health and the environment; and

b) complied, at a minimum with European Union legislation as regards health and safety and waste management.

4.2 Permitted Quantities of Waste

4.2.1 The maximum quantity of waste stored at the Permitted Installation (including waste awaiting dispatch elsewhere) shall not exceed 9500 tonnes. In the event that the maximum capacity of the storage facilities is reached, no further waste shall be accepted at the Permitted Installation until storage capacity becomes available.

4.2.2 The aggregate amount of the wastes specified in Condition 4.1.1 that may be incinerated in the Permitted Installation shall not exceed 150,000 tonnes in any calendar year and shall not exceed 23.01 tonnes in any one hour.

4.2.3 The Operator shall record the daily and monthly total, and individual, quantities of each waste specified in Table 4.1 that is incinerated in the Permitted Installation.

4.3 Waste Acceptance

4.3.1 The Permit Holder shall monitor and record all wastes and accompanying documentation entering the Permitted Installation to ensure that they are within the types/quantities permitted under the conditions of this permit.

4.3.2 Waste shall not be accepted onto the Permitted Installation unless, as a minimum, the information specified in Table 4.2 is recorded and, where practicable, the load visually inspected by a suitably trained member of staff and found to comply with the requirements of this Permit.

4.3.3 Where the Operator refuses any person permission to deposit waste at the Permitted Installation the Operator shall take all reasonable steps to obtain and record, the following details: name and address of person; registration number of vehicle; quantity and type of waste; and date and time of refusal. The details of the refusal shall be reported.

4.3.4 Accepted Wastes which are subsequently found not to conform to Permit conditions, or segregated portions of waste not permitted to undergo incineration, shall be immediately removed to the Quarantine Area required by Condition 4.4.5 pending their removal from the Permitted Installation. The 6-figure EWC number, type and quantity of any waste sent elsewhere for disposal or recovery shall be recorded.

4.3.5 Where waste is accepted and it is subsequently not possible to incinerate that waste due to failure of the incineration plant, and where the Operator removes that waste from the Permitted Installation, the 6-figure EWC number, the type and quantity of the waste and the final destination of the waste shall be recorded.

4.4 Storage of Wastes for Incineration

4.4.1 Each waste storage area or tank shall be clearly labelled. The label shall identify the material permitted to be stored in the area, maximum quantity and any hazardous properties. This information shall be legible from outwith the storage area.

4.4.2 No waste shall be transferred to the waste tanks or storage areas until it has been determined there is sufficient storage capacity for the waste.

4.4.3 The unloading of vehicles delivering wastes shall take place only within a designated area provided with impermeable hardstanding served by a drainage system that allows the isolation of any spillage from the waste, or rainwater contaminated by the waste.

4.4.4 All areas used to store waste, including residues from the incineration plant, shall be constructed in such a way that release of pollutants is prevented, and shall be covered to prevent the ingress of rainwater.

4.4.5 A designated facility/ compound (“the Quarantine Area”) shall be provided for the storage of any wastes found on the Permitted Installation that are not authorised by this Permit.

4.4.6 All storage areas and associated internal and external infrastructure: walkways, floors, railings, doors, walls, ductwork, equipment etc. shall be subject to planned cleaning according to a Hygiene Plan prepared, recorded and implemented at the Permitted Installation.

4.4.7 Degradable waste shall be managed within the waste storage area/ bunker in such a way as to minimise the time in which any such waste is stored prior to Incineration.

4.4.8 For the avoidance of doubt, no waste awaiting incineration shall be stored outside the Waste Reception Area.

Table 4.1: Permitted Waste Types

Required by Condition 4.1.1

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**	
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**	
02 01 02	Animal-tissue waste	SEPA to be notified 10 days prior to first receipt on to site.
02 01 03	Plant-tissue waste	
02 01 04	Waste plastics (except packaging)	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
02 01 07	Wastes from forestry	SEPA to be notified 10 days prior to first receipt on to site
02 01 09	Agrochemical waste other than those mentioned in 02 01 08	
02 01 99	Wastes not otherwise specified	
02 02	**Wastes from the preparation and processing of meat, fish and other foods of animal origin**	
02 02 02	Animal-tissue waste	SEPA to be notified 10 days prior to first receipt on to site
02 02 03	Materials unsuitable for consumption or processing	
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation**	
02 03 04	Materials unsuitable for consumption or processing	SEPA to be notified 10 days prior to first receipt on to site
02 03 99	Wastes not otherwise specified	
02 04	**Wastes from sugar processing**	
02 04 99	Wastes not otherwise specified	SEPA to be notified 10 days prior to first receipt on to site
02 05	**Wastes from the dairy products industry**	

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
02 05 01	Materials unsuitable for consumption or processing	SEPA to be notified 10 days prior to first receipt on to site
02 05 99	Wastes not otherwise specified	
02 06	**Wastes from the baking and confectionery industry**	
02 06 01	Materials unsuitable for consumption or processing	SEPA to be notified 10 days prior to first receipt on to site
02 06 02	wastes from preserving agents	
02 06 99	waste not otherwise specified	
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**	
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials	SEPA to be notified 10 days prior to first receipt on to site
02 07 02	Wastes from spirits distillation	
02 07 04	Materials unsuitable for consumption or processing	SEPA to be notified 10 days prior to first receipt on to site
02 07 99	Waste not otherwise specified	
03	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**	
03 01	**Waste from wood processing and the production of panels and furniture**	
03 01 01	Waste bark and cork	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04	
03 01 99	Wastes not otherwise specified	
03 03	**Wastes from pulp, paper and cardboard production and processing**	
03 03 01	Waste bark and wood	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
03 03 07	Mechanically separated rejects from pulping of waste paper and cardboard	
03 03 08	Waste from sorting of paper and cardboard destined for recycling	

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
03 03 99	wastes not otherwise specified	
04	**Wastes from the leather and fur industry and textile industries**	
04 02	**Wastes from the textile industry**	
04 02 09	Waste from composite materials (impregnated textile, elastomer, plastomer)	SEPA to be notified 10 days prior to first receipt on to site
04 02 10	Organic matter from natural products (eg grease and wax)	
04 02 21	Waste from unprocessed textile fibres	SEPA to be notified 10 days prior to first receipt on to site
04 02 22	Waste from processed textile fibres	
15	**Waste packaging, absorbants, 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	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
15 01 02	Plastic packaging	
15 01 03	Wooden packaging	
15 01 05	Composite packaging	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
15 01 06	Mixed packaging	
15 01 09	Textile packaging	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
15 02	**Absorbents, filter materials, wiping cloths and protective clothing**	
15 02 03	Absorbants, filter materials, wiping cloths, protective clothing other than those mentioned in 15 02 02	SEPA to be notified 10 days prior to first receipt on to site
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**	
17 02	**Wood, glass and plastic**	

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
17 02 01	Wood	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
17 02 03	Plastic	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
18	**WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)**	
18 01	**Wastes from natal care, diagnosis, treatment or prevention of disease in humans**	
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection	SEPA to be notified 10 days prior to first receipt on to site
18 02	**Wastes from research, diagnosis, treatment or prevention of disease involving animals**	
18 02 03	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection	SEPA to be notified 10 days prior to first receipt on to site
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**	
19 02	**Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**	
19 02 03	premixed wastes composed only of non-hazardous wastes	SEPA to be notified 10 days prior to first receipt on to site
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09	
19 05	**Wastes from aerobic treatment of solid wastes**	
19 05 01	Non-composted fraction of animal and vegetable waste	SEPA to be notified 10 days prior to first receipt on to site
19 05 99	wastes not otherwise specified	

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
19 06	**Wastes from anaerobic treatment of waste**	
19 06 04	Digestate from anaerobic treatment of municipal waste	Only when the waste is not PAS100 or PAS110 Compliant and SEPA to be notified 10 days prior to first receipt on to site
19 06 99	wastes not otherwise specified	
19 08	**Wastes from waste water treatment plants not otherwise specified**	
19 08 01	Screenings	SEPA to be notified 10 days prior to first receipt on to site
19 09	**Wastes from the preparation of water intended for human consumption or water for industrial use**	
19 09 01	solid waste from primary filtration and screenings	SEPA to be notified 10 days prior to first receipt on to site
19 09 04	spent activated carbon	
19 09 05	saturated or spent ion exchange resins	
19 09 99	wastes not otherwise specified	
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**	
19 12 01	Paper and cardboard	Only where material is not capable of being directly recycled and SEPA to be notified 10 days prior to first receipt on to site
19 12 04	Plastic and rubber	SEPA to be notified 10 days prior to first receipt on to site
19 12 07	Wood other than that mentioned in 19 12 06	Only where material is not capable of being directly recycled SEPA to be notified 10 days prior to first receipt on to site
19 12 08	Textiles	SEPA to be notified 10 days prior to first receipt on to site
19 12 10	Combustible waste (refuse derived fuel)	None

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	None
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**	
20 01	**Separately collected fractions (except 15 01)**	
20 01 01	Paper and cardboard	Only where material is not capable of being directly recycled
20 01 08	Biodegradable kitchen and canteen waste	Only to be processed where the waste is disallowed from being processed in a PAS 100 or PAS110 compliant facility
20 01 10	Clothes	Only where material is not capable of being directly recycled
20 01 11	Textiles	Only where material is not capable of being directly recycled
20 01 32	medicines other than those mentioned in 20 01 31	Only where material is not capable of being directly recycled
20 01 38	Wood other than that mentioned in 20 01 37	Only where material is not capable of being directly recycled
20 01 39	Plastics	Only where material is not capable of being directly recycled
20 01 41	wastes from chimney sweeping	Only where material is not capable of being directly recycled
20 01 99	other fractions not otherwise specified	Only where material is not capable of being directly recycled
20 02	**Garden and park wastes (including cemetery waste)**	

Wastes permitted to be incinerated		
EWC index number (six figure code)	**Description including physical form**	**Limitations and Exclusions**
20 02 01	Bio-degradable waste	Only to be processed where the waste is disallowed from being processed in a PAS 100 or PAS110 compliant facility
20 02 03	other non-biodegradable wastes	Only to be processed where the waste is disallowed from being processed in a PAS 100 or PAS110 compliant facility
20 03	**Other municipal wastes**	
20 03 01	Mixed municipal waste	Subject to being collected as part of source segregated collection
20 03 02	Waste from markets	None
20 03 03	Street cleaning residues	None
20 03 07	Bulky wastes	None
20 03 99	Municipal wastes not otherwise specified	None

Table 4.2: Waste Delivery Record

Required by Condition 4.3.2

Information required to be kept for each delivery of waste for Incineration
The origin(s) of the waste for Incineration comprising the delivery, including the name(s) and address(es) of the waste generator(s)
The identity of the person who transported the delivery to the premises, and the registration number of the vehicle used to make the delivery
The date and time of the delivery of the waste
The quantity of each type of waste (in tonnes) and the 6 figure EWC number for each type of waste in the delivery

5 CONDITIONS APPLYING TO THE DESIGN, OPERATION AND MAINTENANCE OF THE INCINERATION PLANT

5.1 Process Design, Operation and Maintenance

5.1.1 The incineration plant shall be designed, operated and maintained such that:

a) the unburned organic carbon present in the slag and bottom ashes is reduced to a minimum, and in any case such that the Total Organic Carbon (TOC) content of slag and bottom ashes is less than 3%;

b) an oxygen concentration of not less than 3% v/v (expressed in terms of wet gas) is maintained in the flue gases exiting the secondary combustion zone;

c) the temperature of the flue gases exiting the secondary combustion zone is maintained at not less than 850°C;

d) the gas residence time in the secondary combustion zone is not less than 2 seconds, even under the most unfavourable operating conditions anticipated;

e) no waste shall be fed to the incineration plant unless the temperature in the secondary combustion zone has reached 850°C; and,

f) no waste shall be fed to the incineration plant unless the waste streams have been mixed to ensure a homogenous feed.

5.1.2 The combustion chamber of the incineration plant shall be equipped with at least 1 auxiliary burner for start-up, shutdown and for maintaining combustion gas temperature.

5.1.3 During start up or shut-down or when the temperature of the combustion gas falls below the minimum temperature required by Condition 5.1.1 c) the auxiliary burners shall not be fed with fuels which can cause higher emissions than those resulting from the burning of low sulphur gas oil to BS 2869 part 2, liquefied gas or natural gas.

5.2 Monitoring and Recording Requirements

5.2.1 The Operator shall hourly record the rate at which the waste is fed into the incineration plant.

5.2.2 Whenever any waste is burnt in the incineration plant, the Operator shall continuously measure and record:

a) the concentration of oxygen in the flue gases exiting the secondary combustion zone at the boiler outlet after the economiser; and

b) the temperature of the flue gases exiting the secondary combustion zone at the boiler first pass outlet.

5.2.3 The measured value of each concentration or parameter required to be continuously monitored by Condition 5.2.2 shall be electronically recorded at least once during each period of 30 seconds, and the time and date of each recorded measured value shall also be recorded.

5.2.4 The electronic recording system required by Condition b) shall incorporate an appropriate means of alerting the Operator of any potential non-compliance with Conditions 5.1.1b) or 5.1.1c) or any of the ELVs applying to continuously monitored emissions specified in Table 6.2 and Table 6.2a.

5.2.5 A record shall be kept of all times when the incineration plant is operating and the heat recovery system is not utilised with the reason for the non-utilisation. The record shall be reported quarterly.

5.3 Interlocks, Control Systems and Alarms

5.3.1 At least one of the auxiliary burners specified in Condition 5.1.2 shall automatically switch on to prevent the temperature of combustion gases, after the last injection of combustion air, exiting from the secondary combustion zone falling below the temperature specified in Condition 5.1.1 c) when waste is being burned.

5.3.2 An automatic system shall be provided, maintained and tested to prevent waste feed to the incineration plant under the following situations:

a) at start up, until the temperature specified in Condition 5.1.1 c) has been reached;

b) whenever the temperature specified in Condition 5.1.1 c) is no longer maintained; or

c) whenever the Continuous Emissions Monitoring Systems (CEMS) required by Condition 6.1.3 show that the corresponding emission limit value (ELV) is being exceeded due to a disturbance or failure of the abatement system.

5.3.3 Controls and interlocks shall be provided, maintained and tested to ensure that, as soon as practicable, no waste can be fed to the incineration plant if:

a) any fan supplying combustion air to the incineration plant fails, or is not operating at the appropriate rate;

b) the induced draught fan fails, or is not operating at the appropriate rate;

c) the oxygen concentration of the flue gases exiting the secondary combustion zone is less than the minimum required by Condition 5.1.1 b);

d) the oxygen concentration monitoring required by Condition 5.2.2 a) is not taking place;

e) the temperature monitoring required by Condition 5.2.2 b) is not taking place;

f) any of the continuous monitoring devices required by Condition 6.1.3 show that the corresponding emission limit value is being exceeded;

g) the continuous monitoring required by Condition 6.1.3 is not taking place;

h) there is a stoppage, disturbance or failure of an abatement device that may result in any emission limit value specified in this permit being exceeded; or

i) there is a loss of electrical power to the incineration process, or to any of its safety systems.

5.4 Abnormal Operation, Breakdowns and Other Than Normal Operating Conditions (OTNOC)

5.4.1 In the event of a Breakdown, the Operator shall reduce or close down operations, as soon as practicable until either

a) the operator has established that the breakdown has not caused a breach of a condition of this Permit; or

b) operation in compliance with the Permit can be restored.

5.4.2 Without prejudice to Condition 5.3.2 (c), In the event of Abnormal Operation, the Operator shall restore normal operation of the failed equipment, or replace the failed equipment as rapidly as possible and shall, under no circumstances, continue to incinerate waste for an uninterrupted period of more than four hours.

5.4.3 In the event of any periods of Abnormal Operation, the Operator shall record in writing and report to SEPA the information specified below:

a) the time and date the period of the Abnormal Operation began;

b) the cause of the period of Abnormal Operation;

c) justification of why the cause of the period of Abnormal Operation was unavoidable;

d) the nature, timing and consequences of all work undertaken by the Operator for the purpose of bringing the period of Abnormal Operation to an end;

e) the time and date the period of Abnormal Operation was brought to an end, and whether this was achieved by shutting down the incineration plant;

f) the results of emission monitoring in comparison with Table 6.2a during the period of Abnormal Operation; and,

g) whether the OTNOC Management Plan required by Condition 5.4.6 requires updating as a result of the period of Abnormal Operation.

5.4.4 The cumulative duration of Abnormal Operation shall not exceed 60 hours in any one year.

5.4.5 In the event of a Breakdown or Abnormal Operation the Emission Limit Values (ELVs) for Emissions to Air in Table 6.2a in Schedule 6 shall apply.

5.4.6 No later than 3 months prior to the Commencement of Commissioning, the operator shall prepare, implement, maintain and submit to SEPA a risk-based OTNOC Management Plan (the “OTNOC” Management Plan”) setting out the steps to be taken by the Operator to reduce emissions to air and water during OTNOC. The OTNOC Management Plan shall include the following:

a) a list of potential OTNOC scenarios, including failure of critical equipment start up and shutdown periods when no waste is burned, their root causes and the potential consequences;

b) details of appropriate design of critical equipment identified in Condition 5.4.6 (a);

c) details of the preventative maintenance plan for the relevant systems/critical equipment identified in Condition 5.4.6 (a);

d) the proposed techniques to reduce the frequency, duration and associated emissions to air, water and/or soil from the occurrence of OTNOC;

e) monitoring and recording of emissions caused by OTNOC and associated circumstances;

f) periodic assessment of the emissions occurring during OTNOC in terms of frequency of events, duration, amount of pollutants emitted and implementation of corrective actions; and

g) details of how the OTNOC Management Plan is integrated into the Environmental Management System for the Permitted Installation.

5.4.7 At least every 2 years, or whenever there is a change which could have an impact on Emissions to air or water during OTNOC, the Operator shall review the OTNOC Management Plan required by Condition 5.4.6. Each review of this plan and any revisions shall be recorded and the revised OTNOC management plan shall be reported to SEPA.

5.4.8 No later than 3 months prior to the Commencement of Commissioning, the Operator shall submit a report to SEPA to confirm the proposals for monitoring of emissions to air during the ~~(~~OTNOC) identified in the OTNOC Management Plan required under Condition 5.4.6 to meet the requirements of BAT 5 in the WI BATCs.

6 CONDITIONS APPLYING TO EMISSIONS TO AIR FROM THE INCINERATION PLANT

6.1 Air Emission Conditions and Limits

6.1.1 The emissions to air specified in Table 6.2 and Table 6.2a, shall only be permitted from the emission locations specified in Table 6.1 and shall comply with the criteria in Conditions 6.1.6 to 6.1.11 and Condition 6.1.14.

6.1.2 Any percentage-based ELV-specified in Table 6.2 or Table 6.2a shall be based on the averaging period and time span specified in Table 6.2 and Table 6.2a~~,~~ where the percentage is the percentage of averaging periods within the time span that must not exceed the percentage-based ELV. Compliance with the ELVs specified in Table 6.2 and Table 6.2a shall be assessed as described in Conditions 6.3.1 to 6.3.8 and Conditions 6.4.1 to 6.4.5.

6.1.3 The Operator shall carry out continuous I monitoring and periodic monitoring (also known as spot sampling, SS) of Emissions of the parameters specified in Table 6.2, Table 6.2a and Table 6.3, at the sampling location(s) specified in Table 6.1, and subject to the requirements for monitoring specified in Table 6.2, Table 6.2a and Table 6.3.

6.1.4 For any parameter specified in Table 6.2 or Table 6.2a, other than smoke and odour, all results of monitoring carried out under Condition 6.1.3 shall be corrected to the reference conditions 273.15K, 101.3 kPa, and at the relevant oxygen concentration specified in Condition 6.1.5. The results of all tests and data used to correct the monitoring results to the reference condition specified in this Condition shall be recorded.

6.1.5 For the purposes of Condition 6.1.4, the relevant oxygen concentration shall be expressed as 11%v/v, dry gas.

6.1.6 No continuously monitored daily average concentration in gaseous releases other than carbon monoxide, calculated and recorded as required by Conditions 6.3.1 to 6.3.8, shall exceed the daily average ELV for that parameter in Table 6.2.

6.1.7 At least 97% of continuously monitored daily average concentration of carbon monoxide in gaseous releases over the year, calculated and recorded as required by Conditions 6.3.1 to 6.3.8, shall not exceed the daily average ELV for that parameter in Table 6.2.

6.1.8 Subject to Condition 5.4.5, the reported values for the continuously monitored concentrations of those substances in Table 6.2 in gaseous releases, other than carbon monoxide, calculated and recorded as required by Conditions 6.3.1 to 6.3.8, shall comply with at least one of the criteria stipulated below:

a) Over the calendar year, no half hourly average reported values shall exceed the relevant ELV stipulated in Table 6.2; or

b) Over the calendar year, 97% of the half hourly average reported values shall not exceed the relevant ELV stipulated in Table 6.2.

6.1.9 Subject to Condition 5.4.5, the reported values for the continuously monitored concentration of carbon monoxide in gaseous releases, calculated and recorded as required by Conditions 6.3.1 to 6.3.8, shall comply with at least one of the criteria stipulated below in any 24 hour period:

a) no half hourly average reported values shall exceed the relevant ELV stipulated in Table 6.2; or

b) 95% of the 10 minute average reported values shall not exceed the relevant ELV stipulated in Table 6.2.

6.1.10 Subject to Condition 5.4.5, all reported values for the concentration of those periodically monitored substances in gaseous releases listed in Table 6.2, calculated and recorded as required by Condition 6.4.1, shall not exceed the relevant ELV stipulated in Table 6.2.

6.1.11 Emissions to air from the stack A1 and A2 other than water vapour or steam shall be colourless and free from persistent mist, fumes and droplets.

6.1.12 The Operator shall record and report the mass emission results as kg of pollutant per tonne waste incinerated and kg of pollutant per year for the parameters of the combined stack emissions specified in Table 6.2. The methods used shall make reference to the guidance provided in the SPRI section of www.sepa.org.uk and shall be agreed in writing with SEPA. This information shall be reported in a format agreed in writing with SEPA.

6.1.13 Information used to estimate mass emissions in compliance with Condition 6.1.12 shall be recorded.

6.1.14 From the date of first operation continuous emissions monitoring data shall be made publicly available on a section of the Operators website in a format and at a frequency agreed by SEPA.

6.2 Monitoring Requirements and Standards

6.2.1 The device, or devices, employed for the continuous monitoring of any substance listed in Table 6.2 shall have a 95% confidence interval that, for a single measured result, does not exceed the relevant percentage of the ELV specified in Annex VI Part 6 Section 1.3 of IED or as otherwise agreed with SEPA;

6.2.2 Continuous Emissions Monitoring Systems (CEMS) shall be certified in accordance with BS EN 15267-3 and QAL1 of BS EN 14181 and associated Data Handling Acquisition and Handling Systems (DAHS) shall meet the requirements of and be operated in accordance with BS EN 17255 parts 1 & 2 and within 18 months of publication, with BS EN 17255 part 3.

6.2.3 All new CEMS shall have certification as required by Condition 6.2.2 and have a certified range which is not greater than 1.5 times the daily ELV, or as otherwise agreed in writing with SEPA.

6.2.4 In compliance with BS EN 14181, CEMS employed for monitoring of any substance listed in Table 6.2 shall:

a) be calibrated at least every 5 years by parallel measurements using the current Comité Européen de Normalisation (CEN) standard (“the QAL2 Test”); or

b) where no CEN standard is available (and only in that circumstance): be calibrated using the relevant default calibration method given in Table 6.2.

6.2.5 At least once per year, the Operator shall undertake an appropriate series of tests on all CEMS in compliance with the Annual Surveillance Test (AST) requirements of BS EN 14181.

6.2.6 The tests required by conditions 6.2.4 and 6.2.5 shall demonstrate the satisfactory operation of the CEMS and confirm that the relevant CEMS for each substance specified in Table 6.2 complies with the relevant confidence levels referred to in Condition 6.2.1.

6.2.7 The results of the QAL2 Test referred to in Condition 6.2.4 and the AST referred to in Condition 6.2.5 shall be recorded and reported, in writing, to SEPA.

6.2.8 The Operator shall, in compliance with QAL3 of BS EN 14181, have a documented procedure describing the regular checks and maintenance of the CEMS. The procedure shall describe the requirements for:

a) measuring zero and span values ("zero and span checks");

b) plotting these values by use of control charts; and

c) using the control charts to determine whether the CEMS has gone out with control chart tolerance limits as specified in BS EN 15267-3, and whether this is caused by a random or systematic error.

6.2.9 Data from the zero and span checks referred to in Condition 6.2.8 a) shall be maintained by the Operator. Should the control chart tolerance limits referred to in Condition 6.2.8 c) be exceeded, this shall trigger an alarm in a control room or other appropriate location as agreed with SEPA. If the control chart tolerance limit is exceeded the CEMS shall be regarded as out of operation until the cause is investigated and rectified.

6.2.10 The Operator shall record all maintenance and calibration work carried out on any CEMS required by Conditions 6.2.4 to 6.2.9. If any calibration work identifies that there has been an under or over estimation of any emissions greater than the confidence level referred to in Condition 6.2.1 for that parameter listed in Table 6.2, or that there has been a failure of the QAL2 or AST, this fact shall be notified to SEPA by first class post, email or fax by the next working day after the identification.

6.2.11 Reporting of calibration work carried out on the CEMS shall be carried out in accordance with the requirements of the standards specified in BS EN ISO/IEC 17025 unless otherwise agreed in writing with SEPA.

6.2.12 The technique employed for the periodic monitoring of any substance listed in Table 6.2 shall be:

a) the current CEN standard;

b) where no CEN standard is available (and only in that circumstance): the default method for that substance as appropriate; or

c) alternative methods may be used provided the Operator can demonstrate equivalence to the relevant CEN standard by using CEN/TS 14793.

6.2.13 Monitoring personnel, equipment and organisations shall have a quality system accredited to BS EN ISO/IEC 17025 and laboratory analysis shall be carried out by an organisation accredited to ISO/IEC 17025 unless otherwise agreed in writing with SEPA.

6.3 Data Handling and Reporting – Continuous Emissions Monitoring

6.3.1 The measured value of each concentration or parameter required to be continuously monitored by Condition 6.1.3 shall be electronically recorded as required by Table 6.2 and the time and date of each recorded measured value shall be recorded. The collection of recorded measured values of any concentration or parameter shall be referred to as the 'measured value data set' for that concentration or parameter.

6.3.2 The measured value data sets for concentrations of each continuously monitored substance other than oxygen (or moisture, if sample is not taken on dry basis), shall be electronically filtered on a real time basis as specified in Condition 6.3.3 and for air emissions, corrected on a real time basis as specified in Condition 6.3.4, in order to produce reported value data sets.

6.3.3 Each reported value data set shall:

a) exclude measured values recorded during any zero, span and calibration checks on the instrument which gave rise to the values;

b) exclude measured values recorded during the start-up and shut-down periods during which no waste was being incinerated; and

c) exclude measured values recorded during the failure of monitoring equipment or other equipment that could affect the accuracy of the measurement of the concentration of those substances.

6.3.4 Each measured value for concentrations of those continuously monitored substances listed in Table 6.2, other than oxygen and carbon monoxide, which is included within a reported value data set shall:

a) have the relevant confidence interval specified in Condition 6.2.1 subtracted on a real time basis, with a minimum value of zero after subtracting the confidence interval;

b) be corrected on a real time basis to the reference conditions specified in Condition 6.1.4 using the contemporaneously recorded temperature, pressure, and oxygen concentration; and

c) reflect the most relevant calibration functions following a QAL 2 calibration exercise.

6.3.5 Subject to Conditions 6.3.6 and 6.3.8, the reported value data sets for concentrations of those continuously monitored substances listed in Table 6.2, other than oxygen and carbon monoxide, shall be divided into discrete and consecutive 30 minute subsets (commencing each hour and half hour) and similar 24 hour subsets (commencing at 00h00 each day), and the average concentration of the respective substance for each such subset shall be calculated and recorded within one minute of the subset becoming complete.

6.3.6 To obtain the daily average reported value data set for any substance as required in Condition 6.3.5:

a) no more than five 30 minute average reported value data sets in any day shall be excluded, as required by Condition 6.3.3 a) and 6.3.3 c), due to a malfunction or maintenance of the continuous monitoring system;

b) all 30 minute and 10 minute average values recorded during periods of Abnormal Operation shall be excluded from the daily average reported value data set; and

c) no more than ten daily average reported value data sets shall be excluded per year due to malfunction or maintenance of the continuous monitoring system.

6.3.7 With reference to Conditions 6,3,5, 6.3.6 and 6.3.8 the circumstances under which a data set may still be valid due to a malfunction or maintenance of the continuous monitoring system, even though a part of the data set is invalid, are detailed in Table 6.4.

6.3.8 The reported value data set for the concentration of carbon monoxide shall be divided into discrete and consecutive 10 minute subsets (commencing at 0, 10, 20, 30, 40 and 50 minutes past each hour) and similar discrete 30 minute subsets (commencing each hour and half hour) based on a rolling 24 hour period, and 24 hour subsets (commencing at 00h00 each day), and the average concentration of carbon monoxide for each such subset shall be calculated and recorded within one minute of the subset becoming complete. All half hourly average values and 10 minute average values recorded during periods of Abnormal Operation shall be excluded from the daily average reported value data set.

6.3.9 The Operator shall submit a quarterly report containing, as a minimum, the following:

a) daily average reported value data sets measured and calculated in accordance with Conditions 6.3.1 to 6.3.8, as appropriate;

b) for emissions to air, maximum half-hourly or maximum 10 minute average reported value data sets calculated in accordance with Conditions 6.3.5 or 6.3.8 for each day;

c) for emissions to air, for each reporting period, the percentage of half hourly or 10 minute average reported value data sets calculated in accordance with Conditions 6.3.5 or 6.3.8 that exceed the ELV in column 3 of Table 6.2;

d) graphical representations of the data required by Conditions 6.3.9(a), (b) and (c);

e) any reported value data set that exceeds the relevant percentage compliance level for that substance; and

f) the number of hours the incineration plant was operated during each week covered by the report.

6.4 Data Handling and Reporting – Periodic Monitoring

6.4.1 Whenever periodic monitoring of any substance listed in Table 6.2 is being performed the Operator shall record or cause or require to be recorded:

a) the types of waste being fed to the primary combustion zone during the sampling period, and the average feed rate (tonnes per hour of each waste type);

b) any OTNOC that occurred during the sampling period;

c) details of all corrected continuous monitoring reported values for each day of sampling;

d) the mass of that substance collected during the said sampling period;

e) the volume of gas extracted during the sampling period;

f) any periods when auxiliary fuel was being burned during or prior to the sampling period; and

g) the percentage of the maximum continuous rating, the steam production rate (tonnes per hour) and the estimated average net calorific value (NCV) of the waste being burned during the sampling period.

6.4.2 Dioxins & Furans and Dioxin-like PCB's shall be reported as multiplied by the Toxic Equivalence Factors as specified in Table 6.5.

6.4.3 Polycyclic Aromatic Hydrocarbons (PAHs) shall be reported as calculated using the molecular mass of the individual PAH specified in the footnote of Table 6.2.

6.4.4 The emission concentration values, standardised where appropriate to the reference condition specified in Condition 6.1.4, for those substances listed in Table 6.2 shall be calculated from the information detailed in Condition 6.4.1 d) and 6.4.1 e).

6.4.5 The Operator shall report to SEPA in writing the results of all periodic monitoring, in accordance with the requirements of BS EN ISO/IEC 17025. Said report shall include:

a) the information specified in Condition 6.4.1;

b) an assessment comparing the results from periodic monitoring with the CEMs monitoring results for the same period which considers the differences between the results, defines any consequent actions to be taken to investigate the cause of those differences and includes the proposed date(s) for submission of the results of the investigation; and

c) The submission required by Condition 6.4.5 b) shall include an assessment of the longer-term trend of differences recorded in periodic monitoring exercises.

6.5 Sampling and Monitoring Facilities

6.5.1 Provisions for sampling measurement and monitoring at the Permitted Installation shall meet the requirements of BS EN 15259.

6.5.2 Permanent means of access shall be provided at all times to enable monitoring to be carried out in relation to the emission points specified in Table 6.1 unless otherwise agreed in writing by SEPA.

6.6 Monitoring Programmes

6.6.1 Within 6 months of First Operation, the operator shall carry out a programme of mercury monitoring, and submit a report to SEPA with an analysis of whether mercury emissions can be considered to be low and stable. The monitoring shall be carried out at Emission Point A1 in Table 6.1, over a period and frequency agreed with the SEPA.

6.6.2 Within 6 months of First Operation, the operator shall carry out a programme of dioxins and furans, and dioxin-like PCB monitoring, and submit a report to SEPA with an analysis of whether emissions of dioxin and furans and dioxin-like PCBs can be considered to be stable and whether the emissions of dioxin-like PCBs are proven to be less than 0,01 ng WHO-TEQ/Nm^3. The monitoring shall be carried out at Emission Point A1 in Table 6.1, over a period and frequency agreed with the SEPA.

6.6.3 Without prejudice to Condition 2.9.2 (i), within 3 months of First Operation the operator shall submit a written report to SEPA on the proposals for the frequency of monitoring of odour at Emission point A2 for occasions when the incinerator is shut down.

Table 6.1: Emission Points Details

Required by Condition 6.1.1

Emission point ref. / location on site plan	A1	A2
Emission Source	EfW Stack	Odour Stack
Stack Height (m)	**80**	**25**
Diameter (m)	**1.8**	**1.25**
NGR	NJ 95449 03968	NJ 95456 04062

Table 6.2: Emissions to Air ELVs applicable to normal operating conditions and monitoring requirements

Required by Condition 6.1.1

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Particulate matter	5 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		30 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		10 mg/Nm^3	97% ½ hour	Continuous measurement	BS EN 14181 BS EN 15267-3
		30 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement – Quarterly for first year then bi-annual	BS EN 13284
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	120 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		400 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		200 mg/Nm^3	97% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		200 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 14792
A1	Sulphur dioxide	30 mg/ Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		200 mg/ Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		50 mg/ Nm^3	97% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		200 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 14791 / Alternative method based on BS EN 14791
A1	Carbon monoxide	50 mg/ Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
		100 mg/ Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		150 mg/ Nm^3	95% 10 minute average	Continuous measurement	BS EN 14181 BS EN 15267-3
		100 mg/ Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 15058
A1	Gaseous and vaporous organic substances expressed as Total Organic Carbon (TOC)	10 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		20 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		10 mg/Nm^3	97% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		20 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 12619
A1	Hydrogen chloride	6 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		60 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		10 mg/Nm^3	97% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		60 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 1911
A1	Hydrogen Fluoride (HF)	None Set	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		None Set	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		None Set	97% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
		4 mg/Nm^3	Average value of three consecutive	Periodic Measurement - Quarterly for first year then bi-annual	BS ISO 15713

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
			measurements of at least 30 minutes each		
A1	Ammonia (NH_3)	10 mg/Nm^3	Daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
		20 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	EN ISO 21877
A1	Nitrous oxide (N_2O)	None set	Calendar daily average	Continuous measurement	BS EN 14181 BS EN 15267-3
			Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 21258
A1 Note 1	Cadmium & thallium and their compounds (total)	0.02 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 14385
A1 Note 1	Mercury and its compounds	0.02 mg/Nm^3 (Continuous or periodic), or 0.01 mg/Nm^3 Long-term sampling	See Note 2: daily average, long-term average or average value of three consecutive measurements of at least 30 minutes each	See Note 2. Periodic monitoring to be undertaken this should be undertaken Quarterly for first year then bi-annual.	BS EN 14181, BS EN 15267-3, BS EN 14884 or BS EN 13211. Note 2
A1 Note 1	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.3 mg/Nm^3	Average value of three consecutive measurements of at least 30 minutes each	Periodic Measurement - Quarterly for first year then bi-annual	BS EN 14385

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Dioxins / furans (I-TEQ)	<0.01-0.06 ng I-TEQ/Nm^3 (Long-term sampling) or <0.01-0.04 ng I-TEQ/Nm3 (Periodic monitoring)	Monthly average or Average value over single measurement of 6 to 8 hours Note 3	Continuous sampling or Periodic Measurement - Quarterly for first year then bi-annual Note 3	No EN Standard for long-term sampling or BS EN 1948-2 and 3
	Dioxins / furans (WHO-TEQ Humans / Mammals)	-			
	Dioxins / furans (WHO-TEQ Fish)	-			
	Dioxins / furans (WHO-TEQ Birds)	-			
A1	Dioxin-like PCBs	<0.01-0.08 ng WHO-TEQ/ Nm^3 (Long-term sampling) or <0.01-0.06 ng WHO-TEQ/ Nm^3 (Periodic monitoring) Note 3	Monthly average or Average value over single measurement of 6 to 8 hours Note 3	Continuous sampling or Periodic Measurement - Quarterly for first year then bi-annual Note 3	No EN Standard for long-term sampling; BS EN 1948-2 and 3 or BS EN 1948-1, 2 and 4
	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	-			
	Dioxin-like PCBs (WHO-TEQ Fish)	-			
	Dioxin-like PCBs (WHO-TEQ Birds)	-			
A1	Total and speciated poly-cyclic aromatic hydrocarbons Note 4	-	Average over 3 consecutive samples	Periodic Measurement Quarterly for first year then bi-annual	BS ISO 11338-1 and BS-ISO 11338-2.

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Smoke	Ringlemann shade 1	During start up	As required	Visual assessment to BS 2742:1969 (as amended)
A2	Odour	None set	Average over 3 consecutive measurements	As required by Condition 3.2.14 and subsequently when the incinerator is shut-down to a frequency to be agreed in writing with SEPA	BS EN 13725

Notes:

1. Average values include the gaseous and vapour forms of the relevant heavy metal emissions as well as their compounds.
2. Long-term sampling applies where the report submitted under Condition 6.6.1 confirms that the waste feed does not have a proven low and stable mercury content.
3. The limit of <0.01-0.06 ng I-TEQ/Nm^3 for long-term sampling applies where the report submitted under Condition 6.6.2 confirms that the emission levels of dioxins and furans and dioxin-like PCBs are not sufficiently stable.
4. Total PAHs to be reported expressed as Benzo(a)pyrene and the following speciated PAHs require monitoring: 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, cylclopenta (c,d)pyrene, dibenzo[ah]anthracene, dibenzo(ai)pyrene, fluoranthene, indeno(1,2,3-cd)pyrene and napthalene.

Table 6.2a: Emissions to Air ELVs applicable to Abnormal Operation [Note 1] (Condition 5.4.5 requirements) and Monitoring Requirements

Emission Point	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 (See Condition 5.4.5)	Particulate matter	150 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
	TOC	20 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3
	Carbon monoxide	100 mg/Nm^3	100% ½ hour average	Continuous measurement	BS EN 14181 BS EN 15267-3

Notes:
1. As defined in the Interpretation of Terms.

Table 6.3: Process Monitoring Requirements

Required by Condition 6.1.3

Parameter	Location or description of point of measurement	Monitoring frequency	Monitoring standard or method	Other specifications
Exhaust gas temperature	A1 & A2[1]	Continuous	BS EN 16911-2	As agreed in writing with SEPA
Exhaust gas pressure	A1	Continuous	BS EN 16911-2	As agreed in writing with SEPA
Exhaust gas oxygen content	A1	Continuous	BS EN 14181 BS EN 15267-3	
Exhaust gas water vapour content	A1	Continuous	BS EN 14181 BS EN 15267-3	Unless gas is dried before analysis of emissions.
Exhaust gas velocity (m/s) and/ or volumetric flow (m^3/Hour)	A1 & A2[1]	Continuous	BS EN 16911-2	As agreed in writing with SEPA
		Periodic Measurement - Quarterly for first year then bi-annual	BS EN 16911-2	

Notes:
1. When in use.

Table 6.4: Condition 6.3.7 Exceptions

Required by conditions 6.3.5, 6.3.6, 6.3.7 & 6.3.8

Time Average Basis	Invalidation Threshold
Daily Average (24 hours) based on 30 minute averages	More than five invalid 30 minute averages where the 30 minute averages are based on less than 20 minutes of data for each calendar day period where the plant is operational for all 24 hours
30 Minute average	Invalid average = A 30 minute average based on less than 40 data points (or 20 minutes of relevant data captured at acquisition rates of less than once every 30 seconds)
10 Minute average	Less than 14 data points (or less than 7 minutes of relevant data captured at acquisition rates of less than once every 30 seconds)

Table 6.5: Toxic Equivalence Factors for Dioxins, Furans and Dioxin-like PCBs

Required by Condition 6.4.2

TEF Schemes for dioxins and furans				
Congener	**I-TEF**	**WHO-TEF**		
	1990	**2005**	**1998**	
	Not specified	**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	<0.0001	0.0001
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
2,3,4,7,8-PeCDF	0.5	0.3	0.5	1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
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	**1998**	
	Humans / Mammals	**Fish**	**Birds**
Non-ortho PCBs			
3,3',4,4'-TCB (PCB 77)	0.0001	0.0001	0.05
3,4,4',5-TCB (PCB 81)	0.0003	0.0005	0.1
3,3',4,4',5 - PeCB (PCB 126)	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(PCB 169)	0.03	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (PCB 105)	0.00003	<0.000005	0.0001
2,3,4,4',5-PeCB (PCB 114)	0.00003	<0.000005	0.0001
2,3',4,4',5-PeCB (PCB 118)	0.00003	<0.000005	0.00001
2',3,4,4',5-PeCB (PCB 123)	0.00003	<0.000005	0.00001
2,3,3',4,4',5-HxCB (PCB 156)	0.00003	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (PCB 157)	0.00003	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (PCB 167)	0.00003	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (PCB 189)	0.00003	<0.000005	0.00001

Notes:

Any reference to the toxic equivalent concentration of either a polychlorinated dibenzo-p-dioxin (referred to as a “dioxin”), a polychlorinated dibenzofuran (referred to as a “furan”), or dioxin-like polychlorinated biphenyls (referred to as a “PCB”) in emissions to air shall mean the concentration of that dioxin, furan or PCB multiplied by the toxic equivalence factor for that dioxin, furan or PCB.

Any reference to the toxic equivalent concentration of all dioxins and furans means the sum of the toxic equivalent concentrations of all the dioxins and furans.

Whenever the toxic equivalent concentration of all dioxins is calculated the minimum concentration for any dioxin or furan shall be the measurement technique’s level of detection for that dioxin or furan.

Dioxins & furans shall be calculated and reported using the International toxic equivalency factors (I-TEF) and World Health Organisation toxic equivalency factors (WHO-TEF); PCB’s shall be calculated and reported using the World Health Organisation toxic equivalency factors (WHO-TEF).

7 CONDITIONS APPLYING TO EMISSIONS TO THE WATER ENVIRONMENT AND SOIL FROM THE INCINERATION PLANT

7.1 Water Emission Conditions and Limits

7.1.1 The emissions to water specified in Table 7.1 shall only be permitted from the emission points and to the destinations specified in that table, and only after having passed through the sample points specified in that table.

7.1.2 Emissions of contaminated surface water or process effluent to the Water Environment from the Permitted Installation are not permitted.

7.1.3 Other than as specifically permitted or limited by any condition of this Permit, none of the Permitted Activities shall have a significant adverse impact on, or cause pollution of, the Water Environment.

7.1.4 Subject to Condition 7.1.5, no emission specified in Table 7.1 shall exceed the limit, or be outwith the range, as appropriate, for the parameters specified in said table.

7.1.5 Measurement and/or sampling of the emissions in Table 7.1 shall be carried out by the Operator at the sampling locations specified in that Table subject to the requirements for monitoring specified in Table 7.2.

7.1.6 A sampling plan shall be agreed in writing with SEPA and shall be maintained and reviewed annually. Said sampling plan shall detail how measurements for the determination of concentrations of water polluting substances shall be carried out representatively. The reviewed sampling plan shall be reported each year for the forthcoming calendar year.

7.1.7 The Operator shall record and report the mass emission results as kg of pollutant per tonne waste incinerated and kg of pollutant per year for the parameters of the combined emission points to water specified in Table 7.1. The method's used shall make reference to the guidance provided in the SPRI section of www.sepa.org.uk and shall be agreed in writing with SEPA. This information shall be reported in a format agreed in writing with SEPA.

7.1.8 The information used to estimate mass emissions in compliance with Condition 7.1.7 shall be recorded for each estimate.

7.2 Monitoring Requirements and Standards

7.2.1 The techniques used for the sampling and analysis of any substance listed in Table 7.2; the quality assurance of any automated measurement systems (AMS) referred in Table 7.2 and the reference methods used to calibrate an AMS shall follow the hierarchy of standards referred to in Section 1.2 of Part 6 of Annex VI of IED and as listed in SEPA Guidance or the latest version of Environment Agency Guidance Note M18.

7.2.2 Any AMS referred to in Table 7.2 shall be subject to control by means of parallel measurements with the reference methods referred to in Table 7.2 at least once per year.

7.2.3 The Operator shall record all maintenance and calibration work carried out on any AMS referred to in Table 7.2.

7.3 Data Handling and Reporting - Continuous Monitoring

7.3.1 The measured value of each concentration or parameter required to be continuously monitored by Condition 7.1.5 shall be electronically recorded as required by Table 7.2, as appropriate, and the time and date of each recorded measured value shall be recorded.

7.3.2 The recorded data set shall exclude measured values recorded during any zero, span and calibration checks on the instrument which gave rise to the values.

7.3.3 The Operator shall submit a quarterly report containing, as a minimum, the following:

a) Daily average reported value data sets measured and calculated in accordance with Conditions 7.3.1 and 7.3.2; and

b) Any reported value data set that exceeds the relevant percentage compliance level for that substance.

7.4 Data Handling and Reporting - Periodic Monitoring

7.4.1 Whenever periodic monitoring of any substance listed in Table 7.2 is being performed the Operator shall record, or cause or require to be recorded:

a) the time and date the sampling period commenced and terminated;

b) the identity of each person involved in performing the monitoring exercise, and their respective roles;

c) the volumetric flow-rate of the effluents being sampled and the measuring techniques employed; and

d) any deviations from the methods specified in Table 7.2.

7.4.2 The Operator shall report the results of all periodic monitoring. The report shall contain, as a minimum, the information specified in Condition 7.4.1.

7.5 Surface Water Control, Drainage and Surfacing

7.5.1 Drainage shall be provided and maintained to ensure that:

a) rainfall run-off does not drain into the waste storage areas;

b) surface water run-off contaminated with pollutants does not enter the Water Environment directly;

c) the Permitted Installation does not become subject to ponding or waterlogging; and

d) the quantity of contaminated rainwater, spillages or fire fighting water from containing and extinguishing fires can be contained prior to any discharge to the Water Environment or sewer.

7.5.2 By 3 months prior to the Commencement of Commissioning the Operator shall prepare, record and implement a plan ("the Surface Water, Drainage and Spillage Plan"), designed to prevent the release of pollutants to surface water or site drains from any spillage or leaks resulting from the Permitted Activities.

7.5.3 As part of the Surface Water, Drainage and Spillage Plan required by Condition 7.5.2, the Operator shall identify what spillage prevention, mitigation and clean up equipment is to be made available on the Permitted Installation, the quantity of such equipment, and the strategic locations of any storage containing such equipment.

7.5.4 The Operator shall ensure that the equipment identified in compliance with Condition 7.5.3 is provided and maintained in good working order and is accessible at all times.

7.5.5 At least every 4 years, or after any changes to the system, the Operator shall review the Surface Water, Drainage and Spillage Plan required under Condition 7.5.2. Each review of the said plan and any changes shall be recorded.

7.5.6 Without prejudice to the requirements of Condition 2.2.2 the Operator shall maintain plans that identify the configuration, specification and the position of all drains, subsurface pipework, subsurface sumps and storage vessels that are used or have been used within the Site from the date of this Permit until the Permit is surrendered.

7.5.7 The Operator shall ensure that all surface water drainage systems, oil interceptor systems and SUDS are operated, inspected and maintained so as to be fit for purpose.

7.5.8 All containers being used to store any liquid chemicals or fuels shall be located in a secondary containment system (SCS). The SCS shall meet equivalent technical standards to the rules specified for the storage of oil under General Binding Rule 28 in Schedule 3 of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

7.5.9 The Operator shall undertake and record monthly inspections of all:

a) Drains, bunds and sumps;

b) Waste storage areas; and

c) Hardstanding and road surfaces, both internal and external

7.5.10 Any remedial actions identified during the inspections required by Condition 7.5.9 shall be undertaken and recorded.

7.6 Protection of Soil and Groundwater

7.6.1 Unless specified elsewhere in this permit there shall be no emission of any pollutants to groundwater or soil from the permitted installation.

7.6.2 The Operator shall maintain a record of any incident that has, or might have, impacted on the condition of any soil or groundwater under the permitted installation, either as a result of that incident or as a result of an accumulation of incidents, together with a record of any further investigation or remediation work carried out.

7.6.3 Notwithstanding the requirements of Condition 2.2.2, the record required by Condition 7.6.2 shall be preserved until this permit is surrendered.

7.6.4 At least every 4 years, the operator shall carry out a systematic assessment of all measures used to prevent emissions from the permitted installation to soil and groundwater. A written report of each assessment shall be recorded and reported to SEPA. The report shall include details of and timescales for any additional measures that are required to prevent emissions to soil and groundwater.

7.6.5 The Operator shall monitor the groundwater for the Relevant Hazardous Substances (RHS) specified in Table 7.3, at the frequency specified in Table 7.3, the purpose of which shall be to identify groundwater contamination associated with the activities specified in Table 7.3 by those Relevant Hazardous Substances. Each Assessment shall be recorded and reported to SEPA within one month of completion. The first assessment shall be completed by 1 months prior to the commencement of commissioning. The assessment shall include interpretation of the results with reference to previous monitoring undertaken, (including the site and where applicable baseline reports) and operations at the Permitted Installation and details of corrective actions that are required to protect groundwater and remedy any contamination that has occurred as a result of permitted activities.

7.6.6 The operator shall monitor the soil at the site for the Relevant Hazardous Substances specified in table 7.4 at the frequency specified in Table 7.4, the purpose of which shall be to identify soil contamination associated with the activities specified in Table 7.4 by those Relevant Hazardous Substances. Each assessment shall be recorded and reported to SEPA within one month of completion. The first assessment shall be completed by 1 months prior to the commencement of commissioning. The assessment shall include interpretation of the results with reference to previous monitoring undertaken (including the site and where applicable baseline reports) and operations at the permitted installation and details of corrective actions that are required to protect soil and remedy any contamination that has occurred as a result of permitted activities.

7.6.7 The Operator shall submit a detailed soil and groundwater monitoring plan, for the monitoring required by conditions 7.6.5 and 7.6.6 to SEPA at least 1 month in advance of carrying out the monitoring, which shall include the locations at which monitoring shall be carried out and the frequency and methodology which shall be used.

7.6.8 The operator shall carry out the monitoring required by conditions 7.6.5 and 7.6.6 in accordance with the soil and groundwater monitoring plan required by condition 7.6.7.

7.6.9 The operator shall review the plan required by Condition 7.6.7 no later than 6 months after each monitoring event. The purpose of the review shall be to determine whether any changes to monitoring locations, frequency or parameters are required and where changes are proposed, submit a revised plan to SEPA.

7.6.10 Notwithstanding the requirements of Condition 2.2 all plans, monitoring and assessments reports undertaken in accordance with Conditions 7.6.4, 7.6.5, 7.6.6 and 7.6.8 shall be preserved until the permit is surrendered.

7.6.11 The operator shall maintain the groundwater monitoring wells detailed in the plan required in Condition 7.6.7 in a condition fit for purpose, unless otherwise agreed in writing with SEPA. Where a well's function is compromised it shall be repaired or replaced to allow sample collection in accordance with Conditions 7.6.5 and 7.6.6.

Table 7.1: Emissions to Water/Sewer ELVs

Required by Condition 7.1.4

Source of Emission	**Emission number point / Location on site plan**	W1
	Emission source	Surface Water Drainage
	Destination	East Tullos Burn (Culvert)
	NGR	NJ 95357 04001
Monitoring Details	**Sampling location**	Sampling chamber on discharge line downstream of the Retention Basin
Limits For Parameters From Emission Source	**Basis of limit value**	Emission Limit Value (ELV)
	Flow (litres/second)	15.9
	pH	No less than 6 and no greater than 9
	Temperature (°C)	30
	Total suspended solids (mg/l)	60
	Total Organic Carbon (mg/l)	40

Table 7.2: Emissions to Water Monitoring Requirements

Required by Condition 7.1.6

Emission Point	Parameter	Monitoring Frequency	Monitoring Device Type	Monitoring standard or method
W1	Flow	Continuous	Flow meter	Latest standard from Environment Agency (EA) M18 document or as otherwise agreed in writing with SEPA.
	pH	Daily (on discharge)	Spot Grab sample	
	Conductivity	Continuous	Instantaneous Analyser	
	Temperature	Continuous	Instantaneous Analyser	
	Total Organic Carbon	Continuous	Instantaneous Analyser	
	Total Suspended Solids	Weekly (on discharge)	Spot Grab sample	

Note: All analysis shall be undertaken on unfiltered samples.

Table 7.3: Groundwater Monitoring Requirements

Relevant hazardous substance	Location and activity	Frequency
pH	Storage areas, water treatment plant area , waste bunker area and decantation pit area	5 years
Chemical Oxygen Demand	Storage areas and water treatment plant area, waste bunker area and decantation pit area	5 years
Calcium Dihydroxide	Silos storage area and area of direct feed into the flue gas treatment system	5 years
Sodium Hydroxide	IBC/Carboy storage area and water treatment plant area	5 years
Ammonia	Tank storage area and area of direct feed into boiler system	5 years
Hydrochloric acid	IBC storage area and water treatment plant area	5 years
Sulphuric acid	IBC storage area and water treatment plant area	5 years
TPH CWG aliphatic and aromatic split	Tank storage area and area of direct feed into boiler system	5 years
Heavy metals	APCr silo area, IBA storage bunker area, waste bunker area and decantation pit area	5 years
PAH USEPA 16	APCr silo area, IBA storage bunker area, waste bunker area and decantation pit area	5 years

Table 7.4: Soil Monitoring Requirements

Relevant hazardous substance	Location and activity	Frequency
pH	Storage areas, water treatment plant area , waste bunker area and decantation pit area	10 years
Calcium Dihydroxide	Silos storage area and area of direct feed into the flue gas treatment system	10 years
Sodium Hydroxide	IBC/Carboy storage area and water treatment plant area	10 years
Ammonia	Tank storage area and area of direct feed into boiler system	10 years
Hydrochloric acid	IBC storage area and water treatment plant area	10 years
Sulphuric acid	IBC storage area and water treatment plant area	10 years
TPH CWG aliphatic and aromatic split	Tank storage area and area of direct feed into boiler system	10 years
Heavy metals	APCr silo area, IBA storage bunker area, waste bunker area and decantation pit area	10 years
PAH USEPA 16	APCr silo area, IBA storage bunker area, waste bunker area and decantation pit area	10 years

8 CONDITIONS APPLYING TO SOLID RESIDUES FROM THE INCINERATION PLANT

8.1 Management of Solid Residues Generated on the Permitted Installation

8.1.1 By 3 months prior to the commencement of commissioning the Operator shall prepare, implement, maintain and report a plan ("the Residue Management Plan") following a systematic assessment and review of the management of all residues generated by the Permitted Activities.

8.1.2 The Residue Management Plan shall be reviewed at least every 2 years. Each review shall be recorded and reported to SEPA.

8.1.3 The Residue Management Plan shall be written in accordance with BS EN 14899. See latest version of Environment Agency Technical Guidance (Monitoring) Note M4 Guidelines for Ash Sampling and Analysis for further guidance.

8.1.4 The Residue Management Plan required by Condition 8.1.1 shall define for each solid residue the following information:

a) the residue source, type and storage location, and quantities involved;

b) how the residue from the plant is prevented or reduced to a minimum, in amount and harmfulness;

c) where residues are produced how they are, in order of priority, prepared for re-use, recycled, recovered or, where that is technically and economically impossible, disposed of while avoiding or reducing any impact on the environment;

d) how the method and frequency of sampling and analysis is consistent with recognised European standards;

e) the physical and chemical characteristics (including total soluble fraction and heavy metals soluble fraction), hazard category and polluting potential;

f) how each residue from differing sources is kept separate from other residues to provide compliance with Condition 8.1.8;

g) how each residue which is a dust, or has the potential to become a dust, shall be stored and handled in a manner designed to prevent dispersal into the environment; and

h) as a minimum, the characterisation required by Condition 8.1.4 e) shall comprise:

(i) the assessment of the concentration of the substances listed in Table 8.1 according to the requirements identified in Table 8.1; and

(ii) an assessment of the extent and nature of substances which may leach from a sample of each residue taken no less frequently than once per year.

8.1.5 Compliance with Condition 5.1.1 a) shall be assessed by performing tests to ascertain the Total Organic Carbon (TOC) of composite samples of dry slag or bottom ashes at a frequency of not less than once every week during the first 3 months of operation, and at a frequency of not less than once every 3 months thereafter. The results of the tests shall be recorded and reported to SEPA.

8.1.6 Compliance with Condition 8.1.4 b) shall be assessed by performing tests to ascertain the chemical composition of composite samples of the residues from the abatement filter at a frequency of not less than once every week during the first 3 months of operation, and at a frequency of not less than once every 3 months thereafter. The results of the tests shall be recorded and reported to SEPA.

8.1.7 The Operator shall also maintain a record of the dates, tonnages and destination of each consignment of residue removed from the Permitted Installation. The said record shall be updated daily.

8.1.8 Bottom ash and air pollution control (APC) residues shall not be mixed.

Table 8.1: Residue Assessment

Required by Condition 8.1.4

Substance	Residue stream	Monitoring frequency	Analytical method
Mercury	All residues	As specified in BS EN 14899/ M4 or as agreed in writing with SEPA	BS EN 14899/ latest version of EA Monitoring Technical guidance document M4 Guidance for ash sampling and analysis, or as otherwise agreed in writing with SEPA.
Cadmium			
Dioxins, dibenzofurans, dioxin-like polychlorinated biphenyls and poly-cyclic aromatic hydrocarbons			
All other soluble heavy metals	All residues		
Loss on ignition (LOI) Or Total organic carbon (TOC)	Bottom and boiler ash / slag	Quarterly where process has operated for a total aggregate period of 12 hours or more and LOI or TOC, at least weekly for the first three months of operation.	
Free lime	Filter ash from gas treatment system		
Moisture	Filter ash from gas treatment system		

9 CONDITIONS APPLYING TO ENVIRONMENTAL MONITORING BEYOND THE INSTALLATION BOUNDARY

9.1 Environmental Monitoring

9.1.1 At least three months prior to Commissioning of the Incineration Plant, the Operator shall provide SEPA with proposals for an Environmental Monitoring Programme ("Environmental Monitoring Programme or "EMP") of the species listed in Table 9.1. The purpose of the EMP shall be to determine the baseline concentrations in soil and vegetation of those species and to undertake ambient monitoring of air quality prior to the commencement of Commissioning of the Incineration Plant and following subsequent operation.

9.1.2 Following receipt of written acceptance by SEPA of the programme required by Condition 9.1.1, the Operator shall implement the agreed EMP. The results shall be recorded and reported to SEPA.

Table 9.1: Environmental Monitoring

Required by Condition 9.1.1

Environmental measurement (concentration)	Location	Methodology	Prior to operation	During first 2 years of operation	Subsequent years of operation
Dioxins and furans in soil & vegetation	Locations to be agreed in writing with SEPA including location upwind of prevailing wind direction	Sampling according to BS ISO 10381:2002 or as otherwise agreed in writing with SEPA	At least 5 samples taken and analysed	At least 5 samples taken and analysed annually	As agreed in writing with SEPA
Heavy metals by species in soil & vegetation	Locations to be agreed in writing with SEPA including location upwind of prevailing wind direction	Sampling according to BS ISO 10381:2002 or as otherwise agreed in writing with SEPA	At least 5 samples taken and analysed	At least 5 samples taken and analysed annually	As agreed in writing with SEPA
The following substances in ambient air PM10 PM2.5 Metals to be agreed in writing with SEPA	Locations to be agreed in writing with SEPA including location upwind of prevailing wind direction	Latest version of EA document M8 (Monitoring Ambient Air), or as otherwise agreed in writing with SEPA.	At least 5 samples taken and analysed	At least 5 samples taken and analysed annually	To be agreed in writing with SEPA

10 CONDITIONS APPLYING TO THE EMERGENCY DIESEL GENERATOR

10.1 Medium Combustion Plant Description

10.1.1 The Emergency Diesel Generator with a net rated thermal input of around 3.5 MW served by two exhaust pipes of 3.38m and 0.27m shall comprise the Medium Combustion Plant, described in Condition 1.1.3(b).

10.1.2 The permitted fuel for the Emergency Diesel Generator shall be diesel.

10.2 Start-up and Shut-down

10.2.1 All reasonable steps must be taken to ensure periods of start-up and shut-down of the Medium Combustion Plant are kept as short as possible.

10.3 Monitoring of Emissions

10.3.1 Monitoring of emissions must be undertaken as specified in Table 10.1.

10.3.2 The first measurement of emissions must be taken within four months from the later of:

(a) the grant of this permit; or

(b) the start of operation of the medium combustion plant.

10.3.3 Measurements must be taken when the medium combustion plant is:

(a) Operating under stable conditions at a representative even load; and

(b) Not undergoing start-up or shut-down.

10.3.4 The results of the monitoring of emissions, as required under Condition 10.3.1 must be submitted to SEPA no later than two months from the date on which monitoring was undertaken.

10.4 Record Keeping

10.4.1 Records must be kept of the following:

(a) The type and quantity of fuel used;

(b) The number of hours that the Emergency Diesel Generator has been in operation for each year; and

(c) All monitoring results and verification of compliance with the emission limit values specified in Table 10.1.

10.4.2 All information recorded, kept or submitted to SEPA regarding the Medium Combustion Plant must be kept for a minimum of six years and provided to SEPA upon request.

Table 10.1: Monitoring of Emissions

Required by Condition 10.3.1

Emission Point	Parameter	Limit	Monitoring Frequency	Monitoring Standard
A3	Carbon monoxide	No emission limit value set	The most frequent of each 1500 hours operation or every 5 years	BS EN 15058
	Smoke	Ringlemann Shade 2 during operation and start up	When in operation	Visual assessment to BS 2742:1969 (as amended)

EXPLANATORY NOTES

(These Explanatory Notes do not form part of the Permit)

1. BAT

It should be noted that Regulation 22 of the Regulations specifies that it is a condition of a permit that the operator must use the best available techniques (BAT) for preventing or, where that is not practicable, reducing emissions from the installation. This is referred to as the 'general' BAT condition.

This does not apply to the extent that any other condition of the permit, or a standard rule which has effect as a standard rules condition, has the same effect.

Examples of aspects of the operation that have not been regulated by specific Conditions are general maintenance requirements.

BAT is defined in Regulation 4 of the Regulations as follows:

"Best available techniques" means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole;

"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 UK, 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;

"techniques" includes both the technology used and the way in which an installation is designed, built, maintained, operated and decommissioned.

"BAT conclusions" means a document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.

"emerging technique" means a novel technique for an industrial activity that, if commercially developed, could, when compared to existing best available techniques provide a higher level of protection of the environment, or at least the same level of protection of the environment and higher cost savings.

"emission levels associated with best available techniques" means the range of emission levels obtained under normal operating conditions using a best available technique, or combination of best available techniques, as described

in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions.

Schedule 3 of the Regulations specifies the matters to be taken into account in determining BAT.

In considering BAT, SEPA would expect the Operator to have regard to all relevant PPC sector or other technical guidance, including BAT Reference Documents published by the European Commission and UK technical guidance published by the Environment Agency.

2. GENERAL STATUTORY REQUIREMENTS

The permit does not detract from any other statutory requirements applicable to you in respect of the Permitted Installation, such as any need to obtain planning permission or building regulations approval or any responsibilities under legislation for health, safety and welfare in the workplace.

3. APPEALS

If you are aggrieved by any of the conditions of the permit, you should initially contact the local SEPA Office at the address or telephone number below. Further information on your right of appeal and the appeals procedure is contained Regulation 58 and Schedule 8 of the Regulations.

4. SUBSISTENCE CHARGES

An annual subsistence charge will be payable in respect of the permit in terms of the current Pollution Prevention and Control (Scotland) Charging Scheme or any relevant charging scheme made under Section 41 of the Environment Act 1995, copies of which are available from SEPA.

5. ADDRESS AND TELEPHONE NUMBERS

The contact address and telephone number for all information to be reported in terms of the permit is as follows: -

Type of communication	**Address**	**Telephone/ Fax**	**Email**
Initial notification of Pollution incident	N/A	0800 80 70 60 24-hour pollution hotline	wasteandindustry@sepa.org.uk or as agreed in writing with SEPA
Application for New Permit/ Variation/ Transfer or Surrender	Scottish Environment Protection Agency Aberdeen Office Inverdee House Baxter Street Torry Aberdeen AB11 9QA	0800 80 70 60 and/or 01224 266600	registry@sepa.org.uk or as agreed in writing with SEPA
For all other communications including change notifications, data returns, incident reports and general enquiries		0800 80 70 60 and/or 01224 266600	wasteandindustry@sepa.org.uk or as agreed in writing with SEPA

6. REVIEW OF CONDITIONS

The conditions of the permit will be periodically reviewed by SEPA.

7. PROPOSED CHANGE IN OPERATION OF INSTALLATION

It is a requirement of Regulation 45 of the Regulations that, if you propose to make a change in the operation of the installation, you must notify SEPA at least 14 days before making the change. The requirement under Regulation 45 does not apply if you have already made an application to SEPA for the variation of the conditions of the permit containing a description of the proposed change.

N.B. the requirements of Regulation 45 are in addition to any obligations you may have under the permit itself to only operate the Permitted Installation in the manner set out in the permit and to notify SEPA of proposed changes to the Permitted Installation.

Regulation 46 and Schedule 7 of the Regulations provide details on applications for variation of the permit in respect of proposed changes and substantial changes in operation.

"Change in operation" and "substantial change in operation" are defined in Regulation 2 of the Regulations.

8. ENFORCEMENT & OFFENCES

If SEPA is of the opinion that you have contravened or are contravening or are likely to contravene a Condition of the Permit, or an Incident or accident significantly affecting the environment has occurred as a result of the operation of the Installation it may serve an Enforcement Notice. Further details on Enforcement Notices are provided in Regulation 55 of the Regulations.

If SEPA is of the opinion that the operation of an installation poses an immediate danger to human health, threatens to create an immediate significant adverse effect upon the environment or involves a risk of serious pollution it must, in certain circumstances, serve a Suspension Notice on you. Further details on Suspension Notices are provided in Regulation 56 of the Regulations.

It is an offence to operate an installation covered by the Regulations without a permit or in breach of the conditions of the permit. It is an offence to fail to comply with the requirements of an Enforcement or Suspension Notice. It is an offence to intentionally make a false entry in any record required to be kept under a condition of a permit. Further details on offences and on penalties liable to be imposed upon conviction of an offence are provided in Regulation 67 of the Regulations.

Directors, managers and other individuals within a company may be held personally liable for offences under the Regulations.

All personnel who are responsible for fulfilling any condition of the permit should be made aware of these facts.

9. BREACH OF A PERMIT CONDITION

Regulation 52 of the Regulations specifies that the Operator of an Installation must immediately give notice to SEPA of any breach of a condition of the permit. It is an offence to fail, without reasonable excuse to comply with Regulation 52.

Any statement made by an operator to SEPA for the purposes of complying with regulation 52 may only be used in a prosecution for an offence where in giving evidence the operator makes a statement inconsistent with the initial notification.

All personnel who are responsible for fulfilling any Condition of the Permit should be made aware of these facts.

10. RECORDED SYSTEMS, PROCEDURES OR INFORMATION RECORDING/ RETURN REQUIREMENTS

Where a condition requires any system, procedure or information record/return, the Operator may demonstrate compliance by making use of any relevant existing written system used for any other purpose and which meets the requirements of the relevant condition.

11. SYSTEMATIC ASSESSMENT (AND REVIEW)

Where a condition of the permit requires a "systematic assessment (and review)", the assessment should be undertaken in a methodical and arranged manner. If you require guidance on the scope or extent of any assessment (and review) required to be undertaken, you should contact your local SEPA office at the address or telephone number given above.

12. SEPA DOCUMENT IED-T-01(TT) – EXTENDED TWO TIER CONSENT TABLE

This document can be downloaded from the SEPA website www.sepa.org.uk. Should you have any difficulty accessing a copy please contact SEPA for assistance.

13. COMMERCIAL CONFIDENTIALITY

Regulation 64 of the Regulations requires that SEPA maintain a register ("a Public Register"), whilst Schedule 9 of the Regulations sets out what the Public Register shall contain. Regulation 66(2) provides you with an opportunity to apply for exclusion from the Public Register for certain confidential information. Where you are required to supply SEPA with information whether via a condition in this permit, or otherwise, and that information falls under Schedule 9, if you wish it to be excluded from the public register as confidential information, then such a submission must include an application made under Regulation 66(2).