LICENCE REG. NO. W0232-01 HAS BEEN REVISED
Please note that licence Reg. No. W0232-01 was reviewed and replaced by the revised licence Reg. No. W0232-02

This licence was amended on 7 January 2014 under Section S76A(11) of the Waste Management Act 1996 as amended. The details of the Amendment must be read in conjunction with this licence. The amendment document is entitled "IED Amendment".

LICENCE REG NO W0232-01 HAS BEEN TRANSFERRED
Please note that Licence Reg No W0232-01 was transferred to Dublin Waste to Energy Limited on 31/10/2014. For further information on this please refere ot the Transfer Notification on the Agency's website.

This licence was amended on 11 April 2017 and 27 March 2018 under Section 96(1) of the Environmental Protection Agency Act, as amended. The details of Amendment A and Amendment B must be read in conjunction with this licence. The amendment documents are entitled "Technical Amendment A" and "Technical Amendment B".

Headquarters
P.O. Box 3000
Johnstown Castle Estate
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Ireland

WASTE LICENCE
FOR A NON-HAZARDOUS WASTE INCINERATOR/WASTE-TO-ENERGY FACILITY

Licence Register No:	W0232-01
Applicant:	Dublin City Council, Civic Offices, Wood Quay, Dublin 8.
Location of Facility:	Pigeon House Road, Poolbeg, Dublin 4.

INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

This licence is for the operation of an incinerator to burn non-hazardous waste and to recover energy in the form of steam and electricity (incineration plant) for export to the national grid at Pigeon House Road, Poolbeg, Dublin 4 and for the transfer of heat to a municipal district heating scheme, when such a system is available. The facility covers an area of approximately 5.5ha.

Only residual non-hazardous waste (household, commercial and industrial) may be accepted at the facility. The licence allows up to 600,000 tonnes of waste per annum (t/a) to be processed at the facility.

Infrastructure for the incineration plant includes waste reception area, furnace, boiler, energy recovery system, facilities for the treatment of exhaust gases, on-site facilities for handling and storage of residues and waste water, stack, devices and systems for controlling, recording and monitoring the incineration process. The plant will have two incineration lines with a design capacity of 35 tonnes per hour each, which equates to 300,000 tonnes per line per annum. The heat produced from the process will be used to generate electricity, of which approximately 60MW will be exported to the national grid and for the transfer of heat to a municipal district heating scheme, when such a system is available.

The applicants propose to retain the services of professional agents to operate the facility on their behalf.

The licensee (and their agents) must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular environmental monitoring and submit all monitoring results and a wide range of reports on the operation and management of the facility to the Agency.

The licence sets out in detail the conditions under which Dublin City Council, Civic Offices, Wood Quay, Dublin 8, will operate and manage this facility.

This installation falls within the scope of Annex I of Council Directive 96/61/EC concerning integrated pollution prevention and control. The following IPPC Directive categories of Activity are carried on at the installation:

> Category 5.2: Installations for the incineration of municipal waste as defined in Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants, and Council Directive 89/429/EEC of 21 June 1989 on the reduction of air pollution from existing municipal waste incineration plants, with a capacity exceeding 3 tonnes per hour.
>
> Category 1.1: Combustion installations with a rated thermal input exceeding 50MW.

This installation falls within the scope of operation D10 - Incineration on Land of Annex IIA-Disposal Activities of Council Directive 2006/12/EC on Waste.

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GLOSSARY OF TERMS

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts 1996 to 2008, (the Acts), unless otherwise defined in this section.

Abnormal Operations	Any technical stoppage, disturbance, or failure of any of the purification devices or the measurement devices, during which the concentrations in the discharges to the air may exceed the prescribed emission limit values.
Adequate Lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Application	The application by the licensee for this waste licence.
Appropriate Facility	A waste management facility, duly authorised under relevant law and technically suitable.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
BAT	Best Available Techniques.
Bi-annually	All or part of a period of six consecutive months.
Biennially	Once every two years.
Biodegradable Waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
BOD	5 day Biochemical Oxygen Demand.
Breakdown	Any malfunction or technical stoppage, disturbance, or failure of the incineration plant or equipment.
CCTV	Closed Circuit Television.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Condition	A condition of this licence.
Consignment Note	As specified in the Waste Management (Movement of Hazardous Waste) Regulations (SI No. 147 of 1998).
Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Containment Boom	A boom which can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	08.00 hrs to 22.00 hrs.

dB(A)	Decibels (A weighted).
Dioxins and Furans	As defined in Council Directive 2000/76/EC on the incineration of waste.
DO	Dissolved Oxygen.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4.
Emission Limits	Those limits, including concentration limits and deposition levels established in *Schedule B: Emission Limits,* of this licence.
EMP	Environmental Management Programme.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	Any site or premises used for the purposes of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
GC/MS	Gas Chromatography/Mass Spectroscopy.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
Incident	The following shall constitute an incident for the purposes of this licence: a) an emergency; b) abnormal operation; c) breakdown; d) any emission that does not comply with the requirements of this licence; e) the attainment or exceedance of any trigger level specified in this licence; and, f) any indication that environmental pollution has, or may have, taken place.
Industrial Waste	As defined in Section 5(1) of the Waste Management Acts, 1996 to 2008.
Inert Waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
Incineration Plant	As defined in Council Directive 2000/76/EC on the incineration of waste.
ICP	Inductively Coupled Plasma Spectroscopy.
Incinerator Residue	As defined in Council Directive 2000/76/EC on the incineration of waste.
K	Kelvin.

kPa	Kilo Pascals.
Leq	Equivalent continuous sound level.
Licensee/Applicant	Dublin City Council, Civic Offices, Wood Quay, Dublin 8.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Local Authority	Dublin City Council.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mass Flow Limit	An Emission Limit Value which is expressed as the maximum mass of a substance which can be emitted per unit time.
Mass Flow Threshold	A mass flow rate, above which, a concentration limit applies.
Mixed Municipal Waste	Mixed municipal waste means waste from households as well as commercial, industrial and institutional waste, which because of its nature and composition is similar to waste from households, but excluding fractions indicated in the Annex to Decision 94/3/EC (4) under heading 20 01 that are collected separately at source and excluding the other wastes indicated under heading 20 02 of that Annex.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Movement document	As specified under Article 4(1)(b), Annex 1A of Regulation (EC) No. 1013/2006
Night-time	22.00 hrs to 08.00 hrs.
Noise Sensitive Location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation/facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Nominal Capacity	As defined in Council Directive 2000/76/EC on the incineration of waste.
Notification Document	As specified under Article 4(1)(a), Annex 1A of Regulation (EC) No. 1013/2006
OD	Ordinance datum Malin head.
Oil Separator	Device installed according to the draft European Standard prEN 858 (Installations for the separation of light liquids, e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Recyclable Materials	Those waste types, such as cardboard, batteries, gas cylinders, etc, which may be recycled.

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Residual Waste	In the context of intake to an incinerator/WtE plant, is waste that has been subjected to pre-treatment (including, *inter alia*, pre-segregation, sorting, mechanical-biological treatment) to extract, to the maximum practical and available extent having regard to BAT, the recyclable/reusable components.
Regional Fisheries Board	Eastern Regional Fisheries Board.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
Sludge	The accumulation of organic and inorganic solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with greater than 2% dry matter.
SOP	Standard Operating Procedure.
Standard method	A National, European or internationally recognised procedure (e.g., I.S. EN, ISO, CEN, BS or equivalent) or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed by the Agency.
TOC	Total Organic Carbon.
The Agency	Environmental Protection Agency.
Treatment	Treatment means the physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Water Services Authority	Dublin City Council.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with no more than one measurement in any one week.
WEEE	Waste Electrical & Electronic Equipment.
WWTP	Waste Water Treatment Plant.

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DECISION & REASONS FOR THE DECISION

The Environmental Protection Agency is satisfied, on the basis of the information available, that, subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2008.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, all submissions received from other parties and the reports of its inspector together with objections to the proposed decision and report and recommendations of the chairperson of the oral hearing.

PART I - SCHEDULE OF ACTIVITIES LICENSED

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2008, the Environmental Protection Agency (the Agency), under Section 40(1) of the said Acts hereby grants this waste licence to Dublin City Council, Civic Offices, Wood Quay, Dublin 8 to carry on the waste activities listed below at Pigeon House Road, Poolbeg, Dublin 4 subject to conditions, with the reasons therefor and the associated schedules attached thereto, set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2008

Class 8.	**Incineration on land. [Principal Activity]**
Class 12.	**Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.**
Class 13.	**Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.**

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2008

Class 3.	**Recycling or reclamation of metals and metal compounds.**
Class 4.	**Recycling or reclamation of other inorganic materials.**
Class 6.	**Recovery of components used for pollution abatement.**
Class 9.	**Use of any waste principally as a fuel or other means to generate energy.**
Class 13.	**Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.**

PART II - SCHEDULE OF ACTIVITIES REFUSED

Refused Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2008

Class 6.	**Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.** ***Reason: The addition of biocides to the cooling water is a normal and integrated step in the facility technical processes and is not an independent waste treatment process for wastes imported to, or produced on, the site.***
Class 10.	**Release of waste into a water body (including a seabed insertion).** ***Reason: The discharge of cooling water is a normal and integrated step in the facility technical processes and is not an independent waste treatment process for wastes imported to, or produced on, the site.***
Class 7.	**Physico-chemical treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 8 to 10 of this Schedule (including evaporation, drying and calcination).** ***Reason: The operation of the flue gas abatement system is a normal and integrated step in the facility technical processes and is not an independent waste treatment process for wastes imported to, or produced on, the site.***

Refused Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2008

Class 8.	**Oil re-refining or other re-uses of oil.** ***Reason: The use of a fuel in the auxiliary burners is a normal and integrated step in the facility technical processes and is not an independent waste treatment process for wastes imported to, or produced on, the site***

PART III - CONDITIONS

CONDITION 1. SCOPE

1.1 Waste activities at the facility shall be restricted to those listed and described in *Part I Activities Licensed* and as set out in the licence application and subject to the conditions of this licence.

1.2 For the purposes of this licence, the facility is the combined areas of land outlined in red, blue and purple on Figure 1: 'Ownership Boundary' of the licence application. Any reference in this licence to "facility" shall mean the area thus outlined. The licensed activities shall be those carried on only within the area outlined.

1.3 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2008 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

1.4 The maximum tonnage to be accepted at the facility shall not exceed 600,000 tonnes per annum.

1.5 The waste activities at this facility shall be limited to the waste categories and quantities as set out in *Schedule A: Limitations*, of this licence.

1.6 Only residual wastes shall be incinerated at the facility.

1.7 No hazardous wastes shall be incinerated at the facility.

1.8 Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.

1.9 The facility shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence become part of this licence.

1.10 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in:

(a) a material change or increase in:

- The nature or quantity of any emission,
- The abatement/treatment or recovery systems,
- The range of processes to be carried out,
- The fuels, raw materials, intermediates, products or wastes generated, or

(b) any changes in:

- Site management infrastructure or control with adverse environmental significance,

shall be carried out or commenced without prior notice to, and without the prior agreement of, the Agency, and subject to compliance with BAT .

1.11 Having regard to the nature of the activity and arrangements necessary to be made in connection with the carrying on of the activity, the specified period for the purposes of Section 49(2) of the Waste Management Acts 1996 to 2008, is 8 years.

REASON: To clarify the scope of this licence.

CONDITION 2. MANAGEMENT OF THE FACILITY

2.1 Facility Management

2.1.1 The licensee shall employ a suitably qualified and experienced (minimum 10 years in incinerator operation) facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced deputy (minimum 5 years incinerator experience) shall be present on the facility at all times during its operation or as otherwise required by the Agency.

2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

2.2 Management Structure

2.2.1 Prior to the commencement of waste activities, the licensee shall submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information:

(a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;

(b) details of the responsibilities for each individual named under (a) above; and

(c) details of the relevant education, training and experience held by each of the persons nominated under (a) above.

2.3 Environmental Management System (EMS)

2.3.1 Prior to the acceptance of waste at the facility the licensee shall establish and maintain an Environmental Management System (EMS). The EMS shall be updated on an annual basis and submitted to the Agency as part of the Annual Environmental Report (AER).

2.3.2 The EMS shall include as a minimum the following elements:

2.3.2.1 Management and Reporting Structure.

2.3.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall prepare a schedule of Environmental Objectives and Targets. The Schedule shall as a minimum provide for a feasibility study on the export of energy to the Ringsend WWTP for the drying of WWTP sludge, a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste, and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.3.2.3 Environmental Management Programme (EMP)

(a) The licensee shall, not later than six months from the date of commencement of waste activities, submit to the Agency for agreement an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.3.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

(i) designation of responsibility for targets;

(ii) the means by which they may be achieved;

(iii) the time within which they may be achieved.

(b) The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

(c) A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.

2.3.2.4 Documentation

(a) The licensee shall establish and maintain an Environmental Management Documentation System which shall be to the satisfaction of the Agency.

(b) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.3.2.5 Corrective Action

The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.

2.3.2.6 Awareness and Training

The licensee shall establish and maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training shall be maintained.

2.3.2.7 Efficient Process Control

The licensee shall, in accordance with the Test Programme/ Commissioning Plan, establish and maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

2.3.2.8 Public Awareness & Communications Programme

Co-incident with the commencement of development of the facility, the licensee shall establish and maintain a Public Awareness and Communications Programme to ensure that members of the public are informed and can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility. The Public Awareness & Communications Programme as a minimum shall include the following:

(a) Maintain information at the facility as required in Condition 11.2 which shall be available for inspection at all reasonable times;

(b) Maintain the following information via the internet:

(i) real time data from on-line monitoring of the incinerator (the parameters, format and timeframe for publication to the internet shall be agreed by the Agency but as a minimum shall include combustion chamber temperature as outlined in *Schedule C.1.1: Process Control,* of this licence);

(ii) a weekly summary of continuous emission monitoring data;

(c) Establish a Community Liaison Committee and facilitate regular meetings of that Committee at a frequency to be agreed with the Committee. The Agenda for each meeting shall be prepared and circulated in advance.

REASON: ***To make provision for the proper management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.***

CONDITION 3. INFRASTRUCTURE AND OPERATION

3.1 The licensee shall establish all infrastructure referred to in the licence application and in this licence prior to the commencement of the licensed activities or as required and specified by the conditions of this licence.

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3.2 Monitoring Infrastructure

3.2.1 Meteorological Station

3.2.1.1 The licensee shall operate a weather monitoring station on the site of the facility, at a location agreed by the Agency which records the requirements specified in *Schedule C.5: Meteorological Monitoring,* of this licence.

3.2.1.2 The licensee shall provide and maintain in a prominent location on the facility a windsock, or other wind direction indicator, which shall be visible from the public roadway outside the site.

3.2.2 Monitoring equipment shall be vibration isolated in accordance with manufacturers' instructions.

3.2.3 The licensee shall install, at monitoring and sampling locations, appropriate equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.

3.2.4 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.

3.2.5 The licensee shall maintain all sampling and monitoring points, and clearly label and name all sampling and monitoring locations, so that they may be used for representative sampling and monitoring.

3.3 Facility Notice Board

3.3.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.

3.3.2 The board shall clearly show:-

(a) the name and telephone number of the facility;

(b) the waste acceptance hours;

(c) the name of the licence holder;

(d) an emergency out of hours contact telephone number;

(e) the waste licence reference number; and

(f) where environmental information relating to the facility can be obtained.

3.4 Facility Security

3.4.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground.

3.4.2 Prior to the acceptance of waste at the facility, the licensee shall install a CCTV system which records all truck movement into and out of the facility, as well as operations in the waste reception hall, bunker, and ash storage areas. The CCTV system shall be operated at all times and copies of recordings kept on site for a period to be agreed by the Agency. Copies of these stored recordings shall be made available to the Agency on request.

3.5 Waste Inspection and Quarantine Areas

3.5.1 An impermeable Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.

3.5.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection and waste quarantine areas shall be clearly identified and segregated from each other, and quarantined waste shall be appropriately stored and clearly labelled.

3.5.3 Drainage from these areas shall be directed to a process water storage tank that is not connected to the stormwater system. Water from the storage tank shall be either used as process water in the incineration plant, or if unsuitable, directed to the waste bunker. It shall not be discharged to the surfacewater or foul sewer system.

3.6 The licensee shall provide and maintain a weighbridge system at the facility.

3.7 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

3.8 Fire-water Retention

3.8.1 The licensee shall to the satisfaction of the Agency, establish and maintain a suitable fire-water risk management programme. The risk management programme shall be fully implemented in advance or acceptance of waste at the facility for disposal.

3.8.2 In the event of a fire or a spillage to storm water, the site storm water shall be diverted to suitable containment. The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention.

3.9 Incinerator residues

3.9.1 The licensee shall provide, on site and in accordance with Condition 8.8, the following minimum incinerator residue storage capacity:

(a) bottom ash/non-hazardous boiler ash: 6,000m^3 ; and

(b) fly ash /flue gas cleaning ash/hazardous boiler ash: 700m^3.

3.9.2 The licensee shall carry out an investigation into the feasibility of the use of an enclosed conveyor system for the transfer of bottom ash to trucks/containers and to any off-site storage area with reference to the EC Reference Document on Best Available Techniques on Emissions from Storage. A report on the methods to be used for the handling/transfer of the incinerator residues shall be submitted to the Agency, for agreement, prior to the commencement of the waste activity.

3.10 Prior to the date of commencement of the waste activities at the facility, the licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Such measures shall at a minimum include the following:-

3.10.1 Installation and maintenance of negative pressure at the waste reception, waste bunker, waste storage and incinerator residue storage/loading areas of the incineration plant to ensure no significant escape of odours or dust.

3.10.2 Implementation of an odour and fugitive dust management system to include periods when process lines and / or induced draft fans are not operational.

3.11 Prior to the commencement of a waste activity the licensee shall ensure that adequate standby and back up equipment is provided on site to provide for contingency arrangements in the event of a breakdown of critical waste handling, treatment or abatement equipment.

3.12 Tank and Drum Storage Areas

3.12.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein. Bunds should be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).

3.12.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:-

(a) 110% of the capacity of the largest tank or drum within the bunded area; or

(b) 25% of the total volume of substance which could be stored within the bunded area.

3.12.3 All drainage from bunded areas shall be diverted for collection and safe disposal.

3.12.4 All inlets, outlets, vent pipes, valves and gauges shall be within the bunded area.

3.12.5 The integrity and water tightness of all bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated to the satisfaction of the Agency and shall be reported to the Agency following installation and prior to their use as a storage area. The licensee shall repeat the test at five year intervals and include the results of the tests in the AER.

3.13 Surface Water Management

3.13.1 Effective surface water management infrastructure shall be provided and maintained at the facility.

3.13.2 As provided for in the licence application, all surface water runoff from external areas shall be collected in a storage tank for use as process water in the incineration plant. Surplus storm-water is to be discharged to foul sewer.

3.14 Drainage system, pipeline identification

3.14.1 Prior to the commencement of waste activities, all wastewater gullies, drainage grids and manhole covers shall be painted with red squares whilst all surface water discharge gullies, drainage grids and manhole covers shall be painted with blue triangles. These colour codes shall be maintained so as to be visible at all times during facility operation, and any identification designated in this licence (e.g. SW1) shall be inscribed on these manholes.

3.14.2 The licensee shall install and maintain silt traps and oil separators at the facility to ensure that all storm water discharges (other than roof rain water) from the facility pass through a silt trap and oil separator prior to discharge. The separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).

3.14.3 The drainage system, bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal.

3.14.4 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility.

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3.15 Waste Acceptance / Removal Hours

3.15.1 Waste may be accepted at the facility only between the hours of 0800 hrs to 2200 hrs Monday to Saturday inclusive.

3.15.2 Incinerator residues destined for ships within the Dublin Port Area may be removed from the facility at any time. Otherwise waste may be removed from the facility only between the hours of 0800 hrs to 1830 hrs Monday to Friday inclusive and 0800 hrs to 1400 hrs on Saturdays.

3.15.3 Waste shall not be accepted at, or removed from, the facility outside the hours specified in Conditions 3.15.1 and 3.15.2, or on Sundays or Bank Holidays, without the written approval of the Agency.

3.16 Incineration Plant

3.16.1 Prior to the commencement of waste activities the licensee shall provide and maintain incineration plant as specified in the licence application (Reference W0232-01), or as may be varied with the written approval of the Agency.

3.16.2 The incinerator plant design and construction shall incorporate the following:

(a) The stack elevation of the incineration plant (Emission Point Reference Nos A2-1 & A2-2) shall at minimum be 105m OD.

(b) Appropriate seismic design of the foundation.

3.17 Incineration plant - Test programme/Commissioning Plan

3.17.1 The licensee shall at least three months prior to the date of plant commissioning, submit to the Agency for its agreement a Test Programme/Commissioning Plan.

3.17.2 The Test Programme/Commissioning Plan shall as a minimum:

(a) Verify the residence time as well as the minimum temperature and the oxygen content of the exhaust gas which will be achieved during normal operation and under the most unfavourable operating conditions anticipated.

(b) Demonstrate that each combustion chamber will be able to achieve 850°C for two seconds on a continuous basis.

(c) Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence.

(d) Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.

(e) Confirm that all measurement equipment or devices (including thermocouples) used for the purpose of establishing compliance with this licence has been subjected, in situ, to its normal operating temperature to prove its operation under such conditions.

(f) Establish a list of the standby and back up equipment required to provide for contingency arrangements in the event of a breakdown of critical waste handling, treatment or abatement equipment.

3.17.3 The Test Programme/Commissioning Plan shall be implemented as agreed and a report on its implementation shall be submitted to the Agency on completion.

3.17.4 The Incineration plant shall not be operated (outside of the agreed Test Programme/Commissioning Plan) until such time as it is authorised to do so by the Agency.

3.18 Incineration Plant operations – additional requirements.

3.18.1 The plant shall be operated in accordance with the criteria for operation and control as determined in the test programme in Condition 3.17.

3.18.2 The nominal capacity of the plant shall be 70 tonnes per hour (35t per line).

3.18.3 Prior to the commencement of waste activities the licensee shall establish and maintain standard operating procedures for the operation of the Incineration plant. These shall incorporate the process controls identified in *Schedule C: Control and Monitoring*, of this licence.

3.18.4 The plant shall be operated in order to achieve a level of incineration such that the Total Organic Carbon (TOC) content of the slag and bottom ashes is less than 3% or their loss on ignition is less than 5% of the dry weight of the material.

3.18.5 Even under the most unfavourable of conditions, the incineration plant shall be operated in such a way that, after the last injection of combustion air, the gas resulting from the process is raised, in a controlled and homogeneous fashion, for a duration of two seconds to a temperature of 850°C , as measured near the inner wall or at another representative point of the combustion chamber as authorised by the Agency. Waste shall be charged into the incinerator only when these operating conditions are being complied with and when the continuous monitoring shows that the emission limit values are not being exceeded.

3.18.6 Each line of the incineration plant shall be equipped with at least one auxiliary burner. The burner shall be switched on automatically when the temperature of the combustion gases after the last injection of combustion air falls below 850°C. The auxiliary burner shall also be used during plant start-up and shut-down operations in order to ensure the temperature of 850°C is maintained at all times during the operations and as long as unburned waste is in the combustion chamber.

3.18.7 During start up or shut down or when the temperature of the combustion gas falls below 850°C, the auxiliary burner shall not be fed with fuels that may cause higher emissions than those resulting from the burning of gas oil, as defined in Council Directive 75/716/EEC, liquefied gas or natural gas.

3.18.8 Each process line of the incineration plant shall have and operate an automatic system to prevent waste feed to that line:

(a) At start-up, until the temperature of 850°C has been reached;

(b) Whenever the temperature of 850°C is not maintained;

(c) Whenever the continuous measurements show that any emission limit value is exceeded due to disturbances of the purification devices; and

(d) Whenever stoppages, disturbances, or failure of the purification devices or the measurement devices may result in the exceedance of the emissions limit values.

3.18.9 The boiler shall be equipped with an automatic cleaning system to minimise the reformation of dioxins and furans.

3.18.10 The waste bunker shall be equipped with the following:-

(a) a smoke detection system with alarm and water cannon for fire control; and

(b) a detector for the presence of explosive gases.

3.19 Abnormal operation/breakdown

3.19.1 In the case of a breakdown, the licensee shall reduce or close down operation of the relevant process line(s), as soon as practicable, until normal operations can be restored. The licensee shall not resume incineration operations except in accordance with a protocol agreed with the Agency.

3.19.2 In the case of abnormal operations:

(a) the licensee shall under no circumstances continue to incinerate waste in the relevant process line for a period of more than four hours uninterrupted where emission limit values specified in *Schedule B.1: Emission Limits to Air,* of this licence are exceeded, and

(b) the cumulative duration of abnormal operation over one calendar year shall be less than 60 hours, and

(c) the total dust content of the emissions from the combined stacks (A2-1 and A2-2) shall under no circumstances exceed 150 mg/m^3 (expressed as a half-hourly average) and the emission limit values specified in Schedule B.1 for CO and TOC shall not be exceeded.

3.20 There shall be no bypass of the air abatement system.

3.21 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.

3.22 All pump sumps or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or oil separator, shall be fitted with high liquid level alarms (or oil detectors as appropriate) prior to the commencement of waste activities.

3.23 Engineering Works

3.23.1 All construction work shall be supervised by an appropriately qualified person, and that person, or persons, shall be present at all times during which relevant works are being undertaken.

3.23.2 Following the completion of infrastructural works and prior to operation, the licensee shall commission an independent construction quality assurance validation and submit the validation report to the Agency on completion. The report shall, as appropriate, include the following information:-

(a) A description of the works;

(b) As-built drawings of the facility;

(c) Records and results of all integrity and validation tests carried out (including failures) including a report on the details of the computational fluid dynamic modeling of the incineration plant;

(d) Drawings and sections showing the location, capacity and discharge points of all pipes, drains, bunds, bunkers and waste storage areas;

(e) Name(s) of contractor(s)/individual(s) responsible for undertaking the work;

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(f) Records of any problems and the remedial works carried out to resolve those problems; and

(g) Any other information requested in writing by the Agency.

3.24 The intake screens for the cooling water abstraction shall be designed so as to permit a continuous backwash to the estuary. The licensee shall ensure that appropriate screens are used so-as to protect smolts during their passage past the intake point.

3.25 The licensee shall having regard to Conditions 7.1 and 7.2, assess the feasibility of an air cooled system having regard to the EC Reference Document on the application of Best Available Techniques to Industrial Cooling Systems, November 2000 and the cooling needs of the facility. The assessment shall be submitted to the Agency prior to the commencement of construction.

REASON: ***To provide for adequate infrastructure and appropriate operation of the facility to ensure protection of the environment. To provide for the proper management of waste at the facility in accordance with Directive 2000/76/EC on the incineration of waste.***

CONDITION 4. INTERPRETATION

4.1 Emission limits for emissions to atmosphere from the incineration plant, in this licence shall be interpreted in the following way.

4.1.1 Continuous Monitoring

4.1.1.1 The half-hourly average values and the 10-minute averages shall be determined within the effective operating time (excluding the start-up and shut-off periods if no waste is being incinerated) from the measured values after having subtracted the value of the confidence interval specified at Condition 4.1.1.2 below. The daily average values shall be determined from those validated average values.

4.1.1.2 At the daily emission limit value level, the values of the 95% confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

Carbon monoxide:	10 %
Sulphur dioxide:	20 %
Nitrogen dioxide:	20 %
Total dust:	30 %
Total organic carbon:	30 %
Hydrogen chloride:	40 %
Hydrogen fluoride:	40 %
Ammonia	40 %

4.1.1.3 To obtain a valid daily average value no more than five half hourly average values in any day shall be discarded due to malfunction or maintenance of the continuous measurement system. No more than ten daily average values per year shall be discarded due to malfunction or maintenance of the continuous measurement system.

4.1.2 Non-Continuous Monitoring

4.1.2.1 For periodic measurements, compliance shall be determined from the measured value after having subtracted the uncertainty error for the selected method of sampling and analysis for each relevant pollutant.

4.1.2.2 For any parameter where, due to sampling/analytical limitations, a 30 minute sampling period is inappropriate, a suitable period between 30 minutes and 8 hours should be employed and the value obtained therein shall not exceed the emission limit value.

4.1.2.3 For all other parameters, no 30 minute mean value shall exceed the emission limit value.

4.1.2.4 For flow, no hourly or daily mean value shall exceed the emission limit value.

4.1.3 The results of the measurements made to verify compliance with the emission limit values shall be standardised at the following conditions:

Temperature	273 K
Pressure	101.3 kPa,
Oxygen	11 %

dry gas, in exhaust gas of incineration plants.

4.2 Emission limit values for emissions to waters in this licence shall be interpreted in the following way:-

4.2.1 Continuous monitoring:

4.2.1.1 98% of all flow values over the year, calculated as m^3/hr, shall not exceed the emission limit value.

4.2.1.2 No daily mean flow value shall exceed the emission limit value.

4.2.1.3 98% of all temperature values over the year, calculated as an hourly average, shall not exceed the emission limit value.

4.2.1.4 No temperature value shall exceed the emission limit value by more than 0.5°C.

4.2.1.5 No total residual chlorine value shall exceed the emission limit value.

4.2.2 Non-Continuous Monitoring:

4.2.2.1 No pH value shall deviate from the specified range.

4.2.2.2 No temperature value shall exceed the limit value.

4.2.2.3 For parameters other than pH, temperature, chlorine and flow, eight out of ten consecutive results, calculated as daily mean concentration or mass emission values on the basis of flow proportional composite sampling, shall not exceed the emission limit value. No individual result similarly calculated shall exceed 1.2 times the emission limit value.

4.2.2.4 For parameters other than pH, temperature, chlorine and flow, no grab sample value shall exceed 1.2 times the emission limit value.

4.3 Noise

Noise from the activity shall not give rise to sound pressure levels (Leq,T) measured at noise sensitive locations which exceed the limit value(s).

REASON: To clarify the interpretation of emission limit values fixed under the licence.

CONDITION 5. EMISSIONS

5.1 No specified emission from the facility shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.

5.2 The licensee shall ensure that there are no unauthorised discharges of waste water from the cleaning of exhaust gas to surface water, sewer or ground.

5.3 The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.

5.4 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at noise sensitive locations.

5.5 The licensee shall ensure that all or any of the following:

- Vermin,
- Birds,
- Flies,
- Mud,
- Dust,
- Litter,

associated with the activity do not result in an impairment of, or an interference with amenities or the environment at the facility or beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary. The licensee shall consult with the National Parks and Wildlife Service (where relevant) with regard to any method proposed by the licensee to control or prevent any such impairment/interference. In any event the proposed method shall not cause environmental pollution.

5.6 The licensee shall ensure that all vehicles delivering waste to, and removing waste and materials from, the facility are appropriately covered.

5.7 The licensee shall, prior to the commencement of the waste activity, submit a report to the Agency on the feasibility and reliability of monitoring methods/techniques to determine the Cr(VI) fraction of the Total Cr, the particle size distribution and the particle number of the ultrafine ($<PM_{0.1}$) fraction of the total dust from Emission Point Reference No. A2-1 & A2-2. The licensee shall carry out such monitoring as is agreed by the Agency following an evaluation of the recommendations of the report.

5.8 No emission of process cooling water shall cause, in the receiving water outside the mixing zone

(a) the temperature to exceed the unaffected temperature by more than 1.5°C, during the period 1st May to 30th October or

(b) the temperature to exceed 21.5°C, or

(c) the total residual chlorine level to exceed 0.005mg/l (as HOCl).

The mixing zone shall not exceed 25% of the estuarine cross sectional area at any point. The thermal discharge shall not cause sudden variations in temperature in the receiving water.

5.9 No substance shall be discharged in a manner, or at a concentration which, following initial dilution, causes tainting of fish or shellfish.

REASONS: To control emissions from the facility and provide for the protection of the environment. To provide for the control of nuisances.

CONDITION 6. CONTROL AND MONITORING

6.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Control & Monitoring* of this licence:

6.1.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures.

6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined.

6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.

6.1.4 Where analysis is sub-contracted it shall be to a competent laboratory.

6.2 The licensee shall carry out a noise survey of the site operations within three months after the commencement of the licensed activity, followed by quarterly monitoring intervals for a period of three years, and then biannually thereafter. The survey programme shall be submitted to the Agency in writing prior to the surveys being carried out. The survey programme shall be in accordance with *Schedule C: Control & Monitoring,* of this licence or as otherwise agreed by the Agency. A record of the survey results shall be available for inspection by any authorised persons of the Agency, at all reasonable times and a summary report of this record shall be included as part of the AER.

6.3 Subject to the requirements and provisions of Article 11 of the Council Directive 2000/76/EC on the incineration of waste, the Agency may amend the frequency, locations, methods and scope of monitoring as required by this licence and shall notify the licensee accordingly. The licensee shall provide such information concerning such amendments as may be requested in writing by the Agency and such alterations shall be carried out within any timescale nominated by the Agency.

6.4 Monitoring and analysis equipment shall be operated and maintained so that all monitoring results accurately reflect any emission, discharge or environmental parameter specified in this licence.

6.5 All persons conducting the sampling, analyses, monitoring and interpretation as required by this licence shall be suitably competent.

6.6 Measurements for the determination of concentrations of air and water polluting substances shall be carried out representatively.

6.7 Sampling and analysis of all pollutants including dioxins and furans as well as reference measurement methods to calibrate automated measurement systems shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

6.8 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer. For Incineration Plant, the appropriate installation and the functioning of the automated monitoring equipment for emissions into air shall be subject to an annual surveillance test. Calibration shall be done by means of parallel measurements with the reference methods at least every three years.

6.9 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the waste activities are being carried on, unless alternative sampling or monitoring has been agreed, in writing, by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.

6.10 The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.

6.11 The readouts from continuous emission monitors shall report monitoring compliance information that enables direct comparison with the emission limit values specified in *Schedule B: Emission Limits*, of this licence.

6.12 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions. This programme shall be included in the annual Environmental Management Programme.

6.13 Monitoring off-site shall be subject to the agreement of the property owner(s) where appropriate.

6.14 Residues from the incineration plant shall be subject to the monitoring and analysis specified in *Schedule C.4.1: Monitoring of Incinerator Residues,* of this licence, prior to determining the route for disposal or recycling. The monitoring and analysis shall establish the physical and chemical characteristics and polluting potential of the residues.

6.15 The licensee shall as part of the EMP (Condition 2) prepare and maintain a hypochlorite/chlorine dosing plan for the cooling water system. This plan is to be submitted to the Agency for agreement following completion of the commissioning of the incineration plant. A summary of the plan implementation is to be included as part of the AER.

6.16 Receiving Water

6.16.1 The acute toxicity of the undiluted final effluent to at least four aquatic species from different trophic levels shall be determined by standardised and internationally accepted procedures and carried out by a competent laboratory. The name of the laboratory and the scope of testing to be undertaken shall be submitted, in writing, to the Agency, within three months of the date of commencement of licensed activity. Once the testing laboratory and the scope of testing have been agreed by the Agency, the Agency shall decide when this testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency.

6.16.2 Having identified the most sensitive species outlined in Condition 6.16.1, subsequent compliance toxicity monitoring on the two most sensitive species shall be carried out by the laboratory identified in Condition 6.16.1 as per *Schedule C: Control and Monitoring* of this licence. The Agency shall decide when this testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency within six weeks of completion of the testing.

6.16.3 The licensee shall undertake a biological survey of the receiving water upstream and downstream of the cooling water outfall within twelve months of commencement of the waste activity and biennially thereafter. The licensee shall have regard to the Dublin City Council Biodiversity Plan in scoping the survey and shall consult with

the Agency and the Eastern Regional Fisheries Board on the timing, nature and extent of the survey. The survey shall, as a minimum, include a fish diversity study.

6.16.4 Screens on the discharge pipe shall be examined and details recorded once a week during the period 1st May to 30th September.

6.16.5 A report of the testing, survey and examination referred to in paragraphs 6.16.1, 6.16.2 and 6.16.3 above shall be included as part of the AER.

6.17 The licensee shall undertake a thermal survey of the estuary upstream and downstream of the cooling water channel outfall within twelve months of commencement of the activity. The licensee shall consult with the Agency on the timing, nature and extent of the survey (to include assessment of the design and effectiveness of the cooling water discharge system in distributing the thermal load to the estuary, and the optimisation of the ratio between cooling water volume and temperature), and shall develop a survey programme to the satisfaction of the Agency. The survey programme shall be submitted to the Agency in writing at least one month before the survey is to be carried out. A record of the survey results shall be available for inspection by any authorised persons of the Agency, at all reasonable times and a summary report of this record shall be included as part of the AER. The survey should be repeated as required by the Agency.

6.18 In complying with Condition 6.17, the licensee shall take into account other licensed industrial cooling water discharges in the immediate area and may, with the agreement of the Agency, submit a joint (with these other industrial discharges) thermal ambient river survey proposal.

REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of control and monitoring of emissions.

Condition 7 RESOURCE USE AND ENERGY EFFICIENCY

7.1 The licensee shall, prior to the commencement of construction of the facility, review the energy efficiency aspects of the design to maximise the recovery of the energy generated from the incineration of waste. Surplus energy from the operation of the facility shall be exported to the Dublin district heating system (when such system is available) and the National Grid.

7.2 The licensee shall build and operate the facility to achieve an energy efficiency of, as a minimum, 0.65 using the formula below to calculate Energy Efficiency:

Energy Efficiency = $[E_p-(E_f+E_i)] / [0.97 \times (E_w + E_f)]$ where

E_p = annual energy produced as heat or electricity (GJ/year) (heat produced for commercial use is multiplied by 1.1 and electricity is multiplied by 2.6)

E_f = annual energy input to the system from fuels contributing to the production of steam (GJ/year)

E_w = annual energy contained in the waste input using the lower net calorific value of the waste (GJ/year)

E_i = annual energy imported excluding E_w and E_f

and 0.97 is a factor accounting for energy losses.

7.3 The licensee shall carry out an audit of the energy efficiency of the facility within one year of the date of commencement of waste acceptance. The licensee shall consult with the Agency on the nature and extent of the audit and shall develop an audit programme to the satisfaction of the Agency. The audit programme shall be submitted to the Agency in writing at least one month before the audit is to be carried out. The energy efficiency audit report shall, as a minimum, include:

(a) A review of opportunities for increasing the overall efficiency of the facility over the coming year,
(b) Progress with those opportunities identified in the previous report,
(c) The energy efficiency of the facility.

The report shall include a full breakdown of each parameter in the equation referred to in Condition 7.2 including the net usable energy produced per tonne of waste processed.

The audit shall be repeated annually and submitted to the Agency in the AER.

7.4 The recommendations of the audit shall, where appropriate, be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.

7.5 The licensee shall identify opportunities for:

(a) The reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible.

(b) The recovery/recycling of residues.

(c) Optimisation of fuel and raw material usage on site.

These shall be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.

REASON: To ensure that resources and energy efficiency are used to maximise the environmental performance of the facility.

Condition 8 MATERIALS HANDLING

8.1 Disposal or recovery of waste shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.

8.2 Waste Acceptance/Removal and Characterisation Procedures

8.2.1 Wastes shall be accepted at/removed from the facility only from/by an authorised or an exempted carrier under National or European legislation or Protocols. Copies of the waste collection permits (where required) shall be maintained at the facility.

8.2.2 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the appropriate storage capacity available for such waste.

8.2.3 Prior to commencement of waste acceptance at the facility, the licensee shall establish and maintain, and submit to the Agency for written approval, detailed written procedures for the acceptance and handling of wastes. These procedures shall include the following:

(a) Procedures for waste profiling from new and known customers, inspection at the point of entry to the facility and waste characterisation;

(b) Methods for the characterisation of waste sent off-site for disposal/recovery, in order to distinguish between non-hazardous and hazardous wastes. In the case of materials dispatched to landfill, such methods shall have regard to Decision 2003/33/EC on establishing the criteria and procedures for the acceptance of waste at landfills or any revisions pursuant to article 16 and annex II of Directive 1999/31/EC on landfill of waste;

(c) Procedures for the reception and weighing of the incoming and outgoing wastes;

(d) Procedures for the handling of waste and incinerator residues including bunker and silo management;

(e) Procedures to determine the mass of each category of waste in accordance with, and by reference to, the relevant EWC codes as outlined by Commission Decision 2000/532 of 3rd May 2000, as amended.

8.3 Any waste deemed unsuitable for processing at the facility or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.

8.4 The licensee shall ensure that waste from the incineration plant, prior to being sent off-site for disposal or recovery, is:-

8.4.1 segregated, classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling;

8.4.2 stored in designated areas, protected as may be appropriate, against spillage and leachate run-off;

8.4.3 stockpiled in such a manner as to minimise dust generation.

8.5 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended) shall be consigned for recovery without the prior agreement of the Agency.

8.6 Unless otherwise agreed in writing the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.

8.7 Waste shall be accepted at the facility only from known customers or new customers subject to initial waste profiling and waste characterisation off-site.

8.8 All incinerator residues (ashes and abatement system derived material) shall be stored within the facility building, pending off-site disposal or recovery.

8.9 Hazardous boiler ash and flue gas cleaning residues shall be stored at dedicated areas within enclosed structures (incorporating dust curtains or equivalent approved, and vented through self cleaning filters), or sealed bins on concrete hardstanding with contained drainage.

8.10 Waste sent off-site for recovery or disposal shall be conveyed only by holders of waste collection permits issued under National or European legislation or Protocols to an appropriate facility authorised to accept such waste. The waste shall be transported from the site of the activity to the site of recovery/disposal in a manner which will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.

8.11 All waste processing is to be undertaken within the facility building.

8.12 Prior to the acceptance and use in the process of 'grey water' (effluent from Ringsend WWTP), the licensee shall establish and maintain protocols for the safe and appropriate management and use of this water. This protocol shall be maintained as part of the EMS identified in Condition 2.

REASON: To ensure that the handling of materials does not adversely affect the environment.

Condition 9 ACCIDENT PREVENTION AND EMERGENCY RESPONSE

9.1. The licensee shall, prior to commencement of waste activities ensure that a documented Accident Prevention Policy is in place which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment.

9.2. The licensee shall, prior to commencement of waste activities submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary. The procedure should also develop appropriate responses to off-site emergency situations that may have implications for the safe operation of the licensees site.

9.3. In the event of an incident the licensee shall immediately:-

(a) note the date, time and place of the incident;

(b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;

(c) isolate the source of any such emission;

(d) evaluate the environmental pollution, if any, caused by the incident;

(e) identify and execute measures to minimise emissions/malfunctions and the effects thereof and

(f) notify any other appropriate Agency or Authority.

The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring to:-

(i) identify and put in place measures to avoid reoccurrence of the incident; and

(ii) identify and put in place any other appropriate remedial action.

9.4. Emergencies

9.4.1 In the event of a breakdown or any other occurrence where both process lines of the incineration plant are being shut-down, waste (with the exception of incinerator residues):

(a) arriving at the facility shall be transferred directly to an appropriate facility;

(b) stored or awaiting processing at the facility shall, subject to the agreement of the Agency, be transferred to an appropriate facility within three days of the shutdown.

9.4.2 All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.

9.4.3 A fire outbreak at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.

REASON: To ensure the provision of detailed and documented policies and procedures to prevent accidents and to respond to emergencies.

Condition 10 DECOMMISSIONING

10.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

10.2 Decommissioning Management Plan

10.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency for agreement in advance of the commencement of the activity.

10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.

10.2.3 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Conditions 10.2.1 and 10.2.2 above.

10.3 The Decommissioning Management Plan shall include, as a minimum, the following:

(a) a scope statement for the plan;

(b) the criteria that define the successful decommissioning of the activity or part thereof, which ensures minimum impact on the environment;

(c) a programme to achieve the stated criteria;

(d) where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan;

(e) details of the costings for the plan and the financial provisions to underwrite those costs.

10.4 A final validation report to include a certificate of completion for the decommissioning management plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

REASON: To provide for the closure of the facility.

Condition 11 NOTIFICATION, RECORDS AND REPORTS

11.1 In the event of an incident occurring on the facility -

(a) the facility manager shall notify the Agency as soon as practicable and in any case not later than 10.00 a.m. the following working day after the occurrence of any incident;

(b) the licensee shall submit a written report of the incident, including all aspects described in Condition 9.3 (a-f), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;

(c) where the incident relates to discharges to surface water, the facility manager shall notify the Eastern Regional Fisheries Board as soon as practicable and in any case not later than 10:00 a.m. on the following working day after such an incident; and

(d) should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.

11.2 The licensee shall store and maintain the following documents and records at the facility:-

(a) a copy of this licence, and any licence application or EIS documentation referenced in this licence;

(b) all reports and proposals prepared in accordance with the conditions of this licence;

(c) all written records specified in Condition 11.3;

(d) all notifications to the Agency;

(e) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;

(f) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment; and

(g) dosing plan for hypochlorite/chlorine in cooling water system.

The above documents and records shall be available on site for inspection by authorised persons of the Agency.

11.3 The licensee shall maintain written records of the following:-

11.3.1 All sampling, audits, analysis, measurements, incidents, inspections, examinations, tests, malfunction, breakdown, calibrations, surveys, maintenance or remedial works carried out in accordance with the requirements of this licence.

11.3.2 For each load of waste arriving at and departing from the facility the following:-

(a) the date;

(b) the name of the carrier (including if appropriate, the waste collection permit details);

(c) the vehicle registration number;

(d) the name of the producer(s)/collector(s) of the waste as appropriate;

(e) the name of the waste facility (if appropriate) from which the load originated or to which the load departed, including the waste licence or waste permit register number;

(f) the type, relevant EWC code and total tonnage of waste accepted at the facility on a daily, monthly and annual basis;

(g) the type, relevant EWC code and total tonnage of waste sent off site for disposal/recovery on a daily, monthly and annual basis;

(h) the name of the person checking the load;

(i) where loads of wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed; and

(j) where applicable a consignment note number, the notification document number and movement document number as appropriate;

(k) the type, relevant EWC code and total tonnage of waste disposed of at the facility on an hourly, daily, monthly and annual basis;

(l) the type, relevant EWC code and total tonnage of waste recovered at the facility on a monthly and annual basis; and

(m) details of any approved waste mixing.

11.3.3 Off-site profiling and pre-characterisation of customer waste arriving direct to the incinerator for disposal.

11.3.4 All training undertaken by facility staff.

11.3.5 Details of all wastes consigned abroad for Recovery and classified as 'Green' in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended). The rationale for the classification shall form part of the record.

11.3.6 All incidents.

11.3.7 All complaints from third parties.

11.4 The written records of all complaints relating to the operation of the activity shall give details of the following:-

(a) date and time of the complaint;

(b) the name of the complainant;

(c) details of the nature of the complaint;

(d) actions taken on foot of the complaint and the results of such actions; and

(e) the response made to each complainant.

11.5 Data management

11.5.1 The licensee shall, prior to the commencement of waste acceptance at the facility, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.

11.5.2 The licensee shall submit all records of sampling, analysis, measurements, incidents, inspections, examinations, tests, malfunction, breakdown, calibrations, maintenance or remedial works and reports and notifications to the Agency on a quarterly basis unless otherwise specified by a condition of this licence. Such records, reports and notifications shall:

(a) be sent to the Agency's Office of Environmental Enforcement, Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Wexford, or other office as directed by the Agency;

(b) comprise one original and two copies;

(c) be formatted in accordance with any written instruction or guidance issued by the Agency;

(d) include whatever information as is specified in writing by the Agency;

(e) be accompanied by a written interpretation setting out their significance in the case of all monitoring data;

(f) be transferred electronically to the Agency's computer system if required by the Agency; and

(g) be certified as accurate and representative by the facility manager/deputy.

11.5.3 The frequency of such reporting may be altered by the Agency having regard to the environmental performance of the facility.

11.6 Pollutant Release and Transfer Register (PRTR)

The licensee shall prepare and report a PRTR for the site. The substances and/or waste to be included in the PRTR shall be agreed by the Agency each year by reference to EC Regulation No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.

11.7 Annual Environmental Report

11.7.1 The licensee shall submit to the Agency, by the 31st of March each year, an Annual Environmental Report (AER) covering the previous calendar year.

11.7.2 The AER shall include as a minimum:

(a) The information specified in *Schedule D: Annual Environmental Report,* of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.

(b) A report of annual audits undertaken by the licensee of the waste disposal, treatment and recovery sites for the residues and other wastes dispatched from the facility.

(c) Pollutant Release and Transfer Register (PRTR).

11.8 The licensee shall notify the Agency, in writing, six months in advance, of the intended date of commencement of acceptance of waste for Scheduled Disposal/Recovery activities at the facility.

11.9 Records of off-site waste profiling and characterization shall be retained by the licensee for all active customers and for a ten year period following termination of licensee/customer agreements.

11.10 The Licensee shall maintain an annual log of the use of the emergency generators, this log to be reported as part of the AER.

11.11 Waste Recovery Report

The licensee shall as part of the Annual Environmental Report for the facility submit a report on the contribution by this facility to the achievement of the waste recovery objectives stated in Condition 2.3.2.2 and as otherwise may be stated in National and European Union waste policies and shall, as a minimum, include tonnages of the following:

(a) The pre-treatment of the municipal waste prior to being accepted at the facility,

(b) The recovery of incinerator residues on site, off-site and their final use.

REASON: To provide for the keeping of records and reporting and notification of the Agency.

Condition 12 FINANCIAL CHARGES AND PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €61,295 or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2008. The first payment shall be a pro-rata amount for the period from the date of commencement of enforcement of this licence to the 31st day of December of that year, or shall be paid within one month of the date upon which demanded by the Agency. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2008, and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs in regard to items not covered by the said annual contribution.

12.2 Financial Provision for Environmental Liabilities

12.2.1 Prior to the acceptance of waste, the licensee shall arrange for a comprehensive and fully costed Environmental Liabilities Risk Assessment for the facility to be carried out by an appropriately qualified professional firm. The Environmental Liabilities Risk Assessment shall have particular regard to any accidents, emergencies, or other incidents, which might occur at the facility and their effect on the environment. The Environmental Liabilities Risk Assessment shall include the cost of making such Financial Provision as is required for the purposes of Section 53(1) of the Waste Management Acts, 1996 to 2008. The Financial Provision shall include the costs entered into or incurred in the carrying on of the activities to which this licence relates or will relate including the closure, restoration, remediation and aftercare of the facility.

12.2.2 The licensee shall prior to the acceptance of waste establish and maintain a fund, or provide a written guarantee, for the costs determined under Condition 12.2.1. The type of fund established and means of its release/recovery shall be agreed by the Agency prior to its establishment.

12.2.3 The amount of financial provision, held under Condition 12.2.2 shall be reviewed and revised as necessary, but at least annually. Any proposal for such a revision shall be submitted to the Agency for its agreement.

12.2.4 The licensee shall within two weeks of establishment, purchase, renewal or revision of the financial provision required under Condition 12.2.2, forward to the Agency written proof of such indemnity.

12.2.5 Unless otherwise agreed any revision to the Decommissioning component of the fund shall be computed using the following formula:

Cost = (ECOST x WPI) + CiCC
Where:

Cost = Revised decommissioning cost.

ECOST = Existing decommissioning cost.

WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.

CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

12.2.6 The licensee shall as part of the AER provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

REASON: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment.

SCHEDULE A: Limitations

A.1 Waste Categories and Quantities for Acceptance at the Incineration plant

Maximum annual quantity to be accepted shall not exceed: 600,000 tonnes.

Waste Type	European Waste Catalogue (EWC)[Note 1]	Maximum annual Tonnage [Note 3]
Non-hazardous Residual waste [Note 1]		
Mixed municipal waste [Note 1]	**20 03 01**	**500,000**
Waste from markets	**20 03 02**	
Street-cleaning residues	**20 03 03**	
Bulky waste	**20 03 07**	
Wastes from aerobic treatment of solid waste [Note 2]	**19 05 01**	
Combustible waste (refuse derived fuel) [Note 2]	**19 12 10**	
Sludges from treatment of urban waste water [Note 4]	**19 08 05**	
Commercial, & Industrial wastes [Note 5]	**02 01 03, 02 01 04, 02 01 07, 02 02 02, 02 02 03, 02 03 02, 02 03 03, 02 03 05, 02 05 01, 02 06 01, 02 06 02, 02 07 01, 02 07 02, 02 07 03, 02 07 04, 02 07 05, 03 01 01, 03 01 05, 03 03 01, 03 03 07, 03 03 08, 04 02 09, 04 02 10, 04 02 15, 04 02 17, 04 02 21, 04 02 22, 06 05 03, 07 02 13, 08 01 12, 08 01 18, 08 01 20, 08 03 08, 08 03 13, 08 04 10, 08 04 16, 12 01 05, 15 01 09, 15 02 03, 16 01 03,-16 01 19, 16 01 22, 16 03 04, 16 03 06, 19 02 03, 19 02 10, 19 05 02, 19 05 03, 19 08 01, 19 08 09, 19 10 04, 19 10 06, 19 12 01, 19 12 04, 19 12 07, 19 12 08, 19 12 12.**	**100,000**
Total		**600,000**

Note 1: See Glossary of Terms.
Note 2: Derived from the treatment of the residual waste fraction of mixed municipal waste.
Note 3; The individual limitation on waste streams may be varied with the agreement of the Agency subject to the overall total limit of 600,000 tonnes staying the same.
Note 4: Annual tonnage shall not exceed 10,000. This may be increased to a maximum of 80,000 tonnes annually subject to the submission of a detailed assessment report to the Agency and written approval of the Agency.
NOte 5: Annual tonnage shall be limited to 10,000 per individual waste code. This may be increased with the written agreement of Agency.

Schedule B: Emission Limits

B.1 Emission limits to Air.

Emission Point Reference No.: A2-1 & A2-2 (twin stack emissions, one for each incinerator line)

Location: Flue gas treatment and discharge area

Volume to be emitted: Maximum rate per hour: 275,000m^3 per line/ emission point

Minimum Discharge height: 105 m above OD

Parameters	Units	Half Hour Average		Daily Average	Periodic
		A	B		
Total dust	mg/m^3	30 Note 1	10 Note 1	10	-
Gaseous and vaporous organic substances, expressed as total organic carbon	mg/m^3	20 Note 1	10 Note 1	10	-
Hydrogen chloride (HCl)	mg/m^3	60 Note 1	10 Note 1	10	-
Hydrogen fluoride (HF)	mg/m^3	4 Note 1	2 Note 1	1	-
Sulphur dioxide (SO_2)	mg/m^3	200 Note 1	50 Note 1	50	-
Oxides of Nitrogen (NO and NO_2, expressed as NO_2)	mg/m^3	400 Note 1	200 Note 1	200	-
The sum of Cadmium (as Cd) and thallium (as Tl), and their compounds Note 2	mg/m^3	-		-	0.05
Mercury (as Hg) and its compounds Note 2	mg/m^3	-		-	0.05
The sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co) copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) Note 2	mg/m^3	-		-	0.5
Arsenic and its compounds Note 2	mg/m^3	-		-	0.2
Dioxins/furans (TEQ) Note 3	ng/m^3	-		-	0.1
Carbon monoxide (CO) Note 4	mg/m^3	100 Note 5		50 Note 6	150 Note 7

Note 1: None of the half-hourly average values shall exceed any of the emission limit values set out in column A, or, 97 % of the half-hourly average values over the year shall not exceed any of the emission limit values set out in column B.

Note 2: All average values over the period of a minimum of 30 minutes and a maximum of 8 hours. Metals include both gaseous, vapour and solid phases as well as their compounds (expressed as the metal or total as specified).

Note 3: Average values shall be measured over a sample period of a minimum of 6 hours and a maximum of 8 hours. The emission limit value refers to the total concentration of dioxins and furans calculated using the concept of toxic equivalence in accordance with Annex I of Directive 2000/76/EC.

Note 4: The emission limit values of carbon monoxide (CO) concentrations shall not be exceeded in the combustion gases (excluding the start-up and shut-down phase).

Note 5: Taken in any 24 hour period.

Note 6: 97% of the daily average value over the year does not exceed the emission limit value.

Note 7: 95 % of all measurements determined as 10-minute average values shall notexceed the emission limit value.

B.2 Emission limits to Water

Emission Point Reference No.: SW-1 Cooling Water Discharge

Name of Receiving Waters: Liffey Estuary

Location : Cooling water outfall

Volume to be emitted: Maximum in any one day : 570,000m^3

Maximun rate per hour 14,040 m^3

Parameter	Emission Limit Value
Temperature rise (Δ T) relative to intake	9.0 °C
Total residual chlorine (as HOCl)	0.5mg/l and 0.2mg/l (as 24 hour average)

B.3 Emission limits to Sewer

No Schedule

B.4 Noise emission limits

Day dB(A) L_{eq}(30 minutes)	Night dB(A) L_{eq}(30 minutes)
55[Note 1]	45

Note 1: Construction period excepted.

SCHEDULE C: Control and Monitoring

In addition to the requirements of Condition 6 the following monitoring shall be undertaken.

C.1.1 Process Control [Note 1]

Monitoring of Incinerator		
Control Parameter	**Monitoring (continuous unless otherwise stated in licence)**	**Key Equipment** [Note 2]
Combustion	Combustion chamber temperature [Note 3]	Thermocouple
Exhaust gas	% O_2 in exhaust gas	O_2 analyser
Exhaust gas	Exhaust gas temperature	Thermocouple
Exhaust gas	Exhaust gas pressure	Pressure monitor
Exhaust gas	Water vapour content [Note 4]	Standard method
Furnace pressure	Pressure in the furnace	Pressure monitors
Waste input	Feed Rate	Low level detector and visual
Hydrocarbon	Hydrocarbon levels	LEL Detector
Burnout of waste in the furnace	CCTV monitoring of flame	CCTV Camera
Monitoring of Boiler		
Control Parameter	**Monitoring (continuous unless otherwise stated in licence)**	**Key Equipment**
Flue gas	Pressure	Pressure sensors
Flue gas	Temperature	Thermocouple
NO_X	Concentration and Reagent	NO_X Analyser and Reagent dosage rate
Feed water supply	Water rate and water level	Flow meter and level
Monitoring of Energy Recovery		
Control Parameter	**Monitoring (continuous unless otherwise stated in licence)**	**Key Equipment**
Energy Recovery	Steam Flow, Condenser Control, Turbine Control	Flow meter, Temperature, Pressure analysers

2

C.1.1 (Continued)

Flue gas cleaning		
Location	***Item/Parameter***	***Monitoring Equipment***
Boiler /NOx abatement	Reagent dosage rate	Flow meter
Activated Carbon/Lime Mixture Injection:	Activated Carbon / Lime Mixture dosing	Dosage rate meter
	Supply silo level	Low level alarm
Baghouse Filter:	Pressure Differential Across Filters	Differential Pressure Indicator
	Collection Unit level	High level alarm on collector unit
	Filter bag leak detection	Leak detection system
Cooling System	Gas Temperature	Thermocouples
Wet Flue Gas Cleaning:	Flue Gas Temperature	Thermocouple
	Water Input	Flow meter
	pH	Meter
	Scrubber Liquid Flow	Flow meter
	Reagent Dosage Rate	Flow meter
	Scrubbing Liquid level	Low Level Alarm
	Scrubber solution dissolved salt levels	Chemical Analysis
Residues		
	Item/Parameter	***Monitoring Equipment (where applicable)***
Residue Silos/hoppers:	Silo/hopper Capacity	High Level Alarms
	Silo area under negative air pressure	Air flow/Pressure Indicator
	Flue gas hopper emissions	HEPA Filter Integrity
Solid:	Ash	Quantity & Type of ash

Note 1: Or other emissions control/monitoring equipment agreed in advance by the Agency, and subject to application of BAT and the requirements of Condition 1.10.
Note 2: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the system.
Note 3: Near the inner wall of the combustion chamber (or other representative location agreed by the Agency).
Note 4: Not necessary if gases are dried prior to analysis.

C.1.2 Monitoring of Emissions to Air

Emission Point Reference No.: A2-1 and A2-2 (twin stack emission points)		
Parameters	**Monitoring Frequency**	**Analysis Method / Technique** Note 1
Total dust	Continuous	Iso-kinetic/gravimetric
PM_{10} and $PM_{2.5}$	Quarterly	To be agreed by the Agency
Gaseous and vaporous organic substances, expressed as total organic carbon	Continuous	Flame Ionisation Detector
Hydrogen chloride (HCl)	Continuous	Infra red analyser
Hydrogen fluoride (HF)	Quarterly	To be agreed by Agency
Sulphur dioxide (SO_2)	Continuous	Infra red analyser
Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Continuous	Infra red analyser
Nitrous oxide (N_2O)	Quarterly	To be agreed by the Agency
Cadmium (as Cd) and thallium (as Tl), and their compounds	Quarterly	To be agreed by the Agency
Mercury (as Hg) and its compounds	Quarterly	To be agreed by the Agency
Antimony (as Sb), arsenic (as As) lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) and their compounds	Quarterly	To be agreed by the Agency
Dioxins/furans	Continuous sampling with analysis every two weeks. Biannual measurement, average value over sample period of between 6 and 8 hours. (Quarterly for first year of operation)	Continuous sampling method as per application. Other measurements as per CEN method (EN 1948, parts 1,2, and 3).
Carbon monoxide (CO)	Continuous	Infra red analyser

Emission Point Reference No.: A2-3A, A2-3B & A2-3C (Back-up Diesel Fired Electricity Generation Plant)		
Parameter	**Monitoring Frequency** Note 2	**Analysis Method/Technique**
CO	On installation	Flue gas analyser/datalogger
NOx	On installation	Flue gas analyser
Particulates	On installation	Isokinetic/Gravimetric
TOC	On installation	Flame ionisation

Note 1: Or other methods agreed in advance by the Agency.
Note 2: Monitoring to be carried out on installation and thereafter as instructed by the Agency.

C.2.1 Control of emissions to Water.

Emission Point Reference No.: SW-1 Cooling Water Discharge

Monitoring :

Monitoring to be Carried Out	Monitoring Frequency	Monitoring Equipment/Method
Temperature Rise (Δ T)	Continuous	Temperature probe
Flow	Continuous	Flow meter/recorder
Hypochlorite/Chlorine Dosing	Concentration & Interval	To be agreed by the Agency

Equipment:

Control Parameter	Equipment	Backup Equipment
Temperature (intake & outlet)	Temperature probe	Spares held on site
Flow	Flow meter/recorder	Spares held on site
Hypochlorite/Chlorine dose (Total Residual Oxidant)	To be agreed by the Agency	To be agreed by the Agency

C.2.2 Monitoring of emissions to Water

Emission Point Reference No.: SW-1 Cooling Water Discharge

Parameter	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	On-line flow meter with recorder
Temperature	Continuous	On-line temperature probe with recorder
pH	Continuous	pH electrode/meter and recorder
Total residual chlorine	Hourly	To be agreed by the Agency
Biological	Biennially	To be agreed by the Agency (Refer Condition 6.16)
Toxicity Note 1	As may be required	To be agreed by the Agency

Note 1: The number of toxic units (Tu) = 100/x hour EC/LC_{50} in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.

C.2.3 Monitoring of Storm Water Emissions

Emission Point Reference No.: Surface water overflow from reservoir

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	**Continuous**	**pH meter and recorder**
TOC	**Continuous**	**TOC analyser and recorder**

C.3.1 Control of emissions to Sewer

No Schedule

C.3.2 Monitoring of emissions to Sewer

No Schedule

C.4.1 Monitoring of incinerator residues

Waste	Frequency	Parameter Note 1
Liquid and solid material from the cleaning of the flue gas treatment system and storage areas	**per consignment**	**TOC, metals Note2 and their compounds, chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCB's.**
Bottom ash, fly ash, boiler ash and flue gas treatment residues	**per consignment Note 3**	**TOC, metals Note2 and their compounds, chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCB's.**
Other Note 4		

Note 1: The scope and methods of analysis shall take account of the total soluble fraction, the metals soluble fraction shall be submitted with the Test Programme and shall be agreed with the Agency prior to the commencement of the waste activity.
Note 2: Metals shall include Ba, Cd, Mo, Sb, Se, Zn, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V and Sn.
Note 3: The TOC of the bottom ash and slag shall be determined on a weekly basis.
Note 4: Analytical requirements to be determined on a case by case basis.

C.5 Meteorological Monitoring

Monitoring Location: To be agreed by the Agency.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	WMO Standard [Note 1]
Temperature (min/max.)	Daily	WMO Standard [Note 1]
Wind Speed and Direction	Continuous	WMO Standard [Note 1]
Atmospheric Pressure	Continuous	WMO Standard [Note 1]

Note 1: World Metrological Organisation Standards and Recommendations.

C.6.1 Ambient Groundwater Monitoring

Monitoring Location: One monitoring borehole at agreed location along eastern boundary of site.

Parameter	Monitoring Frequency	Analysis Method/Technique
Potassium	Annually	Standard Method
Ammonia (NH_4)	Annually	Standard Method
pH	Annually	pH electrode/meter
Metals(Cd, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V, Sn) and their compounds	Annually	Standard Method
Organohalogens [Note 1]	Annually	GC-MS

Note 1: Screening for priority pollutant list substances (such as US EPA volatile and/or semi-volatile compounds).

C.6.2 Ambient Noise Monitoring

Monitoring Locations: At noise monitoring locations NL01 to NL10 (incl.)[Note 1]

Parameter	Monitoring Frequency	Analysis Method/Technique
$L(A)_{EQ}$ [30 minutes]	**As specified in Condition 6.2**	Standard [Note 2]
$L(A)_{10}$ [30 minutes]	**As specified in Condition 6.2**	Standard [Note 2]
$L(A)_{90}$ [30 minutes]	**As specified in Condition 6.2**	Standard [Note 2]
Frequency Analysis(1/3 Octave band analysis)	**As specified in Condition 6.2**	Standard [Note 2]

Note 1: Or as otherwise may be amended by agreement, or as necessary direction, of the Agency.
Note 2: "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

C.6.3 Receiving Water Monitoring

Location: **To be agreed** Note 1

Parameter	Monitoring Frequency	Analysis Method/Technique
Dissolved oxygen	**Biannually**	Note 2
Temperature	**Biannually**	Note 2
Total residual chlorine	**Biannually**	Note 2

Note 1: Having regard to the requirements of Conditions 6.16 and 6.17.
Note 2: Third Schedule of S.I. No. 293 of 1988 or other method/techniques as agreed by the Agency.

SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content
Reporting period.
Details of waste activities carried out at the facility.
Summary of quantity and composition of waste received, recovered and disposed of in reporting period.
Summary report on emissions.
Summary of noise survey.
Summary of all environmental monitoring.
Marine biological & thermal discharge survey report summary.
Resource and energy consumption summary.
Waste recovery report (Condition 11.11).
Tank, drum, pipeline and bund testing and inspection report.
Summary of reported incidents and complaints.
Summary of audits of waste disposal, treatment and recovery sites for the residues from facility.
Environmental management programme – report for previous year.
Environmental management programme – proposal for current year.
PRTR – report for previous year.
PRTR – proposal for current year.
Log of use of emergency generators.
Report of particulates monitoring.
Hypochlorite/chlorine dosing plan summary report.
Review of decommissioning management plan.
Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).
Environmental liabilities risk assessment review (every three years or more frequently as dictated by relevant on site change including financial provisions).
Waste pre-treatment proposals.
Any other items specified by the Agency.

Sealed by the seal of the Agency on this the 1st day of December 2008.

PRESENT when the seal of the Agency
Was affixed hereto:

Dara Lynott, Director/Authorised Person