

ENVIRONMENTAL PROTECTION
AGENCY
06 AUG 2014



IPPC/Waste Licence Transfer Application Form

This document does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Waste Management Acts, 1996 to 2013 or Environmental Protection Agency Acts 1992 to 2013.

Environmental Protection Agency
P.O. Box 3000, Johnstown Castle, County Wexford
Telephone: Lo-Call 1890 335599; 053-9160600
Fax: 053-9160699

Section 1 of this application form must be completed by the current Licensee and accompanied by required attachments. Section 2 must be completed by the Proposed Transferee and accompanied by required attachments. Both parties must complete Section 3. The transfer application shall not be regarded as complete and will not be processed unless all information requirements as set out in this form are met in advance of the application being submitted to the EPA.

Section 1: To be Completed by Current Licence Holder (Licensee)

1.1	Register Number of Licence to be Transferred	W0232-01
1.2	Name of Current Licensee	Dublin City Council (DCC)
1.3	Address of Current Licensee	Civic Offices Wood Quay Dublin 8
1.4	Contact details for nominated person(s) or persons in relation to the transfer application	Peadar O'Sullivan Email: peadar.osullivan@dublincity.ie Phone: (01) 222 4246
1.5	Class/Nature of Activity	113 (a) Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants for non-hazardous waste with a capacity exceeding 3 tonnes per hour.
1.6	Location of activity to which the licence relates	Pigeon House Road Poolbeg Dublin 4
1.7	Name of Proposed Transferee	Dublin Waste to Energy Limited
1.8	Reason for licence transfer request (provide detail in fifty words or less)	The Proposed Transferee will construct, own operate and maintain the Facility pursuant to a (PPP) project agreement with the Licensee. Transfer of the licence to the Proposed Transferee is required to achieve financial close in respect of the project, which is imminent.
1.9	Desired date for proposed transfer to take effect?	31 October 2014, subject to confirmation by the Authority of achievement of financial close in respect of the Project.

<p>1.10</p>	<p>Has the Licensee arranged for the completion, by an independent and appropriately qualified consultant, of an up-to-date and fully costed Risk Assessment of environmental liabilities for the site (ELRA or equivalent), which will address liabilities from past and present activities?</p> <p><u>And</u></p> <p>Has the Risk Assessment been approved by OEE?</p> <p>(Provide copy of OEE approval letter as Attachment 1B)</p>	<p>Condition 12.2.1 of the Licence requires preparation of the ELRA "Prior to the acceptance of waste". The facility will not be constructed and no waste will be accepted before 2017. DCC thus consider that no ELRA is required at this moment in time and notes that no ELRA is available at this time. Notwithstanding this, preliminary estimates have been prepared for the purpose of this application.</p> <p>See Attachment E for further details.</p>
<p>1.11</p>	<p>Has the Licensee prepared an up-to-date and fully detailed and costed plan for the decommissioning or closure¹ (DMP/CRAMP or equivalent) of the site or part thereof?</p> <p><u>And</u></p> <p>Has the Decommissioning /Closure Plan been approved by OEE?</p> <p>(Provide copy of OEE approval letter as Attachment 1C)</p>	<p>Condition 10.2.1 of the Licence requires preparation of the DMP/CRAMP "in advance of the commencement of the activity". The facility will not be constructed and no waste activity will be commenced before 2017. DCC thus consider that no DMP/CRAMP is required at this moment in time and notes that no DMP/CRAMP is available at this time. Notwithstanding this, preliminary estimates have been prepared for the purpose of this application.</p> <p>See Attachment E for further details.</p>

¹ The plan must show estimated expenditure for each phase of the activity/activities and include:

- (i) Likely costs of abatement installation, control & monitoring;
- (ii) Likely costs of closure & remediation of the site;
- (iii) Likely costs of clean-up following a plausible accident/incident;
- (iv) Likely costs of long-term aftercare for residual environmental liabilities;
- (v) Statement or details of provisions made for the underwriting of these costs/liabilities.



Section 1 Attachments: The following documents must be provided to the EPA by the current Licensee to support the licence transfer request. Failure to do so will result in the transfer application form being returned:

Attachment 1A	As per Section 47(3) of the Waste Management Acts 1996 to 2013 / Section 94(3) of the Protection of the Environment Acts 1992 to 2013), provide a copy of the licence to be transferred.	See Attachment A.
Attachment 1B	Provide a letter of approval from the EPA's Office of Environmental Enforcement (OEE) for the Risk Assessment referred to in Q1.10.	Not applicable. See response to question 1.10.
Attachment 1C	Provide a letter of approval from the EPA's Office of Environmental Enforcement (OEE) for the Decommissioning/Closure Plan described in Q1.11.	Not applicable. See response to question 1.11.

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Section 2: To be Completed by Proposed Transferee

2.1	Name of Proposed Transferee	Dublin Waste to Energy Limited
2.2	Address of Proposed Transferee	Arthur Cox Building Earlsfort Terrace Dublin 2
2.3	Contact details for nominated person(s) in relation to the transfer application	David L. Martin Email: dlmartin@covantaenergy.com Phone: 087 2479079
2.4	<p><i>General background on the Proposed Transferee. (approx: 150 words or less)</i> <i>Details to include:</i></p> <ul style="list-style-type: none"> • <i>Business activity of Proposed Transferee</i> • <i>Date established (companies only)</i> • <i>Most recent details on total assets value, turnover and profit (where available)</i> • <i>State whether Proposed Transferee is a holding company</i> • <i>Where appropriate, provide similar details for ultimate parent company (also include jurisdiction where ultimate parent company is registered)</i> 	<p>The Proposed Transferee is a special purpose vehicle established to enter into the PPP Project Agreement with the Licensee and, pursuant to that agreement to design, build, own operate and maintain the Licensed Facility.</p> <p>The Proposed Transferee was established on 11 March 2005 and is currently a wholly owned subsidiary of Dublin Waste to Energy (Holdings) Limited. As at the date of financial close, Covanta Energy Corporation (the largest operator of waste to energy facilities in the world) will hold a controlling interest in the Proposed Transferee through its wholly owned subsidiary Dublin Waste to Energy (Holdings) Limited, which will hold 100% of the common shares in the Proposed Transferee.</p> <p>Covanta Energy Corporation was founded in the US in 1960. It is a NYSE listed company, incorporated in Delaware and located in New Jersey with a market capitalisation of approximately \$2.5 billion and an enterprise value of approximately \$4 billion. In 2012, it reported total operating revenue of US\$1,644million.</p>

<p>2.5</p>	<p>Has the Proposed Transferee/other relevant person been convicted under any of the following:</p> <ul style="list-style-type: none"> • EPA Acts 1992 to 2013? • Waste Management Acts 1996 to 2013? • Local Government (Water Pollution) Acts 1977 and 1990? • Air Pollution Act 1987? <p>If yes, provide full details.</p>	<p>No.</p>
<p>2.6</p>	<p>Provide:</p> <p>(a) names</p> <p>(b) details of relevant education, training and experience; and</p> <p>(c) responsibilities</p> <p>of all persons to provide management and supervision of the activities authorised by the licence (in particular the name of the facility manager and any nominated deputies).</p>	<p>Condition 2.1.1 of the Licence requires the licensee to employ persons at the facility with certain qualifications and experience "during its operation". Condition 2.2.1 requires the licensee to submit written details of the management structure "Prior to the commencement of waste activities". The facility will not be constructed and no waste activity will be commenced before 2017. The names and details for these persons are not available at this time. Notwithstanding this, an outline of the approach to personnel selection is included at Attachment B.</p>

<p>2.7</p>	<p>Has the Proposed Transferee made adequate financial provision² to meet the financial commitments/liabilities that will be entered into/incurred in carrying on the activity to which the licence relates or in consequence of ceasing to carry on that activity as the licence may specify*?</p> <p><u>And</u></p> <p>Has the financial provision been approved by OEE?</p> <p>(Provide copy of OEE approval letter as Attachment 2D).</p> <p><i>*Refer to 'Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision' EPA, 2006 and consult with OEE.</i></p>	<p>See the responses to questions 1.10 and 1.11 of this Application Form.</p> <p>The facility will not be constructed and no waste will be accepted before 2017. No ELRA, DMP/CRAMP is available at this time. Notwithstanding this, preliminary estimates have been prepared for the purpose of this application. An outline of the approach to the financial provision to underwrite these liabilities is set out in Attachment F.</p>
<p>2.8</p>	<p>Provide a statement (signed by the Proposed Transferee) that <i>"the Proposed Transferee has assumed and accepted all liabilities, requirements and obligations provided for in or arising under the licence, or revised licence, regardless of how and in respect of what period, including a period prior to the transfer of the licence or revised licence they may arise."</i></p>	<p>See Attachment C(f).</p>

² The amount of financial provision must always be capable of covering the liabilities identified and must have been updated at least within the last twelve months.

2.9	Has the Proposed Transferee, their parent company or any 'relevant person' had an application for a licence: (a) Granted? (b) Rejected? (c) Revoked? If yes, provide full details.	No.
2.10	Has the Proposed Transferee, their parent company or any 'relevant person' been refused by the EPA as a transferee for a licence? If yes, provide full details.	No.

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Section 2 Attachments: The following documents must be provided to the EPA by the Proposed Transferee to support the licence transfer request. Failure to do so will result in the transfer application being rejected.

Attachment 2A	Provide a copy of the Certified Copy of Certificate of Incorporation.	See Attachment C(a).
Attachment 2B	Provide particulars of Registered Office of the Company (if not included in 2A above).	See Attachment C(c).
Attachment 2C	Where appropriate provide an organisational chart showing company structure, including parent company, subsidiaries and related addresses.	See Attachment C(d).
Attachment 2D	Provide a letter of approval from the Office of Enforcement for the financial provision described in Q2.7.	Not applicable. See response to question 2.7.

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Section 3: To be Completed by Both Parties**3.1: Payment of Fee**

The licence transfer application cannot be processed, unless accompanied by the transfer fee (*please tick*):

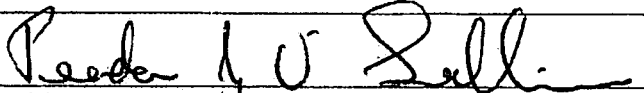
Waste Licence Transfer Application €5,000

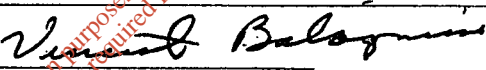
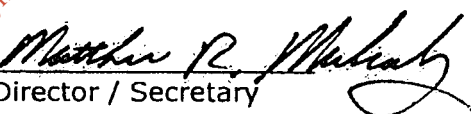
IPPC Licence Transfer Application €2,000

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Declaration

I/We, the undersigned, hereby apply to the Environmental Protection Agency, as per Section 47 of the Waste Management Acts 1996 to 2013 for the transfer of licence reg. no. WE232-01 (formerly W0232-01) from Dublin City Council to Dublin Waste to Energy Limited.

Signed:	
Licensee Name:	Dublin City Council
Date:	30/07/2014.
Company Seal: (where available)	

Signed:	 Director  Director / Secretary
Proposed Transferee Name:	Dublin Waste to Energy Limited
Date:	
Company Seal: (where available)	

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ATTACHMENT A

Copy of Industrial Emissions Licence W0232 – 01

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Dublin Waste to Energy Project
Licence Transfer Request

IE Licence W0232-01

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Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

Section 76A(11) Amendment
to
Industrial Emissions Licence

Licence Register Number:	W0232-01
Licensee:	Dublin City Council
Location of Installation:	Pigeon House Road Poolbeg Peninsula Dublin 4 Dublin

Reason for the Decision

The Environmental Protection Agency has examined the terms of Licence Reg. No. W0232-01 as required by the provisions of Section 76A(8)(a) of the Waste Management Act 1996 as amended, and determined that the licence can be brought into conformity with the provisions and requirements of Council Directive 2010/75/EU by the exercise of the powers conferred by Section 76A(11) of the Waste Management Act 1996 as amended.

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of Licence Reg. No. W0232-01, granted on 01/12/2008, any amendments made to date, as well as any amendments noted herein, the carrying on of the activity will comply with and not contravene any of the requirements of Section 40(4) of the Waste Management Act 1996 as amended.

Amendment

In pursuance of the powers conferred on it by Section 76A(11) of the Waste Management Act 1996 as amended, the Agency hereby amends Licence Reg. No. W0232-01, granted to Dublin City Council, Pigeon House Road, Poolbeg Peninsula, Dublin 4, Dublin.

Henceforth, the licence shall be read in conjunction with any other amendment made to the licence and the amendments set out below.

From the date of this amendment, Licence Reg. No. W0232-01 shall be deemed to be an Industrial Emissions Licence granted under Part IV of the Environmental Protection Agency Act 1992 as amended and shall not be a waste licence or revised waste licence.

This amendment is limited to the following Glossary of Terms or Interpretation, Conditions and Schedules of Licence Reg. No. W0232-01:

Amendments

Amend Glossary of Terms or the Interpretation as follows

To be inserted into the Glossary or the Interpretation of the existing licence or where relevant replace the existing term.

BAT conclusions	A document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures.
BAT reference document	A document drawn up by the Commission of the European Union in accordance with Article 13 of the Industrial Emissions Directive, resulting from the exchange of information in accordance with that Article of that Directive and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques.
Facility	A site or premises used for the purpose of the recovery or disposal of waste or an installation.
Groundwater	Has the meaning assigned to it by Regulation 3 of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010).
Industrial Emissions Directive	Industrial Emissions Directive means Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast).
Installation	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Act 1992 as amended is or will be carried on, and shall be deemed to include any directly associated activity, which has a technical connection with the activity and is carried out on the site of the activity.
Waste	Any substance or object which the holder discards or intends or is required to discard.
Waste licensing under the Waste Management Act 1996	Any reference within Condition 1: <i>Scope</i> of this licence to "waste licensing under the Waste Management Act 1996" or any similar construed reference shall be deemed to mean a reference to "industrial emissions licensing under the Environmental Protection Agency Act 1992 as amended."

Amend the 'Schedule of Activities Licensed' as follows:

The licensed activities are amended to be as follows:

- 11.3 (a) Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants for non-hazardous waste with a capacity exceeding 3 tonnes per hour
- 11.1 The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.

Notwithstanding the foregoing, any limitations on waste recovery and disposal activities specified in this Part in accordance with the Third Schedule and Fourth Schedule of the Waste Management Act 1996 as amended including, where applicable, any refused waste disposal and recovery activities from the Third Schedule and Fourth Schedule of the Waste Management Act as amended shall continue to apply.

New Conditions

Amend the licence to insert the following additional conditions at the end of Condition 2 of the licence:

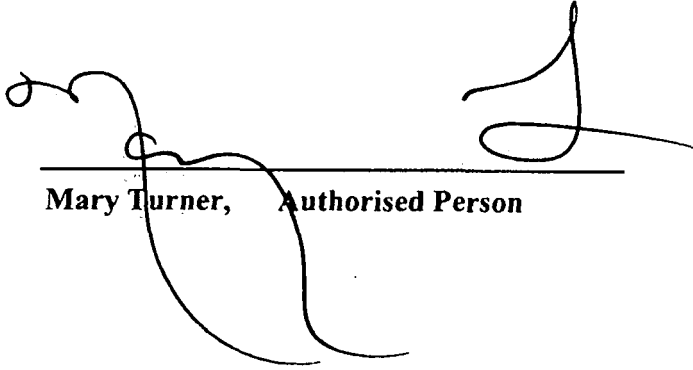
- 2A The licensee shall notify the Agency, in a format as may be specified by the Agency, without delay after:
- (i) an incident or accident that significantly affects the environment, and/or
 - (ii) the occurrence of any breach of one or more of the conditions attached to this licence
- 2B The licensee shall, where an incident or accident that significantly affects the environment occurs, without delay take measures to limit the environmental consequences of the incident or accident and to prevent further possible incident or accident.
- 2C The licensee shall, where a breach of one or more of the conditions of this licence occurs, without delay take measures to restore compliance with the conditions of this licence within the shortest possible time.
- 2D The licensee shall ensure that waste generated in the carrying on of the activity shall be prepared for re-use, recycling or recovery or, where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment.

Reason: To bring the licence into conformity with the requirements of the Industrial Emissions Directive.

This amendment shall be cited as a Section 76A(11) Amendment and should be read in conjunction with Licence Reg. No. W0232-01, granted on 01/12/2008 and any other amendments made to the licence.

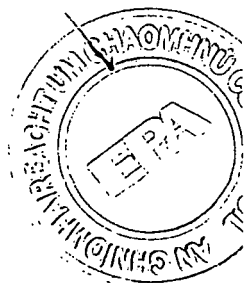
Sealed by the seal of the Agency on this the 7th day of January, 2014

PRESENT when the seal of the Agency was affixed hereto:



Mary Turner, Authorised Person

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ENVIRONMENTAL PROTECTION
AGENCY
06 AUG 2014

Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

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

Content of copyright is not required for any other use.

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 <i>Schedule B: Emission Limits</i> , 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.

Residual Waste	In the context of intake to an incinerator/WtE plant, is waste that has been subjected to pre-treatment (including, <i>inter alia</i> , 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.

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.	<p>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.</p> <p><i>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.</i></p>
Class 10.	<p>Release of waste into a water body (including a seabed insertion).</p> <p><i>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.</i></p>
Class 7.	<p>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).</p> <p><i>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.</i></p>

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

Class 8.	<p>Oil re-refining or other re-uses of oil.</p> <p><i>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.</i></p>
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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.

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: 6,000m³; and
 - (b) fly ash /flue gas cleaning ash/hazardous boiler ash: 700m³.
- 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:-
- 110% of the capacity of the largest tank or drum within the bunded area; or
 - 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.

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;

- (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.

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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 $0.5^\circ C$.

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:

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

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 licensee's site.
- 9.3. In the event of an incident the licensee shall immediately:-
- note the date, time and place of the incident;
 - carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - isolate the source of any such emission;
 - evaluate the environmental pollution, if any, caused by the incident;
 - identify and execute measures to minimise emissions/malfunctions and the effects thereof and
 - 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:-

- identify and put in place measures to avoid reoccurrence of the incident; and
 - 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):
- arriving at the facility shall be transferred directly to an appropriate facility;
 - 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:

$$\text{Cost} = (\text{ECOST} \times \text{WPI}) + \text{CiCC}$$

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.

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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 waste ^{Note 1} Residual waste ^{Note 1} Mixed municipal waste ^{Note 1} Waste from markets Street-cleaning residues Bulky waste Wastes from aerobic treatment of solid waste ^{Note 2} Combustible waste (refuse derived fuel) ^{Note 2} Sludges from treatment of urban waste water ^{Note 4}	20 03 01 20 03 02 20 03 03 20 03 07 19 05 01 19 12 10 19 08 05	500,000
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: 275,000m³ 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	mg/m ³	-	-	-	0.05
Mercury (as Hg) and its compounds	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)	mg/m ³	-	-	-	0.5
Arsenic and its compounds	mg/m ³	-	-	-	0.2
Dioxins/furans (TEQ)	ng/m ³	-	-	-	0.1
Carbon monoxide (CO)	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 not exceed 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 : 570,000m³
 Maximum rate per hour 14,040 m³

Parameter	Emission Limit Value
Temperature rise (ΔT), 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.

2

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 (conditions 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 (conditions 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 (conditions unless otherwise stated in licence)	Key Equipment
Energy Recovery	Steam Flow, Condenser Control, Turbine Control	Flow meter, Temperature, Pressure analysers

C.1.1 (Continued)

<i>Flue gas cleaning</i>		
<i>Location</i>	<i>Item/Parameter</i>	<i>Monitoring Equipment</i>
Boiler /NOx abatement Activated Carbon/Lime Mixture Injection: Baghouse Filter: Cooling System Wet Flue Gas Cleaning:	Reagent dosage rate	Flow meter
	Activated Carbon / Lime Mixture dosing	Dosage rate meter
	Supply silo level	Low level alarm
	Pressure Differential Across Filters	Differential Pressure Indicator
	Collection Unit level	High level alarm on collector unit
	Filter bag leak detection	Leak detection system
	Gas Temperature	Thermocouples
	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	
<i>Residues</i>		
	<i>Item/Parameter</i>	<i>Monitoring Equipment (where applicable)</i>
Residue Silos/hoppers: Solid:	Silo/hopper Capacity	High Level Alarms
	Silo area under negative air pressure	Air flow/Pressure Indicator
	Flue gas hopper emissions	HEPA Filter Integrity
	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.

2

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
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 ₂ O)	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	Analysis Method/Technique
CO	On installation	Flue gas analyser/datalogger
NO _x	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 (ΔT)	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 <small>Note 1</small>	As may be required	To be agreed by the Agency

Note 1: The number of toxic units (Tu) = 100/x hour EC/LC₅₀ 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.

2

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
Liquid and solid material from the cleaning of the flue gas treatment system and storage areas	per consignment	TOC, metals 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	TOC, metals and their compounds, chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCB's.
Other		

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 Meteorological 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 ₃)	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."

2

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.

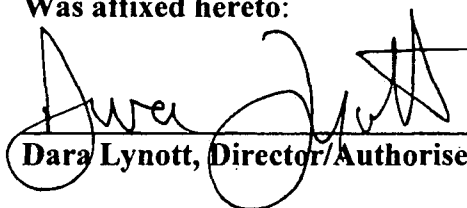
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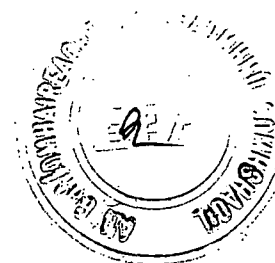
SCHEDULE D: Annual Environmental Report

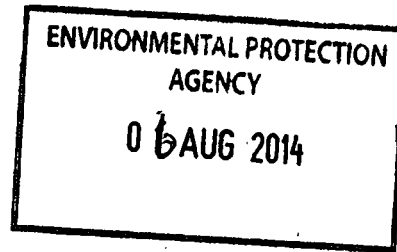
Annual Environmental Report Content	
Reporting period.	
Details of waste activities carried out at the facility.	
Summary of quantity and composition of waste received, recovered and disposed of in reporting period.	
Summary report on emissions.	
Summary of noise survey.	
Summary of all environmental 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





ATTACHMENT B

Transferee General Background & Technical Competence

Dublin Waste to Energy Limited ("DWTEL") is currently a wholly owned subsidiary of Dublin Waste to Energy (Holdings) Limited ("DWTEHL"). As at the date of financial close, Covanta Energy Corporation ("Covanta") will hold a controlling interest in DWTEL through its wholly owned subsidiary DWTEHL, which will hold 100% of the common shares in DWTEL. Please see structure chart enclosed at Attachment C (d).

Covanta is an internationally recognised owner and operator of large-scale Waste to Energy (WTE) facilities. The company delivers environmentally responsible and increasingly innovative solutions for the public, local government, industry and commerce, enabling their customers to reduce their impact on the environment. The company has more than 25 years of operations and maintenance experience and currently operates over 40 WTE facilities in the Americas, Asia and Europe, processing in excess of 20 million tonnes of residual municipal, commercial and industrial waste each year to generate clean, renewable energy.

Covanta provides high quality, safe and efficient solutions for treating residual waste through investing in larger scale facilities so as to maximise the economic and environmental benefits. No other firm processes more waste than Covanta, supported by a total corporate staff of 400+ highly skilled professionals at its corporate headquarters supporting the overall management of ~3,500 employees working in domestic and international operations.

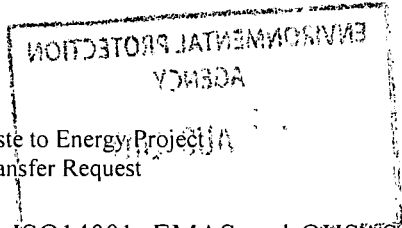
Covanta maintains a comprehensive health and safety programme, and its strong environmental and safety performance has received a wide range of awards in recent years from US government bodies. These include OSHA VVP star award and various US State Environmental Awards.

Covanta is very familiar with the terms of License Register W0232 – 01 from its experience as a participant and witness in the associated hearings and subsequent changes that constitute the terms of the License. Covanta uses an environmental management system at its facilities that address the requirements of its permits/licences and is ready to prepare all documents and information when and as required by the Agency.

European Operations

Covanta is familiar with WID and IED not only in principle but in practice, and can demonstrate European legislative compliance with WID and IED through its WTE Facility in Trezzo sull'Adda, Italy. Covanta owns a significant percentage of the Operations & Management provider - Ambiente 2000. Under the Ambiente 2000 Articles of Association, all material decisions regarding the plant are made jointly by Falck Renewables (partner) and Covanta.

Covanta provides 100% of the guarantee to the banks for the operating performance of the WTE Facility and determines the President of the operating company. Covanta also has an ownership stake in the plant (which has been operational since 2003). The WTE Facility has obtained (09/08/07) and currently operates to the Integrated Environmental Authorisation pursuant to Legislative Decree 59/2005 for IPPC activity nr. 5.1 (Installations for the incineration of municipal waste with a capacity exceeding 3 t/h). The Trezzo WTE Facility is certified to



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ISO9001, ISO14001, EMAS and OHSAS18001. The Trezzo WTE Facility is authorised for R1 (energy recovery) operations on residual municipal waste and non-hazardous special waste with a nominal thermal input equal to 41.2 MWt (with a 15% maximum overload) for each of the two WTE lines. It currently has an availability level of 90%.

The WTE Facility is composed of 2 waste combustion lines for the purpose of energy recovery and electricity production. The rated thermal input is equal to 82.4 MW and the power capacity installed is 20.2 MW.

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Management of the Dublin WTE Facility

DWTEL's management team for the operation of the Dublin WTE Facility will be led by the Facility Manager. He/she will have at least 10 years' experience in WTE operations, in line with Condition 2.1.1 of the EPA Licence. The Licence requirement for an experienced deputy to be present on the facility at all times during its operation in line with Condition 2.1.2 will be met by ensuring each Shift Supervisor has a minimum 5 years incinerator experience.

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ATTACHMENT C

- a) Certified copy of Certificate of Incorporation
- b) DWTEL's Number in company's registration office
- c) Particulars of registered office
- d) DWTEL Organisation Chart
- e) Certificate Guaranteeing Obligations
- f) Certificate Accepting Liabilities

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1. Certified copy of Certificate of Incorporation



2005.03.18
EDWTE.pdf



2006.11.16
DWTE.pdf

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4180105/1

Number 399060

DUPLICATE FOR THE FILE


Certificate of Incorporation

I hereby certify that

ELSAM DUBLIN WASTE TO ENERGY LIMITED

is this day incorporated under
the Companies Acts 1963 to 2003,
and that the company is limited.

Given under my hand at Dublin, this
Friday, the 11th day of March, 2005


for Registrar of Companies

Certificate handed to/posted to*: *Arthur Cox Trustees Limited*
Arthur Cox Building
Earlsfort Terrace
Dublin 2

Signed: Neil Cloake

Date: 18/3/05

*Delete as appropriate

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Consent of copyright owner required for any other use.

10/13/14 10:00 AM

10/13/14 10:00 AM

CONFIDENTIAL - INTERNAL USE ONLY

For inspection purposes only.
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CONFIDENTIAL - INTERNAL USE ONLY



CONFIDENTIAL - INTERNAL USE ONLY

4906505/1

Number 399060

DUPLICATE FOR THE FILE

Certificate of Incorporation on change of name

I hereby certify that

ELSAM DUBLIN WASTE TO ENERGY LIMITED

having, by a Special Resolution of the Company,
and with the approval of the Registrar of Companies,
changed its name, is now incorporated as
a limited company under the name

DUBLIN WASTE TO ENERGY LIMITED

and I have entered such name on the Register accordingly.

Given under my hand at Dublin, this
Monday, the 13th day of November, 2006


for Registrar of Companies

Certificate handed to/posted to*: Arthur Cox
Arthur Cox Building,
Earlsfort Terrace,
Dublin 2.

Signed: Neil Acock

Date: 16 / 11 / 06

*Delete as appropriate

STATE OF CALIFORNIA

DEPARTMENT OF INDUSTRIAL RELATIONS

OFFICE OF THE ASSISTANT ATTORNEY GENERAL

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INVESTIGATION REPORT

[Signature]

2. DWTEL's Number in company's registration office:

DWTEL's registration number: 399060

3. Particulars of registered office:

Name – Dublin Waste to Energy Limited
Address – Arthur Cox Building
Earlsfort Terrace
Dublin 2

4. DWTEL Organisation Chart

Please see attached

5. Certificate Guaranteeing Obligations

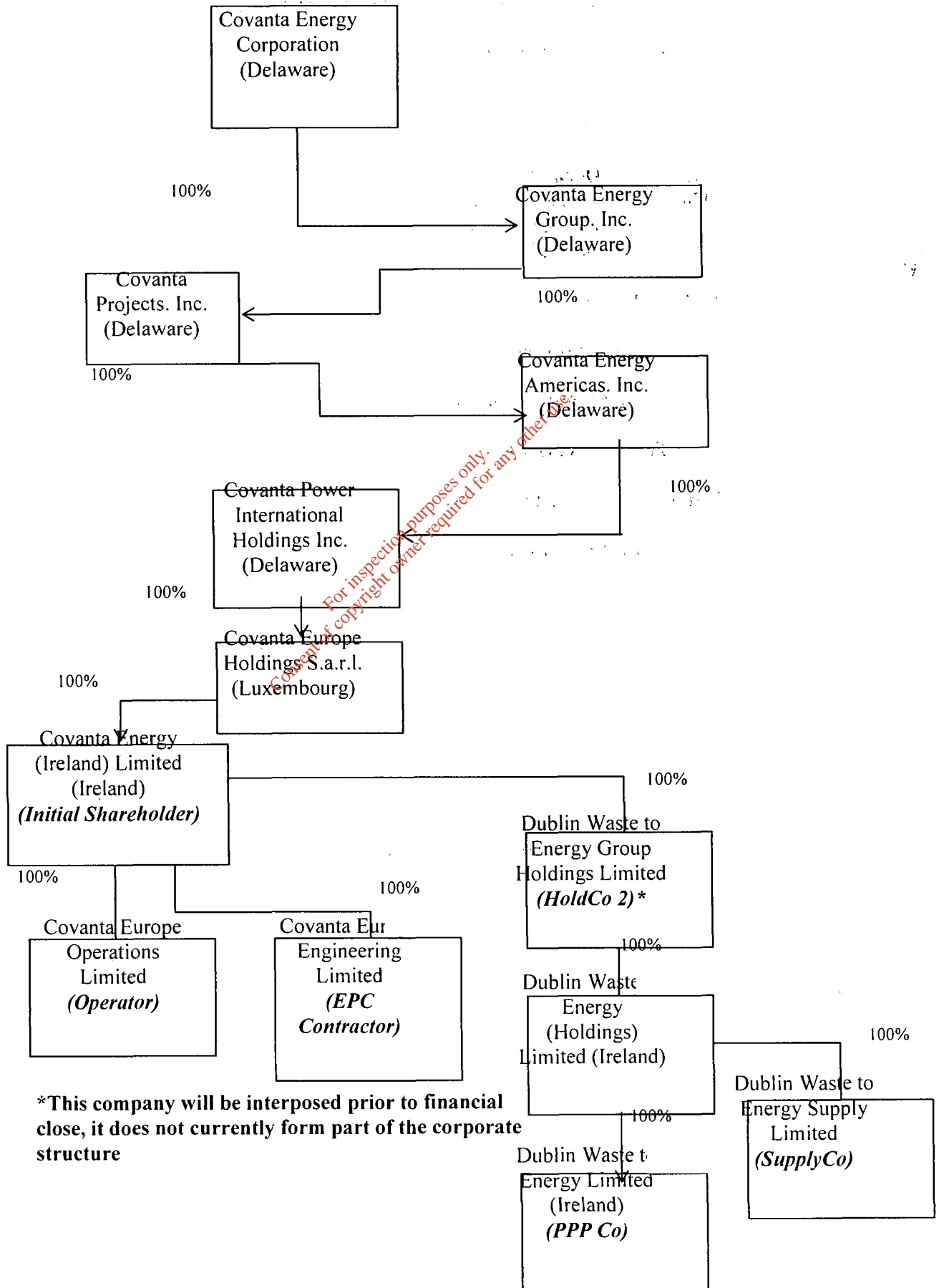
Please see attached

6. Certificate Accepting Liabilities

Please see attached

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DUBLIN WASTE TO ENERGY LIMITED



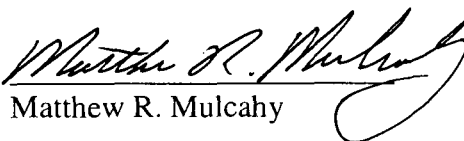


Covanta Energy Corporation
445 South Street
Morristown, NJ 07960
862-345-5000

CERTIFICATE

I, Matthew R. Mulcahy, do hereby certify that I am Senior Vice President of Covanta Energy Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), and that the Corporation will guarantee the obligations of Dublin Waste to Energy Limited in order to comply with the License Condition 12.2.1 of the waste license concerning Environmental Liabilities Risk Assessment (ELRA).

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Corporation as of the 23 day of July 2014.


Matthew R. Mulcahy

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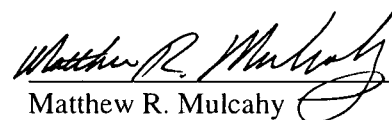


Dublin Waste to Energy Limited
Arthur Cox Building
Earlsfort Terrace
Dublin 2

CERTIFICATE

I, Matthew R. Mulcahy, do hereby certify that I am a Director of Dublin Waste to Energy Limited, a corporation organized and existing under the laws of Ireland (the "Corporation"), and that the Corporation has assumed and accepted all liabilities, requirements and obligations provided for in or arising under the Waste License W0232-01, or revised license, regardless of how and in respect of what period, including a period prior to the transfer of the license or revised license that may arise.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Corporation as of the 23 day of July 2014.


Matthew R. Mulcahy

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ATTACHMENT D

Covanta Energy Corporation Financial Statements



CES_Consolidated
Balance Sheet_2013_

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CONDENSED CONSOLIDATED BALANCE SHEETS**03/14 Q****2013 Y**

As Of Date

3/31/2014

12/31/2013

Source Document

3/31/2014 10-Q

3/31/2014 10-Q

Currency Code

USD

USD

(in millions)

ASSETS

Current

Cash and cash equivalents	389	198
Restricted funds held in trust	39	41
Receivables (less allowances)	263	265
Unbilled service receivables	17	16
Deferred income taxes	30	25
Note Hedge	79	78
Prepaid expenses and other current assets	116	110
Assets held for sale	4	7
Total Current Assets	937	740

Property, plant and equipment, net

2,661

2,636

Investments in fixed maturities at market (cost)

32

32

Restricted funds held in trust

126

126

Unbilled service receivables

11

13

Waste, service and energy contracts, net

346

364

Other intangible assets, net

20

20

Goodwill

249

249

Investments in investees and joint ventures

39

47

Other assets

160

151

Total Assets

4,581

4,378

LIABILITIES AND EQUITY

Current

Current portion of long-term debt	535	528
Current portion of project debt	53	55
Accounts payable	64	24
Accrued expenses and other current liabilities	267	250
Liabilities held for sale	1	2
Total Current Liabilities	920	859

Long-term debt

1,754

1,557

Project debt

175

181

Deferred income taxes

715

722

Waste and service contracts, net

27

30

Other liabilities

117

118

Total Liabilities

3,708

3,467

Equity

Covanta Holding Corporation stockholders equity

Preferred stock	0	0
Common stock	14	14
Additional paid-in capital	791	790
Accumulated other comprehensive loss	(9)	(2)
Accumulated earnings	74	106
Treasury stock, at par	(1)	(1)

Total Covanta Holding Corporation stockholders equity

869

907

Noncontrolling interests in subsidiaries

4

4

Total Equity

873

911

Total Liabilities and Equity

4,581

4,378

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ATTACHMENT E

Liabilities Assessment

The DWTE Facility's construction completion and commencement of waste processing activity are not expected prior to 2017. Hence, the Environmental Liability Risk Assessment (ELRA) required *prior to the acceptance of waste* at the facility pursuant to Condition 12.2.1 and the Decommissioning Management Plan required pursuant to Condition 10 of the licence are not required or available at this time.

However, to establish a reasonable order of magnitude liability assessment for purposes of this licence transfer request, DWTEL has reviewed the ELRA and the Closure, Restoration, Aftercare Management Plan (CRAMP) established for Indaver's Meath Waste-to-Energy Facility (associated with Waste Licence Register No. W 0167-02 available from the EPA's internet site).

Both the DWTE Facility and the Meath Facility are fundamentally similar, designed to incinerate and recover energy from waste.

<u>General/Design Data</u>	<u>DWTE Facility</u>	<u>Meath Facility</u>
Site	c.13.5 acres brownfield	c.25 acre greenfield
Technology	Conventional grate furnace	Conventional grate furnace
Number of process trains	2	1
Waste Processed	600,000 tpa	200,000 tpa
Energy generated (net)	c.59 MWe	c. 15 MWe

The review of the Meath Facility documents found that the environmental liabilities associated with the Meath Waste-to-energy Facility are generally similar and relevant to those expected for the DWTE Facility.

The liability amounts presented below as being indicative for the DWTE Facility (based on a general assessment of the Meath Facility liabilities) shall be revisited and appropriately established in the detailed and specific assessments performed as part of the DWTE Facility's ELRA and Decommissioning Management Plan at the time required by the licence.

Unknown Liability - Accidental Releases

Each of the potential environmental liabilities assessed in Table 11, page 44 in Meath Facility's ELRA, are considered indicative for the DWTE Facility. Whilst the DWTE Facility is a larger facility (ie: more truck trips, larger storage containers) the occurrence ratings, likelihood ranges, severity ratings, and cost ranges would not necessarily be greater all cases, and pro-rating by the ratio in facility sizes would not apply.

Accordingly, the "Upper Scenario Cost" for environmental liability of €38,350 established for the Meath Facility should only require a marginal increase to account for DWTE Facility liabilities. An indicative amount of €43,000 is assumed for the DWTE Facility.

Regarding the upper range of remediation cost, the Meath Facility ELRA estimates €330,000 due to the generation of firewater or for a leak in the waste bunker with a likelihood of occurrence rating between 0% and 5% over a thirty year operational period. In each of these scenarios, the

estimated cost for the DWTE Facility should be similar or only marginally greater¹. An indicative amount of €375,000 is assumed for the DWTE Facility.

Known Liability - Closure

The Meath Facility's CRAMP sets out the liabilities that will arise upon closure of the facility (e.g. costs for decommissioning activities and waste disposal). As reflected in Table 5, page 23, in Meath Facility's CRAMP, the closure plan costs for the Meath site were estimated at €584,875.

Due to the larger size of the DWTE Facility it would be reasonable to increase certain components in Table 5 as follows:

Item	Description	Meath Est. Cost (€)	DWTE Est. Cost (€)
1	Close-down and decommissioning activities by site personnel and contract personnel (including electricity costs)	296,600	445,000 (50% increased)
2	Decommissioning activities by specialist contractors, including waste disposal	143,300	290,000 (100% increase)
3	Removal and disposal of plant ²	NA	NA
4	Demolition ³	NA	NA
5	Environmental consultancy (incl. Closure Audit, report to EPA and validation certification)	16,000	16,000
	Subtotal	455,900	751,000
6	Contingency (25%)	113,975	187,750
7	Surrender of Waste Licence	15,000	15,000
	Total Estimated Closure Cost	584,875	953,750

An indicative closure plan cost of €953,750 is assumed for the DWTE Facility.

Known Liability – Restoration and Aftercare Management

The Meath Facility's CRAMP also sets out the liabilities that will arise as part of the restoration and aftercare management once the site is closed. As reflected in Table 6, page 26, in Meath Facility's CRAMP, the components accounted for are:

1. Environmental personnel to oversee the Remediation and Aftercare Plan
2. Aftercare monitoring programme (groundwater)
3. Site security
4. Site maintenance

Since the scope reflected generally does not correlate to the differences in size or other characteristics of the facilities, the estimated cost for the Meath Facility of €19,288 per month for such items is expected to be similar for the aftercare management plan for the DWTE Facility.

¹ Note that firewater storage on the Meath and DWTE facilities is 1,900 m³ and 2,160 m³, respectively.

² Removal and disposal of plant, where required, is considered cost neutral.

³ No demolition work is envisaged as part of Closure Plan.

ATTACHMENT F

Financial Management Provisions

The Project Agreement between Dublin Waste to Energy Ltd. and Dublin City Council ("Project Agreement") includes financial provision for the closure and aftercare of the facility through a performance guarantee either by a bank or other institution approved by Dublin City Council (the Authority) or through a retention account established with a bank located in Ireland and approved by the Authority. The Project Agreement requires that the financial provisions be reviewed and funded beginning at least five years prior to expiry of the Project Agreement.

DWTEL holds and shall maintain Pollution Liability insurance with insured limits of €10,000,000 for each incident and €20,000,000 in the aggregate (See following sheet for a copy of DWTE's insurance certificate). DWTEL shall also hold public liability insurance of €25,000,000 for each and every occurrence. These insurances may cover the liabilities arising from the incident scenarios assessed in this request.

Further, Covanta Energy Corporation will be providing Parent Guarantees towards the performance of the Project Agreement.

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To whom it may concern

11th July 2014

Dear Sirs

**Our Client: Dublin Waste to Energy Limited
Confirmation of Pollution Liability Insurance**

We hereby confirm that the following pollution liability insurance is in place for the Dublin Waste to Energy Project.

Named Insured: Dublin Waste to Energy Limited also known as DWIE Limited

Additional Insured:

- a) The Authority, which is Dublin City Council
- b) The Contractor, which is Covanta Europe Engineering Limited
- c) The Project Manager, which is Covanta Europe Engineering Limited
- d) The Environmental Advisor and Project Supervisor, which is Jacobs Engineering Ireland Limited
- e) The Operator, which is Covanta Europe Operations Limited
- f) The Project Supervisor, which is Project Management Limited
- g) All other sub-contractors of any tier
- h) All finance parties

Period: From 11 December 2009 to 10 December 2014

Type of Insurance: Contractors Pollution Liability Insurance (occurrence wording)

Insurer: Chubb Insurance Company of Europe SE

Policy No: 37332383

Limits of Indemnity: Euro 10,000,000 Each Pollution Incident
Euro 20,000,000 Aggregate Limit

Deductible: Euro 100,000 Each Pollution Incident

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Registered Office: The Walbrook Building, 25 Walbrook, London EC4N 8AW. Registered No: 1193013 England and Wales. www.ajginternational.com

Covered Operations:

The engineering, procurement, construction, testing, commissioning & operation and all associated work in connection with the Dublin Waste to Energy facility to be located and undertaken at Pigeon House Road, Poolbeg Peninsula, Dublin 4 Ireland

Retroactive Date: Policy Inception

This document is furnished to you as a matter of information only. It does not make the person or organisation to whom it has been issued an additional insured, nor does it modify in any manner the contract of insurance between the insured and underwriters. Any amendment, change or extension of such contract can only be effected by specific endorsement attached hereto.

Should the above mentioned contracts of insurance be cancelled, assigned or changed during the above Policy period in such manner as to affect this document, no obligation to inform the holder of this document is accepted by the Undersigned Insurance Brokers.

Yours Faithfully



Graeme Merry MSc DIC CChem
Environmental Director
Construction Services
Arthur J. Gallagher

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Contractors Pollution Liability Insurance

Endorsement 7

Policy period 11 December 2009 to 10 December 2014
Effective date 11 July 2014
Policy Number 37332383
Insured Dublin Waste to Energy Limited also known as DWtE Limited
Name of Company Chubb Insurance Company of Europe SE
Date Issued 11 July 2014

This Endorsement applies to the following forms:

Contractors Pollution Liability Policy Form Number 70-02-0903

Item 1.b Additional Insured

It is hereby agreed that Item 1.b Additional Insured of the Policy Schedule is deleted in its entirety and replaced by the following:

- a) the Authority, which is Dublin City Council
- b) the Contractor, which is Covanta Europe Engineering Limited
- c) the Project Manager, which is Covanta Europe Engineering Limited
- d) the Environmental Advisor and Project Supervisor, which is Jacobs Engineering Ireland Limited
- e) the Operator, which is Covanta Europe Operations Limited
- f) the Project Supervisor, which is Project Management Limited
- g) all other sub-contractors of any tier
- h) all finance parties

All other terms and conditions remain unchanged

Authorized Representative

YR Lodge