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Ireland

**INDUSTRIAL EMISSIONS LICENCE**  
**Recommended Determination**

<b>Licence Register Number:</b>	W0167-03
<b>Company Register Number:</b>	59667
<b>Applicant:</b>	Indaver Ireland Limited
<b>Location of Installation:</b>	Carranstown, Duleek, County Meath.

## ***INTRODUCTION***

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

**Indaver Ireland Limited (CRO Number 59667) is authorised to incinerate waste at Carranstown, Duleek, County Meath in a waste to energy installation that generates electricity. The plant operates 24 hours per day for approximately 7,752 hours per annum (46 weeks).**

**This licence authorises the incineration of certain hazardous waste streams suitable for the technology provided at the installation in addition to the non-hazardous waste streams previously authorised.**

**This licence also authorises an increase in the maximum quantity of waste that may be accepted at the installation from 200,000 tonnes per annum to 235,000 tonnes per annum (of which 10,000 tonnes per annum may be hazardous waste). This licence authorises the acceptance of up to 2,000 tonnes of waste per annum for treatment in a proposed residue solidification plant.**

**The plant has one incineration line with a design capacity of 26.7 tonnes per hour. Under the new arrangements, the heat produced from the process will increase the electrical output from 17 to 21MW.**

**For the purposes of the EU Industrial Emissions Directive (2010/75/EU), this installation falls within the scope of the following Annex I categories:**

**Category 5.2: Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants:**

- (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;**
- (b) for hazardous waste with a capacity exceeding 10 tonnes per day.**

The licensee must manage and operate the installation 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 installation to the Agency.

The licence sets out in detail the conditions under which **Indaver Ireland Limited, 4<sup>th</sup> Floor, Block 1, West Pier Business Campus, Old Dunleary Road, Dun Laoghaire, County Dublin** will operate and manage this installation.

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## *Glossary of Terms*

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 to 2013 / Waste Management Acts 1996 to 2013, unless otherwise defined in the section.

<b>Abnormal Operations</b>	Any technical stoppage, disturbance, or failure of any of the purification devices or the measurement devices, during which the concentrations in the discharges to air may exceed the prescribed emission limit values.
<b>Adequate Lighting</b>	20 lux measured at ground level.
<b>AER</b>	Annual Environmental Report.
<b>Aerosol</b>	A suspension of solid or liquid particles in a gaseous medium.
<b>Agreement</b>	Agreement in writing.
<b>Annually</b>	At approximately twelve-monthly intervals.
<b>Application</b>	The application by the licensee for this licence.
<b>Appropriate Facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application (Register No. W0167-02).
<b>Basic characterisation</b>	<b>A thorough determination, according to standardised analysis and behaviour testing methods, of the short and long-term leaching behaviour and/or characteristic properties of the waste.</b>
<b>BAT</b>	Best Available Techniques.
<b>BAT conclusions</b>	<b>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.</b>
<b>BAT reference document</b>	<b>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,.</b>
<b>Bi-annually</b>	All or part of a period of six consecutive months.

<b>Biennially</b>	Once every two years.
<b>Biodegradable Waste</b>	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
<b>BOD</b>	5 day Biochemical Oxygen Demand (without nitrification suppression).
<b>Breakdown</b>	Any technical stoppage, disturbance, or failure of the purification devices or the measurement devices.
<b>CCTV</b>	Closed Circuit Television.
<b>CEN</b>	Comité Européen De Normalisation – European Committee for Standardisation.
<b>COD</b>	Chemical Oxygen Demand.
<b>Compliance Testing</b>	<b>This constitutes periodical testing to determine whether a waste complies with waste acceptance criteria. The tests focus on key variables and behaviour identified by basic characterisation.</b>
<b>Condition</b>	A condition of this licence.
<b>Consignment Note</b>	As specified in the Waste Management (Movement of Hazardous Waste) Regulations (S.I. No. 147 of 1998).
<b>Construction and demolition (C&amp;D) waste</b>	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
<b>Containment boom</b>	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
<b>CRO Number</b>	Company Register Number.
<b>Daily</b>	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.
<b>Day</b>	Any 24 hour period.
<b>Daytime</b>	<b>07:00 hrs to 19:00 hrs</b>
<b>dB(A)</b>	Decibels (A weighted).
<b>Dioxins and Furans</b>	As defined in Council Directive 2010/75/EU on industrial emissions.
<b>Documentation</b>	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.

<b>Drawing</b>	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
<b>Emergency</b>	Those occurrences defined in Condition 9.4.
<b>Emission Limits</b>	Those limits, including concentration limits and deposition levels established in <i>Schedule B: Emission Limits</i> , of this licence.
<b>EMP</b>	Environmental Management Programme.
<b>Environmental damage</b>	As defined in Directive 2004/35/EC.
<b>EPA</b>	Environmental Protection Agency.
<b>European Waste Catalogue (EWC)</b>	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.
<b>Evening Time</b>	<b>19:00hrs to 23:00hrs</b>
<b>Facility</b>	A site or premises used for the purpose of the recovery or disposal of waste or an installation.
<b>Fortnightly</b>	A minimum of 24 times per year, at approximately two week intervals.
<b>Gas Oil</b>	Gas Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
<b>GC/MS</b>	Gas chromatography/mass spectroscopy.
<b>Groundwater</b>	Has the meaning assigned to it by Regulation 3 of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010).
<b>HEPA filter</b>	High efficiency particulate air filter.
<b>Hours of waste acceptance</b>	The hours during which the installation is authorised to accept waste.
<b>ICP</b>	Inductively coupled plasma spectroscopy.
<b>IE</b>	Industrial Emissions
<b>Incident</b>	The following shall constitute as 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.
<b>Incineration Plant</b>	As defined in Council Directive 2010/75/EU on industrial emissions.
<b>Incinerator Residue</b>	As defined in Council Directive 2010/75/EU on industrial emissions.
<b>Industrial Emissions Directive</b>	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).
<b>Industrial waste</b>	As defined in Section 5(1) of the Waste Management Acts 1996 to 2013.
<b>Inert Waste</b>	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.
<b>Installation</b>	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Acts 1992 to 2013 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.
<b>K</b>	Kelvin.
<b>kPa</b>	Kilopascals.
<b>L<sub>Aeq,T</sub></b>	This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
<b>L<sub>Ar,T</sub></b>	The Rated Noise Level, equal to the LAeq during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
<b>Licensee</b>	<b>Indaver Ireland Limited, CRO Number 59667, 4<sup>th</sup> Floor, Block 1, West Pier Business Campus, Old Dunleary Road, Dun Laoghaire, County Dublin.</b>
<b>Liquid waste</b>	Any waste in liquid form and containing less than 2% dry matter, or any waste tankered to the installation.
<b>List I</b>	As listed in EC Directive 2006/11/EC.
<b>List II</b>	As listed in EC Directive 2006/11/EC.

<b>Local Authority</b>	Meath County Council.
<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
<b>Mass flow limit</b>	An emission limit value expressed as the maximum mass of a substance that can be emitted per unit time.
<b>Mass flow threshold</b>	A mass flow rate above which a concentration limit applies.
<b>Mixed Municipal Waste</b>	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.
<b>Monthly</b>	A minimum of 12 times per year, at intervals of approximately one month.
<b>Night-time</b>	<b>23:00 hrs to 07:00 hrs.</b>
<b>Noise-sensitive location (NSL)</b>	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
<b>Nominal Capacity</b>	As defined in Council Directive 2000/76/EC on the incineration of waste.
<b>O.D.</b>	Ordinance datum Malin Head.
<b>Oil separator</b>	Device installed according to the International Standard I.S. EN 858-2:2003 (Separator system for light liquids, (e.g. oil and petrol) – Part 2: Selection of normal size, installation, operation and maintenance).
<b>PRTR</b>	Pollutant Release and Transfer Register.
<b>Quarterly</b>	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
<b>Recyclable Materials</b>	Those waste types, such as cardboard, batteries, gas cylinders, etc., which may be recycled.
<b>Residue</b>	As defined in Council Directive 2010/75/EU on industrial emissions.
<b>Residual Waste</b>	In the context of intake to an incinerator/WtE plant, residual waste is waste that has been subjected to pre-treatment (including, <i>inter alia</i> , pre-segregation, sorting) to extract, to the maximum practical and available extent having regard to BAT, the recyclable/reusable components.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, the term samples shall include measurements taken by electronic instruments.



<b>Sanitary effluent</b>	Wastewater from installation toilet, washroom and canteen facilities.
<b>Sludge</b>	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.
<b>Soil</b>	The top layer of the Earth's crust situated between the bedrock and the surface and the soil is composed of mineral particles, organic matter, water, air and living organisms.
<b>SOP</b>	Standard operating procedure.
<b>Source segregated waste</b>	Waste which is separated at source; meaning that the waste is sorted at the point of generation into a recyclable fraction(s) for separate collection (e.g., paper, metal, glass, plastic, bulk dry recyclables, biodegradables, etc.) and a residual fraction. The expression 'separate at source' shall be construed accordingly.
<b>Specified emissions</b>	Those emissions listed in <i>Schedule B: Emission Limits</i> of this licence.
<b>Standard method</b>	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.
<b>Storm water</b>	Rain water run-off from roof and non-process areas.
<b>The Agency</b>	Environmental Protection Agency.
<b>TOC</b>	Total organic carbon.
<b>Treatment/pre-treatment</b>	Any manual, thermal, physical, chemical or biological processes that change the characteristics of the waste in order to reduce its volume or hazardous nature or facilitate its handling, disposal or recovery.
<b>Trigger level</b>	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
<b>Waste</b>	Any substance or object which the holder discards or intends or is required to discard.
<b>Water Services Authority</b>	Meath County Council.
<b>Weekly</b>	During all weeks of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
<b>WEEE</b>	Waste Electrical & Electronic Equipment
<b>WtE Plant</b>	Waste-to-Energy incineration plant.

**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 83(5) of the Environmental Protection Agency Acts 1992 as amended.

### **Recommended Determination**

In reaching this decision the Environmental Protection Agency has considered the documentation relating to the current licence, Register Number: W0167-02, and the review application Register Number: W0167-03. This includes supporting documentation received from the applicant, all submissions received from other parties, the report of the Licensing Inspector and the Environmental Impact Assessment (EIA) report contained therein.

It is considered that the Environmental Impact Assessment Report (as included in the Inspectors Report dated **6<sup>th</sup> November 2014** contains a fair and reasonable assessment of the likely significant effects of the licensed activity on the environment. The assessment as reported is adopted as the assessment of the Agency. Having regard to this assessment, it is considered that the proposed activity, if managed, operated and controlled in accordance with the licence will not result in the contravention of any relevant environmental quality standards or cause environmental pollution.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Site(s). In this context, particular attention was paid to the following European sites:

- **River Boyne & river Blackwater SAC (002299);**
- **River Boyne & river Blackwater SPA (004232);**
- **Boyne Estuary SPA (004080); and**
- **River Nanny Estuary and Shore SPA (004518).**

The Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of those sites as European Sites and that it can be excluded on the basis of objective information, that the activity, individually or in combination with other plans or projects, will have a significant effect on a European site, and accordingly the Agency determined that an Appropriate Assessment of the activity is not required.

It has been determined that this facility does not have the potential for significant effects on any European site due to the nature and scale of the waste to energy plant operations and the distance between the installation and the designated sites.

## ***Part I Schedule of Activities Licensed***

In pursuance of the powers conferred on it by the Environmental Protection Agency Acts 1992 to 2013, the Agency proposes to determine the review of the existing licence (Reg. No. W0167-02) granted to:

**Indaver Ireland Limited, 4<sup>th</sup> Floor, Block 1, West Pier Business Campus, Old Dunleary Road, Dun Laoghaire, County Dublin, and CRO Number 59667.**

under Section 90(2) of the said Acts to carry on the following activities:

**Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants -**

**(a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour,**

**and (b) for hazardous waste with a capacity exceeding 10 tonnes per day.**

at Carranstown, Duleek, County Meath subject to the following twelve Conditions, with the reasons therefor and associated schedules attached thereto.

## ***Part II Schedule of Activities Refused***

None of the proposed activities as set out in the licence review application have been refused.

## ***Part III Conditions***

### **Condition 1. Scope**

- 1.1 **Industrial Emissions activities at this installation** shall be restricted to those listed and described in *Part I Schedule of Activities Licensed*, and shall be as set out in the licence application or as modified under Condition 1.5 of this licence and subject to the conditions of this licence.
- 1.2 Activities at this installation shall be limited as set out in *Schedule A: Limitations* of this licence.
- 1.3 **Hazardous wastes with a content of >1% of halogenated organic substances (expressed as chlorine) shall not be accepted for treatment at the installation.**
- 1.4 For the purposes of this licence, the installation authorised by this licence is the area of land outlined in red on **Drawing No. 21098\WL\002 Site Plan** of the application. Any reference in this licence to “installation” shall mean the area thus outlined in red. The licensed activities shall be carried on only within the area outlined.
- 1.5 No alteration to, or reconstruction in respect of, the activity, or any part thereof, that would, or is likely to, result in
- (i) 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
- (ii) 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 agreement of, the Agency.
- 1.6 The installation shall be controlled, operated and maintained, and emissions shall take place as set out in the licence. All programmes required to be carried out under the terms of this licence become part of this licence.
- 1.7 This licence is for purposes of **Industrial Emissions** licensing under the Environmental Protection Agency Acts 1992 to 2013 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations, or requirements under any other enactments or regulations.
- 1.8 This licence is being granted in substitution for the licence granted to the licensee on **16<sup>th</sup> February 2011 (Register No. W0167-02)**. The previous licence (**Register No. W0167-02**) is superseded by this licence.

**Reason:** *To clarify the scope of this licence.*

## Condition 2. Management of the Installation

### 2.1 Installation Management

2.1.1 The licensee shall employ a suitably qualified and experienced (minimum 10 years in incinerator operation) installation manager who shall be designated as the person in charge. The installation manager or a nominated, suitably qualified and experienced deputy (minimum 5 years incinerator experience) shall be present on the installation 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 The licensee shall maintain written details of the management structure of the installation. 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 installation 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 **The licensee shall establish and maintain an Environmental Management System (EMS), which shall incorporate energy efficiency management. The EMS shall be reviewed for suitability, adequacy and effectiveness and updated on an annual basis.**

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

2.3.2.1 **An environmental policy defined for the installation.**

2.3.2.2 Management and Reporting Structure.

2.3.2.3 Schedule of Environmental Objectives and Targets.

The licensee shall maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for 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).

2.3.2.4 Environmental Management Programme (EMP)

- (i) The licensee shall maintain 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:
  - designation of responsibility for targets;
  - the means by which they may be achieved;

- the time within which they may be achieved.

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

#### 2.3.2.5 Documentation

- (i) The licensee shall maintain an environmental management documentation system which shall be to the satisfaction of the Agency.
- (ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

#### 2.3.2.6 Corrective **and Preventative** Action

- (i) The licensee shall maintain procedures to ensure that corrective **and preventative** action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for persons initiating further investigation and corrective **and preventative** action in the event of a reported non-conformity with this licence shall be defined.
- (ii) Where a breach of one or more of the conditions of this licence occurs, the licensee shall without delay take measures to restore compliance with the conditions of this licence in the shortest possible time **and any feasible preventative actions to prevent recurrence of the breach.**
- (iii) **All corrective and preventative actions shall be documented.**

#### 2.3.2.7 Awareness and Training

The licensee shall 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.

#### 2.3.2.8 Maintenance Programme

The licensee shall maintain a programme for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above). **The maintenance programme shall use appropriate techniques and measures to ensure the optimisation of energy efficiency in plant and equipment.**

#### 2.3.2.9 Efficient Process Control

The licensee shall, in accordance with the Test Programme Commissioning Plan, 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.

#### 2.3.2.10 Internal Audits

**The licensee shall establish and maintain a programme for independent internal audits of the EMS. Such audits shall be carried out at least once every three years. The audit programme shall determine whether or not the EMS is being implemented and**

**maintained properly, and in accordance with the requirements of the licence. Audit reports and records of resultant corrective and preventative actions shall be maintained as part of the EMS in accordance with condition 2.3.2.5.**

#### 2.3.2.11 Public Awareness & Communications Programme

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

- (iv) Maintain information at the installation as required in Condition 11.2 which shall be available for inspection at all reasonable times;
- (v) Maintain the following information via the internet:
  - a) Real time data from on-line process and emissions 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)
  - b) A weekly summary of continuous emissions monitoring data;
- (vi) Maintain 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 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 and maintain, for each component of the facility, all infrastructure referred to in this licence in advance of the commencement of the licensed activities in that component, or as required by the conditions of this licence. Infrastructure specified in the application that relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.
- 3.2 **The licensee shall have regard to the following when choosing and/or designing any new plant or infrastructure:**
  - (i) **energy efficiency; and,**
  - (ii) **the environmental impact of eventual decommissioning.**
- 3.3 Monitoring Infrastructure
  - 3.3.1 Meteorological Station
    - (i) The licensee shall operate a weather monitoring station at the installation which records the requirements specified in *Schedule C.5: Meteorological Monitoring*, of this licence.
    - (ii) The licensee shall **maintain** in a prominent location on the installation a windsock, or other wind direction indicator, which shall be visible from the public roadway outside the site.
  - 3.3.2 Monitoring equipment shall be vibration isolated in accordance with manufacturers' specifications.
  - 3.3.3 The licensee shall install on all emission points such sampling points or 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.



- 3.3.4 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site point as required by the Agency. The requirement with regard to off-site points is subject to the prior agreement of the landowner(s) concerned.
- 3.3.5 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.
- 3.3.6 All wellheads shall be adequately protected to prevent contamination or physical damage.
- 3.4 Installation Notice Board
- 3.4.1 The licensee shall **maintain** an Installation Notice Board at the installation so that it is legible to persons outside the main entrance to the installation. The minimum dimensions of the board shall be 1200 mm by 750 mm.
- 3.4.2 The board shall clearly show:
- (i) the name and telephone number of the installation;
  - (ii) the waste acceptance hours;
  - (iii) the name of the licence holder;
  - (iv) an emergency out of hours contact telephone number;
  - (v) the waste licence reference number; and
  - (vi) where environmental information relating to the installation can be obtained.
- 3.4.3 A plan of the installation clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the installation. The plan shall be displayed on a durable material such that is legible at all times. The plan shall be replaced as material changes to the installation are made.
- 3.5 Installation Security
- 3.5.1 Security and stockproof fencing and gates shall be maintained.
- 3.5.2 The licensee shall **maintain** a CCTV system which records all truck movements into and out of the installation, 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.
- 3.6 Waste Inspection and Quarantine Areas
- 3.6.1 An impermeable Waste Inspection Area and a Waste Quarantine Area shall be maintained at the installation.
- 3.6.2 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.
- 3.6.3 Drainage from these areas shall be diverted for collection and safe disposal. The collected water shall be either used as process water in the incineration plant, or if unsuitable, tankered off site for treatment at an authorised waste or wastewater treatment installation.
- 3.7 The licensee shall provide and maintain two weighbridges at the installation.
- 3.8 Fire-water Retention
- 3.8.1 The licensee shall, to the satisfaction of the Agency, maintain a suitable fire-water risk management programme.
- 3.8.2 In the event of a fire or spillage to storm water, the site storm water shall be diverted to suitable containment. **The storage capacity shall be adequate to ensure that such waters can be tested and treated before discharge where necessary.** The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention.
- 3.9 The licensee shall provide the following minimum incinerator residue storage capacity:
- (i) bottom ash: 1,600 m<sup>3</sup>;

- (ii) boiler ash: 100 m<sup>3</sup>;
  - (iii) fly ash/flue gas cleaning ash: 420 m<sup>3</sup>.
- 3.10 The licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the installation. 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 Doors at the entry/exit points from the buildings where waste is accepted and stored, shall be kept closed where possible.
  - 3.10.3 Implementation of an odour and fugitive dust management system to include periods when the incinerator is not operational.
- 3.11 The licensee shall ensure that adequate standby and back up equipment, to include that listed in the Test Programme/Commissioning Plan Report, 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, Container and Drum Storage Areas
- 3.12.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall 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:
    - (i) 110% of the capacity of the largest tank or drum within the bunded area; or
    - (ii) 25% of the total volume of substance that could be stored within the bunded area.
  - 3.12.3 All drainage from bunded areas shall be treated as contaminated unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal, unless it can be deemed uncontaminated and does not exceed the trigger levels agreed by the Agency.
  - 3.12.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
  - 3.12.5 All tanks, containers, drums **and pipework** shall be labelled to clearly indicate their:
    - (i) contents;
    - (ii) **capacity; and**
    - (iii) **flow direction**
  - 3.12.6 **The licensee shall provide adequate secondary containment for tankers delivering aqueous wastes to the installation for treatment.**
- 3.13 Wastewater Treatment
- The wastewater treatment systems and percolation areas shall satisfy the criteria set out in the Agency's Wastewater Treatment Manual on *Treatment Systems for Small Communities, Business, Leisure Centres and Hotels* (p.e. 10 – 500) (EPA, 1999). Any references therein to *Treatment Systems for Single Houses* (EPA, 2000) shall be replaced by the *Code of Practice on Waste Water Treatment and Disposal Systems serving single houses* (p.e. ≤ 10) (EPA, 2009).
- 3.14 Surface Water Management
- Effective surface water management infrastructure shall be provided and maintained at the installation during construction and operation of the installation. The rate of surface water discharge from the site shall not exceed **59.8 litres per second** unless otherwise agreed by the Water Services Authority.
- 3.15 Drainage System, pipeline identification

- 3.15.1 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 installation operation, and any identification designated in this licence (e.g. SW1) shall be inscribed on these manholes.
- 3.15.2 Silt Traps and Oil Separators
- The licensee shall install and maintain:
- (iv) Silt traps to ensure that all storm water discharges, other than storm water from roofs, from the installation pass through a silt trap in advance of discharge;
  - (v) A Class I oil separator on the storm water discharge from yard areas.
  - (vi) A forecourt separator at the diesel delivery area.
- The silt traps and separators shall be in accordance with I.S. EN 585-2:2003 (separator systems for light liquids).
- 3.15.3 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.
- 3.15.4 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 installation.
- 3.15.5 Appropriate drainage infrastructure shall be provided at the aqueous waste unloading area to collect any potential spills or losses. All waste water from this area shall be diverted for collection and safe disposal.
- 3.16 Existing 200mm Diameter Gas Main
- The pathway for the existing gas main shall be clearly delineated on site. An on-site permanent way-leave width of 14m and a working strip of 18m shall be provided and maintained by the licensee.
- 3.17 Waste Acceptance / Dispatch Hours and Hours of Operation
- 3.17.1 Waste may be accepted at, or dispatched from, the installation only between the hours of **0700** to 1830 Monday to Friday inclusive and 0800 to 1400 on Saturdays, **unless otherwise agreed by the Agency**.
- 3.17.2 Waste shall not be accepted at, or removed from, the installation on Sundays and Public Holidays without the written approval of the Agency.
- 3.17.3 The incineration plant may be operated 24 hours per day, Monday to Sunday inclusive.
- 3.18 Incineration Plant
- 3.18.1 The licensee shall provide and maintain incineration plant **as specified in licence application Reg. No. W0167-02, as updated in licence application Reg. No. W0167-03**, or as may be varied with the written approval of the Agency.
- 3.18.2 The incinerator plant design and construction shall incorporate the following:
- (i) The stack elevation of the incineration plant (Emission Point Reference No. A1-1) shall at minimum be 95.5m O.D.
  - (ii) Appropriate seismic design of the foundation.
- 3.19 Incineration Plant – Test Programme
- 3.19.1 The licensee shall, **prior to implementation**, submit to the Agency for its agreement, a Test Programme **to validate the performance of the plant under the extended range of waste streams**.
- 3.19.2 The Test Programme shall as a minimum:
- (i) 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.

- (ii) Demonstrate that the combustion chamber will be able to achieve 850°C for two seconds on a continuous basis.
  - (iii) Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence.
  - (iv) Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.
  - (v) 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.
  - (vi) 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.
- 3.19.3 The Test Programme shall be implemented as agreed and a report on its implementation shall be submitted to the Agency on completion.
- 3.19.4 **The test programme shall be repeated as necessary or as may be directed by the Agency as new wastes of different EWC codes are proposed to be accepted.**
- 3.19.5 The licensee shall not accept any hazardous waste, categorised by its EWC code, at the installation (outside of the agreed Test Programme) until such time as it is authorised to do so by the Agency.**
- 3.20 Incineration Plant operations – additional requirements
- 3.20.1 The plant shall be operated in accordance with the criteria for operation and control as determined in test programmes conducted in accordance with Condition 3.19.
- 3.20.2 The nominal capacity of the plant shall be 26.7 tonnes per hour.
- 3.20.3 The licensee shall 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.
- 3.20.4 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.
- 3.20.5 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 homogenous 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.
- 3.20.6 The incineration plant shall be equipped with at least one auxiliary burner. The burner must 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.
- 3.20.7 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 which may cause higher emissions than those resulting from the burning of gas oil, **as defined in Council Directive 1999/32/EC, relating to a reduction in the sulphur content of certain liquid fuels**, liquefied gas or natural gas.
- 3.20.8 The incineration plant shall have and operate an automatic system to prevent waste feed:
- (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 or failures 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 emission limit values.
- 3.20.9 The boiler shall be equipped with an automatic cleaning system to minimise the reformation of dioxins and furans.
- 3.20.10 The licensee shall maintain **a detector for the presence of radioactive materials at the entrance to the installation, or other location agreed by the Agency.**
- 3.20.11 The waste bunker shall be equipped with the following:-
  - (a) a smoke detection system (or equivalent) with alarm and water cannon for fire control;
  - (b) a detector for the presence of explosive gases.
- 3.20.12 Liquid wastes shall be introduced to the furnace by way of direct injection.
- 3.21 **Abnormal Operation / breakdown**
  - 3.21.1 In the case of a breakdown, the licensee shall shut down incineration plant operations as soon as practicable, until normal operations can be restored. The licensee shall not resume incineration operations except in accordance with a protocol to be agreed with the Agency.
  - 3.21.2 In the case of abnormal operations:
    - (i) The licensee shall under no circumstances continue to incinerate waste 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
    - (ii) The cumulative duration of abnormal operation over one calendar year shall be less than 60 hours, and
    - (iii) The total dust content of the emissions from the stack (A1-1) shall under no circumstances exceed 150 mg/m<sup>3</sup> (expressed as a half-hourly average) and the emission limit values specified in *Schedule B.1: Emission Limits to Air*, of this licence for CO and TOC shall not be exceeded.
- 3.22 **Shut-down**

**In the event of a shut-down of the incineration plant or process line, any waste:-**

  - (a) **arriving at the installation shall be transferred directly to an appropriate facility;**
  - (b) **stored or awaiting processing at the installation shall, subject to the agreement of the Agency, be transferred to an appropriate facility within three days of shut-down, unless otherwise agreed with the Agency.**
- 3.23 There shall be no bypass of the air abatement system.
- 3.24 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.
- 3.25 All pump sumps, storage tanks, 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 separator, shall be fitted with high level liquid alarms (or oil detectors as appropriate).
- 3.26 The licensee shall provide and use adequate lighting during the operation of the installation in hours of darkness.
- 3.27 **Engineering Works**
  - 3.27.1 All construction works 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.

- 3.27.2 Following the completion of infrastructural works, 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 installation;
  - (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 modelling 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.
- 3.27.3 The licensee shall submit proposals for the installation of residue treatment and bottom ash recovery infrastructure to the Agency for its agreement at least three months in advance of the intended date of commencement of any such works (installation of infrastructure). No such works shall be carried out without the prior agreement of the Agency.
- 3.28 The licensee shall ensure the net calorific value of wastes entering the incinerator does not exceed 18MJ/kg, nor cause the need for excessive primary air levels to control grate temperature.**
- 3.29 The provision of a catchment system to collect any leaks from flanges and valves of all over-ground pipes used to transport material other than water shall be examined. This shall be incorporated into a Schedule of Environmental Objectives and Targets set out in Condition 2 of this licence for the reduction in fugitive emissions.

***Reason: To provide for appropriate operation of the installation to ensure protection of the environment.***

## Condition 4. Interpretation

- 4.1 Emission limit values 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.

4.2 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.

#### 4.3 Noise

Noise from the installation 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 limit values fixed under the licence.*

## Condition 5. Emissions

5.1 No specified emission from the installation 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 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 installation 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 Air extracted from the waste reception hall and waste bunker shall be:

- (i) used as combustion air for the incinerator, except when the incinerator is not operating, and
- (ii) discharged via the stack (emission point A1-1).

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

- Vermin;
- Birds;
- Flies;
- Mud;
- Dust;
- Litter;
- Odour;

associated with the activity do not result in an impairment of, or an interference with, amenities or the environment at the installation or beyond the installation boundary or any other legitimate uses of the environment beyond the installation boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.

5.7 The licensee shall ensure that all vehicles delivering waste to and removing waste from the installation are appropriately covered, and sealed in the case of hazardous incinerator residues.

**Reason:** *To provide for the protection of the environment by way of control and limitation of emissions.*

## 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 Analyses 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 shall be 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 any 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 annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)' as published by the Agency.

6.3 Subject to the limitations of **Article 15 of the European Union (Waste Incineration Plants and Waste Co-Incineration Plants) Regulations 2013 (S.I. No. 148 of 2013)**, 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. **Automated measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once per year.**
- 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 installation 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 using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.
- 6.13 **Groundwater monitoring trigger levels agreed by the Agency shall be used in the assessment of, and response to, groundwater monitoring data.**
- 6.14 **Prior to determining the routes for the disposal or recovery of incineration residues, appropriate tests shall be carried out to establish the physical and chemical characteristics and the polluting potential of the incinerator residues. Those tests shall include the monitoring and analysis specified in *Schedule C.4: Monitoring of Incinerator Residues* of this licence.**
- 6.15 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee prior to use. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.16 Storm Water
- 6.16.1 A visual examination of the storm water discharges shall be carried out daily. A log of such inspections, shall be maintained.

6.16.2 **Storm waters, where the trigger levels for storm water discharges agreed with the Agency are exceeded, shall be diverted for retention and suitable disposal. The licensee shall have regard to the Environmental Protection Agency “Guidance on the setting of trigger values for storm water discharges to off-site surface waters at EPA IPPC and Waste licensed facilities” when establishing suitable trigger levels.**

#### 6.17 Soil Monitoring

**The licensee shall carry out soil monitoring at the site of the installation at least once every ten years. The sampling and monitoring shall be carried out in accordance with any guidance or procedure as may be specified by the Agency.**

6.18 An inspection system for the detection of leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be developed and maintained within three months of the date of grant of licence.

**Reason:** *To provide for the protection of the environment by way of treatment and monitoring of emissions.*

## Condition 7. Resource Use and Energy Efficiency

### 7.1 Energy Efficiency

7.1.1 **The recovery of energy shall take place with a high level of energy efficiency.**

7.1.2 The licensee shall operate the installation to achieve an energy efficiency of, as a minimum, 0.65 using the formula below to calculate Energy Efficiency:

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

$E_p$  = 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 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.

**The calculation shall be in accordance with the European Commission’s *Guidelines on the Interpretation of the R1 Energy Efficiency Formula for Incineration Facilities Dedicated to the Processing of Municipal Solid Waste According to Annex II of Directive 2008/98/EC on Waste.***

7.1.3 The licensee shall carry out an audit of the energy efficiency of the site **annually**. The audit shall be carried out in accordance with the guidance published by the Agency, “Guidance Note on Energy Efficiency Auditing”. The energy efficiency audit report shall include:

- (i) A review of opportunities for increasing the overall energy efficiency of the installation.
- (ii) Progress with those opportunities identified in the previous report.
- (iii) The net usable energy produced per tonne of waste processed (i.e. energy consumption of the installation and unused energy discharged from cooling operations to be deducted).

The report shall include a full breakdown of the calculation of each parameter in the equation referred to in Condition 7.1 and the net usable energy produced per tonne of waste processed.

- 7.1.4 The audit shall identify all practicable opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.
- 7.1.5 **The licensee shall explore and develop where feasible suitable outlets for the export of heat.**
- 7.2 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.
- 7.3 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. **The licensee shall also explore and develop where feasible opportunities for the recovery/recycling of incinerator residues.** Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

**Reason:** *To provide for the efficient use of resources and energy in all site operations.*

## Condition 8. Materials Handling

### 8.1 Waste recovery

**8.1.1 The licensee shall ensure that waste generated in the carrying on of the activity shall be prepared for re-use recycled or recovered or, where that is not technically or economically feasible, disposed of in a manner which will prevent or minimise any impact on the environment.**

**8.1.2 Notwithstanding Condition 8.1.1, incinerator residues shall be minimised in their amount and harmfulness. Incinerator residues shall be recycled, where appropriate, directly in the plant or outside.**

8.2 All waste handling and treatment shall be undertaken within the installation building, with the exception of storage of non-conforming waste at the outdoor waste quarantine area.

8.3 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.

### 8.4 Waste Acceptance/Removal and Characterisation Procedures

8.4.1 Waste shall be accepted at/removed from the installation only from/by an authorised or exempted carrier under National or European legislation or protocols. Waste sent off-site for recovery or disposal shall be conveyed 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 only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols. Copies of the waste collection permits must be maintained at the installation.

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

8.4.3 The licensee shall establish and maintain, **and implement to the satisfaction of the Agency**, detailed written procedures for the acceptance and handling of wastes. Once approved by the Agency, the procedures shall be implemented at the installation. These procedures shall include the following:

- (i) Procedures for waste profiling from new and known customers, waste inspection prior to discharge into the bunker, and waste characterisation;
- (ii) **Procedures and criteria for:**

- (a) **characterisation, compliance testing, acceptance, on-site verification and handling of all wastes arriving at the installation;**
  - (b) **rejection of unacceptable incoming waste; and**
  - (c) **ensuring adequate storage capacity exists in advance of waste acceptance.**
- (iii) Methods for the characterisation of waste sent off-site for disposal/recovery, in order to distinguish between inert, non-hazardous and hazardous wastes. In the case of materials dispatched to landfill, such methods shall have regard to the EU 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 the landfill of waste;
- (iv) Procedures for the reception and weighing of incoming and outgoing wastes;
- (v) 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 3<sup>rd</sup> May 2000, as amended.
- (vi) **The manner in which waste, including incineration residues, will be handled for disposal or recovery. This shall include bunker management procedures at the incineration plant (mixing, blending and pre-treatment of waste, including hazardous waste, as well as periodic emptying and cleaning). The mixing, blending and pre-treatment of waste shall take place with due regard for safety considerations.**

#### **8.4.4 Hazardous Waste**

**8.4.4.1 Prior to accepting hazardous waste at the installation, the licensee shall collect, record and retain available information about the waste for the purpose of verifying compliance with Schedule A.2 *Hazardous Waste Categories and Quantities for Acceptance for Incineration* and the waste acceptance procedures. That information shall cover the following:**

- (i) **All the administrative and technical information on the generating process contained in the documents mentioned in Condition 8.4.4.2(i):**
- (ii) **The physical properties and chemical composition of the waste and all other information where necessary to evaluate its suitability for the intended incineration process;**
- (iii) **The hazardous characteristics of the waste, the substances with which it cannot be mixed, and the precautions to be taken in handling the waste.**

**8.4.4.2 Prior to accepting hazardous waste at the installation, at least the following procedures shall be carried out by the operator:**

- (i) **The checking of the documents required by Directive 2008/98/EC and, where applicable, those required by Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste and by legislation on transport of dangerous goods;**
- (ii) **The taking of representative samples, unless inappropriate, as far as possible before unloading but in all cases prior to mixing with other waste at the installation, to verify conformity with waste acceptance procedures and the information specified in Condition 8.4.4.1.**
- (iii) **The samples referred to in Condition 8.4.4.2(ii) shall be kept for at least 1 month after the incineration of the waste concerned.**

**8.4.4.3 The licensee shall use a feed equalisation system for solid hazardous wastes.**

**8.4.5 The procedures referred to in conditions 8.4.3 and 8.4.4 shall be reviewed prior to the acceptance of any new waste stream not previously accepted.**

#### **8.5 Waste Pre-treatment**

8.5.1 In the case of municipal waste, only waste that has been subject to pre-treatment shall be accepted for incineration at the installation.

8.5.2 Pre-treatment shall reflect published EPA technical guidance as set out in *Municipal Solid Waste – Pre-treatment and Residuals Management*, EPA, 2009.

- 8.6 Any waste deemed unsuitable for processing at the installation or in contravention of this licence shall be immediately separated and removed from the installation 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 contamination of stormwater, putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.
- 8.7 The licensee shall ensure that waste from the incineration plant, prior to being sent for disposal or recovery off site, is:-
- 8.7.1 Segregated, classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling;
- 8.7.2 Stored, loaded and unloaded in designated areas, protected as may be appropriate against spillage and leachate run-off;
- 8.7.3 Stockpiled in such a manner as to minimise dust generation.
- 8.8 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.
- 8.9 Unless **approved in accordance with procedures to be established under Condition 8.4** or otherwise agreed in writing by the Agency, **hazardous waste shall not be mixed with other categories of hazardous waste or with other waste, substances or materials. If hazardous waste has been so mixed, the licensee shall separate the mixture if so instructed by, and in a manner agreeable to, the Agency.**
- 8.10 Waste shall be accepted at the installation only from known **waste producers** or new **waste producers** subject to initial waste profiling and waste characterisation off-site. The written records of this off-site waste profiling and characterisation shall be retained by the licensee for all active **waste producers** and for a two year period following termination of licensee/waste producer agreements.
- 8.11 Incinerator Residues
- 8.11.1 Bottom ash shall be stored at dedicated areas within the ash handling building on concrete hardstanding with contained drainage, **or other buildings agreed by the Agency.**
- 8.11.2 **The licensee shall ensure that incinerator bottom ash is subject to suitable treatment, either on-site or off-site and in a manner agreeable to the Agency, before its final deposition or recovery at an authorised facility.**
- 8.11.3 Boiler ash and flue gas cleaning residues shall be stored in dedicated enclosed silos (equipped with HEPA filters) within the main process building, on concrete hardstanding with contained drainage.
- 8.11.4 Dry residues in the form of dust, such as boiler dust, and dry residues from the treatment of combustion gases shall be stored in closed containers in such a way as to prevent dispersal in the environment.
- 8.11.5 Lime grits shall not be mixed with incinerator residues.
- 8.11.6 Metals for recycling that are recovered from the bottom ash shall be stored at a dedicated area within the bottom ash handling building on concrete hardstanding with contained drainage.
- 8.11.7 Prior to the commencement of solidification of waste residues from the incineration process, the licensee shall establish and maintain procedures for the solidification process to be agreed by the Agency.
- 8.12 The licensee shall neither import waste into the State nor export waste out of the State except in accordance with the relevant provisions of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14th June 2006 on shipments of waste and associated national regulations.
- 8.13 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.

**Reason:** *To provide for the appropriate handling of material and the protection of the environment.*

## **Condition 9. Accident Prevention and Emergency Response**

- 9.1 The licensee shall ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.2 The licensee shall ensure that a documented Emergency Response Procedure is in place that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment, and appropriate responses to off-site emergency situations that may have implications for the safe operation of the licensee's site. This procedure shall be reviewed annually and updated as necessary.
- 9.3 Incidents
- 9.3.1 In the event of an incident the licensee shall immediately:
- (a) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
  - (b) isolate the source of any such emission;
  - (c) evaluate the environmental pollution, if any, caused by the incident;
  - (c) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
  - (d) identify the date, time and place of the incident;
  - (e) notify the Agency and other relevant authorities.
- 9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency, to:
- (i) identify and put in place measures to avoid recurrence of the incident; and
  - (ii) identify and put in place any other appropriate remedial actions.
- 9.3.3 Where an incident or accident that significantly affects the environment occurs, the licensee shall, without delay take measures to limit the environmental consequences of the incident or accident and to prevent further incident or accident.
- 9.4 Emergencies
- 9.4.1 In the event of a complete breakdown of equipment or any other occurrence which results in the shutdown of the incineration plant or process line, any waste:-
- (a) arriving at the installation shall be transferred directly to an appropriate facility;
  - (b) stored or awaiting processing at the installation shall, subject to the agreement of the Agency, be transferred to an appropriate facility within three days of shut-down, unless otherwise agreed with the Agency.
- 9.4.2 All significant spillages occurring at the installation 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 installation shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.
- 9.4.4 In the event that monitoring of local wells indicates that the installation is having a significant adverse effect on the quantity or the quality of the water supply, this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

**Reason:** *To provide for the protection of the environment.*

## Condition 10. Decommissioning & Residuals Management

- 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, subsoil, 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 (DMP)
- 10.2.1 The licensee shall **maintain**, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof.
- 10.2.2 The plan shall be revised and agreed by the Agency prior to the acceptance of hazardous waste at the installation.**
- 10.2.3 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.
- 10.2.4 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision **and the baseline report**, when implementing Condition 10.2.1 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; and
  - (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 make provision for the proper closure of the activity ensuring protection of the environment.*

## Condition 11. Notification, Records and Reports

- 11.1 The licensee shall notify the Agency **in a format as may be specified by the Agency**, as soon as practicable after the occurrence of any of the following:
- (i) **an incident or accident that significantly affects the environment;**
  - (ii) any release of environmental significance to atmosphere from any potential emissions point including bypasses;
  - (iii) **any breach of one or more of the conditions attached to this licence;**

- (iv) any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control and Monitoring*, of this licence which is likely to lead to loss of control of the abatement system; and
- (v) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

- 11.2 In the case of any incident relating to discharges to water, the licensee shall notify the Local and Water Services Authority and Inland Fisheries Ireland as soon as practicable after such an incident, **and in any case, not later than 10:00 a.m. on the following working day after such an incident.**

### 11.3 Record of and report on notifications made under condition 11.1

- 11.3.1 **The licensee shall make a record of any notification made under Condition 11.1. This record shall include details of the nature, extent and impact of, and circumstances giving rise to, the incident or accident and shall include all aspects described in Condition 9.3.1. The record shall include all corrective actions taken to manage the incident or accident, minimise wastes generated and the effect on the environment, and preventative actions to avoid recurrence. In the case of a breach of a condition, measures to restore compliance shall be recorded.**

- 11.3.2 **The licensee shall, as soon as practicable following notification under condition 11.1, and in any case within five working days after the occurrence of any incident, submit to the Agency the record of the incident.**

- 11.3.3 **The licensee shall submit a written investigation report, including details of any further actions taken as a result of an incident occurring, to the Agency as soon as practicable and no later than one month after the incident.**

- 11.4 The licensee shall store and maintain the following documents and records at the installation:-

- (a) the licences relating to the installation;
- (b) any elements of the licence application or EIS documentation referenced in this licence;
- (c) the current EMS for the installation, **including all associated procedures, reports, records and other documents;**
- (d) the previous year's AER for the installation;
- (e) all reports and proposals prepared in accordance with the conditions of this licence;
- (f) all written records specified in Condition 11.3;
- (g) all notifications to the Agency and relevant correspondence with the Agency;
- (h) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
- (i) 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**
- (j) **all records of audits.**

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

- 11.5 The licensee shall maintain written records at the installation of the following:-

- 11.5.1 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.

- 11.5.2 For each load of waste arriving at and departing from the installation, the following:-

- (a) the date and time;



- (b) the name of the carrier (including if appropriate, the waste collection permit details);
- (c) the vehicle registration number;
- (d) the trailer, skip or other container unique identification number (where relevant);
- (e) the name of the producer of the waste;
- (f) 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) a description of the waste including the associated EWC codes;
- (g) the quantity of the waste, recorded in tonnes;
- (h) details of the treatment(s) to which the waste has been subjected, if any;
- (i) the classification or coding of the waste, including whether MSW or otherwise;
- (j) whether the waste is for disposal or recovery, and if recovery, for what purpose ;
- (k) the name of the person checking the load ;
- (l) where loads of waste are removed or rejected, details of the date of occurrence the types of waste and the facility to which they were removed ; and
- (m) where applicable a consignment note number (including transfrontier shipment notification and movement/tracking form numbers, as appropriate).

11.5.3 For waste accepted at or dispatched from the installation:

- (a) the type, relevant EWC code and total tonnage of waste accepted at the installation for disposal on a daily, monthly and annual basis;
- (b) the type, relevant EWC code and total tonnage of waste accepted at the installation for recovery on a daily, monthly and annual basis;
- (c) the type, relevant EWC code and total tonnage of waste sent off-site for disposal on a daily, monthly and annual basis;
- (d) the type, relevant EWC code and total tonnage of waste sent off-site for recovery on a daily, monthly and annual basis
- (e) the type, relevant EWC code and total tonnage of waste disposed of at the installation on an hourly, daily, monthly and annual basis;
- (f) the type, relevant EWC codes and total tonnage of waste recovered at the installation on a monthly and annual basis;
- (g) details of any approved waste mixing;
- (j) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
- (k) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
- (l) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
- (m) details of any rejected consignments; and
- (n) the results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence.

11.5.4 Off-site profiling and pre-characterisation (including basic characterisation and compliance testing) of customer waste arriving direct to the incinerator.

11.5.5 All training undertaken by installation staff.

- 11.5.6 Details of all wastes consigned abroad for recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record.
- 11.5.7 Details of all wastes consigned abroad.
- 11.5.8 All incidents.
- 11.5.9 All complaints from third parties.
- 11.6 The written record of all complaints relating to the operation of the activity shall give details of the following:-
- (a) date and time of the complaint;
  - (b) 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.
- 11.7 Data Management
- 11.7.1 The licensee shall maintain a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.
- 11.7.2 **The licensee shall submit all records of complaints, monitoring data and incident investigation reports 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, McCumiskey House, Richview, Clonskeagh Road, Dublin 14, 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; and
  - (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 installation manager/deputy.
- 11.5.3 The frequency of such reporting may be altered by the Agency having regard to the environmental performance of the installation.
- 11.8 Pollutant Release and Transfer Register (PRTR)
- The licensee shall prepare and report a PRTR for the site. The substance and/or wastes to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulations 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.
- 11.9 Annual Environmental Report
- 11.9.1 The licensee shall submit to the Agency, by the 31<sup>st</sup> of March each year, an Annual Environmental Report (AER) covering the previous calendar year. 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 incinerator residues and other wastes dispatched from the installation.
  - (c) Pollutant Release and Transfer Register (PRTR).
  - (d) **Calculation of the energy efficiency of the incinerator in accordance with condition 7.1.2.**
- 11.10 Records of off-site waste profiling and characterisation shall be retained by the licensee for all active customers and for a ten year period following termination of licensee/customer agreements.
- 11.11 The licensee shall maintain a record/log of the use of the emergency generator. A summary of the record/log shall be included as part of the AER.
- 11.12 Waste Recovery Report
- The licensee shall, as part of the AER for the installation, submit a report on the contribution by this installation to the achievement of the waste recovery objectives agreed under Condition 2.3.2.3 and as otherwise may be stated in National and European Union waste policies. The report shall, as a minimum, include tonnages of the recovery of incinerator residues on site, off-site and their final use.

**Reason:** *To provide for the collection and reporting of adequate information on the activity.*

## Condition 12. Financial Charges and Provisions

- 12.1 Agency Charges
- 12.1.1 The licensee shall pay to the Agency an annual contribution of **€14,998**, 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 Environmental Protection Agency Acts 1992 to 2013. The first payment shall be a pro-rata amount for the period from the date of grant of this licence to the 31<sup>st</sup> day of December, and shall be paid to the Agency within one month from the date of grant of the licence. 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 Environmental Protection Agency Acts 1992 to 2013, 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 defray its costs in regard to items not covered by the said annual contribution.
- 12.2 Environmental Liabilities
- 12.2.1 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.
- 12.2.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the Decommissioning Management Plan. **A report on this assessment shall be**

**submitted to the Agency for agreement with the AER due March 2015.** The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. The results of the review shall be notified as part of the AER.

- 12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency **and prior to the acceptance of hazardous waste at the installation**, make financial provision to cover any liabilities identified in Condition 12.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.2.1.
- 12.2.4 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Conditions 12.2.2 and 12.2.3 above.

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

## SCHEDULE A: Limitations

### A.1 Waste Categories and Quantities for Acceptance for Incineration

Only waste falling within the descriptions in the first column (subject to the notes at the end of the table), bearing the waste codes in the second column, and being of the types of waste listed in the third column may be accepted. The maximum tonnage of any type of waste which may be accepted is as listed in the fourth column, subject to the proviso that the total quantity of all wastes must not exceed the overall limit at the bottom of that column.

Waste Type	European Waste Catalogue (EWC) Code	Description	Maximum Quantity (Tonnes per annum)
<b>Non-hazardous Residual Municipal Waste.</b> <small>Note 1</small>	20 03 01	Mixed Municipal Waste.	235,000
	20 03 02	Waste from Markets.	
	20 03 03	Street Cleaning Residues.	
	20 03 07	Bulky Waste.	
	20 03 99	Municipal wastes not otherwise specified.	
	19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	
<b>Commercial &amp; Industrial non-hazardous Waste</b>	02 01 02, 02 01 03, 02 01 04, 02 01 06, 02 01 07, 02 01 09, 02 01 99, 02 02 02, 02 02 03, 02 02 99, 02 03 02, 02 03 03, 02 03 04, 02 03 99, 02 04 99, 02 05 01, 02 05 99, 02 06 01, 02 06 02, 02 06 99, 02 07 01, 02 07 02, 02 07 03, 02 07 04, 02 07 99	Wastes from rendering plants, slaughterhouses, veterinarians, farms, horse stables, food factories, warehouse distributors, manufacturers, restaurants.	50,000
	03 01 01, 03 01 05, 03 01 99, 03 02 99, 03 03 01, 03 03 07, 03 03 08, 03 03 99	Wastes from furniture production, carpentry, forestry.	
	04 01 01, 04 01 02, 04 01 05, 04 01 09, 04 01 99, 04 02 09, 04 02 10, 04 02 15, 04 02 17, 04 02 21, 04 02 22, 04 02 99	Wastes from leather, fur and textile industries.	
	05 01 99, 05 06 99, 05 07 02, 05 07 99	Wastes from petroleum refining, natural gas purification and pyrolysis of coal.	
	06 01 99, 06 02 99, 06 03 99, 06 04 99, 06 06 03, 06 06 99, 06 07 99, 06 08 99, 06 09 04, 06 09 99, 06 10 99, 06 11 01, 06 11 99, 06 13 03, 06 13 99	Wastes from inorganic chemical processes.	
	07 01 99, 07 02 13, 07 02 15, 07 02 17, 07 02 99, 07 03 99, 07 04 99, 07 05 14, 07 05 99, 07 06 99, 07 07 99	Wastes from organic chemical processes.	
	08 01 12, 08 01 18, 08 01 99, 08 02 01, 08 02 99, <b>08 03 08</b> , 08 03 13, 08 03 18,	Wastes from paint/varnish/coating/glue	

	08 03 99, 08 04 10, 08 04 99	manufacturers, painting companies, householders, printers waste, general maintenance contractors.
	09 01 07, 09 01 08, 09 01 10, 09 01 99	Wastes from photographers, pharmacists, schools and colleges.
	10 01 25, 10 01 99, 10 03 99, 10 04 99, 10 05 99, 10 06 99, 10 07 99, 10 08 99, 10 09 99, 10 10 99, 10 11 99, 10 12 99, 10 13 99	Wastes from thermal processes.
	11 01 14, 11 01 99, 11 02 03, 11 02 06, 11 02 99, 11 05 99	Wastes from metal plating, engineering firms.
	12 01 01, 12 01 03, 12 01 05, 12 01 13, 12 01 99	Wastes from crane companies, jewellers, car manufacturers, engineering firms.
	<p style="text-align: center;">Note 2</p> 15 01 01, 15 01 02, 15 01 03, 15 01 04, 15 01 05, 15 01 06, 15 01 07, 15 01 09, 15 02 03	Packaging wastes from manufacturing companies, schools, hospitals, chemical industry, local authorities, householders.
	16 01 03, 16 01 06, 16 01 15, 16 01 17, 16 01 18, 16 01 19, 16 01 20, 16 01 22, 16 01 99, 16 02 16, 16 03 04, 16 03 06, 16 05 09, 16 07 99, 16 11 02, 16 11 04, 16 11 06	Wastes from garages, maintenance of vehicles, farming, warehouse distributors, companies who produce a product/batch, e.g. pharmaceutical, chemical, food manufacturing (off-specification products), schools, universities, hospitals.
	18 01 01, 18 01 02, 18 01 04, 18 01 07, 18 01 09, 18 02 01, 18 02 03, 18 02 06, 18 02 08	Wastes from healthcare/hospitals, universities, veterinarians.
	<p style="text-align: center;">Note 2</p> 19 02 03, 19 02 10, 19 02 99, 19 05 01, 19 05 02, 19 05 03, 19 05 99, 19 06 04, 19 06 06, 19 06 99, 19 08 01, 19 08 02, 19 08 09, 19 08 99, 19 09 01, 19 09 04, 19 09 05, 19 09 99, 19 10 01, 19 10 02, 19 10 04, 19 10 06, 19 11 99, 19 12 01, 19 12 02, 19 12 03, 19 12 04, 19 12 05, 19 12 07, 19 12 08, 19 12 10, 19 13 02	Wastes from waste management facilities, transfer stations, water treatment facilities (e.g. local authorities, pharma industry), mechanical-biological treatment plants, landfills.
	<p style="text-align: center;">Note 2</p> 20 01 01, 20 01 08, 20 01 10, 20 01 11, 20 01 25, 20 01 30, 20 01 32, 20 01 38,	Wastes from waste management facilities, transfer stations, waste collectors, local

	20 01 39, 20 01 40, 20 01 41, 20 01 99, 20 02 01, 20 02 03, 20 03 06	authorities, septic tank companies.	
<b>Sewage &amp; Industrial Sludges</b>	02 01 01, 02 02 01, 02 02 04, 02 03 01, 02 03 05, 02 04 03, 02 05 02, 02 06 03, 02 07 05, 03 03 02, 03 03 05, 03 03 10, 03 03 11, 04 01 07, 04 02 20, 05 01 10, 05 01 13, 06 05 03, 07 01 12, 07 02 12, 07 03 12, 07 04 12, 07 05 12, 07 06 12, 07 07 12, 08 01 14, 08 01 16, 08 02 02, 08 03 07, 08 03 15, 08 04 12, 08 04 14, 10 01 21, 10 02 15, 10 11 18, 10 12 13, 11 01 10, 12 01 15, 19 02 06, 19 08 05, 19 08 12, 19 08 14, 19 09 02, 19 09 03, 19 09 06, 19 11 06, 19 13 04, 19 13 06, 20 03 04	Wastes from industrial and municipal wastewater treatment plants, washing and cleaning at commercial and industrial sites.	20,000
<b>Non-hazardous Aqueous Wastes</b>	08 01 20, 08 02 03, 08 03 08, 08 04 16, 11 01 12, 16 10 02, 16 10 04, 19 04 04, 19 06 03, 19 06 05, 19 07 03, 19 13 08, <b>20 01 28</b>	Wastes from pharmaceutical industry, paint/varnish/coating/glue manufacturers, painting companies, engineering firms, printers waste, general maintenance contractors, metal plating.	10,000
<b>Construction &amp; Demolition Waste</b>	Notes 2 & 3  17 02 01, 17 02 02, 17 02 03, 17 03 02, 17 05 04, 17 05 08, 17 06 04		50,000
<b>Hazardous waste</b>	<b>As specified in Schedule A.2</b>	<b>As described in Schedule A.2</b>	<b>10,000</b>
<b>Total</b>			<b>235,000</b> <sup>Note 4</sup>

**Note 1:** Household waste (as well as commercial and other waste that, because of its nature or composition, is similar to household waste) that has been pre-sorted or segregated to remove reusable and recyclable materials.

**Note 2:** Non-contaminated and separately collected recyclable waste shall only be accepted for incineration if agreed in advance by the Agency.

**Note 3:** While the specified C&D wastes may not have a significant energy content, they may be accepted for incineration to treat and remove organic contamination from non-hazardous bulk inorganic materials.

**Note 4:** This quantity of waste is permitted up to 31/12/2019. Waste acceptance is limited to 220,000 tonnes per annum thereafter.



## A.2 Hazardous Waste Categories and Quantities for Acceptance for Incineration

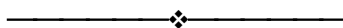
Waste Type	European Waste Catalogue (EWC) Code	Minimum Mass flow (Tonnes per annum)	Maximum Mass flow (Tonnes per annum)	Minimum Calorific Value (MJ/kg)	Maximum Calorific Value (MJ/kg)
Aqueous wastes	07 01 01* 07 05 01*	0	8,000	0	12
Contaminated packaging & clothing	15 01 10* 15 02 02*	0	10,000	10	30
Off-specification materials & unused products	07 05 13* 16 03 03* 16 03 05* 16 05 07* 16 05 08*	0	10,000	5	25
Treated or contaminated wood	03 01 04* 17 02 04* 17 09 03* 19 12 06* 20 01 37*	0	3,000	14	25
Industrial sludges	07 05 11* 19 08 11*	0	9,000	1	16
Contaminated soils, spoil and sludges from soil remediation	17 05 03* 17 05 05* 19 13 03*	0	2,000	0	6
Contaminated wastes from waste treatment facilities	19 10 03*	0	10,000	4	30
Paint & inks	20 01 27*	0	4,000	0	20
Oil filters	16 01 07*	0	1,000	10	16
Waste oil	13 07 01*	0	10,000	25	46





**Chemical Limits for Hazardous wastes**

Substance	Maximum content	Substance	Maximum content
Sulphur (S)	3%	Thallium (Tl)	20 ppm
Fluorine (F)	0.4%	Molybdenum (Mo)	30 ppm
Bromine (Br)	0.5%	Nickel (Ni)	60 ppm
Iodine (I)	0.5%	Cobalt (Co)	60 ppm
Phosphorous (P)	0.5%	Arsenic (As)	100 ppm
Polychlorinated biphenyls (PCB)	10 ppm	Beryllium (Be)	100 ppm
Polychlorinated terphenyls (PCT)	10 ppm	Copper (Cu)	100 ppm
Pentachlorophenol	1 mg/kg	Antimony (Sb)	100 ppm
Sodium (Na)	2.5%	Tin (Sn)	200 ppm
Potassium (K)	2.5%	Chromium (Cr)	300 ppm
Mercury (Hg)	10 ppm	Vanadium (V)	300 ppm
Cadmium (Cd)	20 ppm	Lead (Pb)	1000 ppm
Selenium (Se)	20 ppm	Zinc (Zn)	1000 ppm

**A.3 Waste Categories and Quantities for Acceptance for Treatment other than Incineration**

The annual quantity to be accepted for treatment other than by incineration shall not exceed 2,000 tonnes.

Waste Type	European Waste Catalogue (EWC) Code	Description	Maximum Quantity (Tonnes per annum)
Industrial Non-hazardous Waste <sup>Note 1</sup>	10 01 01, 10 01 02, 10 01 03, 10 01 15, 10 01 17, 10 01 19	Wastes from thermal processes	2,000

**Note 1:** These wastes may be accepted at the installation for waste-to-waste applications in a residue pre-treatment installation, e.g. fly ash from other combustion processes may be used as a substitute for cement in the solidification of the flue gas treatment residues.



## SCHEDULE B: Emission Limits

### B.1 Emission Limits to Air

<b>Emission Point Reference No.:</b>	A1-1 (Stack Emission)		
<b>Location:</b>	Main process building		
<b>Volume to be emitted:</b>	Maximum rate per hour:	183,700 m <sup>3</sup>	
<b>Minimum Discharge height:</b>	65 m above ground level (95.5m O.D.)		

Parameters	Units	Half Hour Average		Daily Average	Periodic
		A	B		
<b>Total dust</b>	mg/m <sup>3</sup>	30 <sup>Note 1</sup>	10 <sup>Note 1</sup>	10	-
<b>Gaseous and vaporous organic substances, expressed as total organic carbon</b>	mg/m <sup>3</sup>	20 <sup>Note 1</sup>	10 <sup>Note 1</sup>	10	-
<b>Hydrogen chloride (HCl)</b>	mg/m <sup>3</sup>	60 <sup>Note 1</sup>	10 <sup>Note 1</sup>	10	-
<b>Hydrogen fluoride (HF)</b>	mg/m <sup>3</sup>	4 <sup>Note 1</sup>	2 <sup>Note 1</sup>	1	-
<b>Sulphur dioxide (SO<sub>2</sub>)</b>	mg/m <sup>3</sup>	200 <sup>Note 1</sup>	50 <sup>Note 1</sup>	50	-
<b>Oxides of Nitrogen (NO and NO<sub>2</sub>, expressed as NO<sub>2</sub>)</b>	mg/m <sup>3</sup>	400 <sup>Note 1</sup>	200 <sup>Note 1</sup>	200	-
<b>The sum of Cadmium (as Cd) and thallium (as Tl), and their compounds</b> <sup>Note 2</sup>	mg/m <sup>3</sup>	-	-	-	0.05
<b>Mercury (as Hg) and its compounds</b> <sup>Note 2</sup>	mg/m <sup>3</sup>	-	-	-	0.05
<b>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)</b> <sup>Note 2</sup>	mg/m <sup>3</sup>	-	-	-	0.5
<b>Dioxins/furans (TEQ)</b> <sup>Note 3</sup>	ng/m <sup>3</sup>	-	-	-	0.1
<b>Carbon monoxide (CO)</b>	mg/m <sup>3</sup>	100 <sup>Note 4</sup>	-	50 <sup>Note 5</sup>	-

**Note 1:** Either 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 a sampling 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 sampling 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 Part 2 of Annex VI of Council Directive 2010/75/EU.

**Note 4:** At least 95% of all 10-minute values taken in any 24 hour period shall not exceed 150 mg/m<sup>3</sup> or all the half-hourly average values taken in the same period shall not exceed 100 mg/m<sup>3</sup>.

**Note 5:** At least 97% of the daily average values over the year shall not exceed the emission limit value.



**B.2 Emissions to Water**

There shall be no process emissions to water.

**B.3 Emissions to Sewer**

There shall be no emissions to sewer.

**B.4 Noise Emissions**

Daytime dB $L_{Ar,T}$ (30 minutes)	Evening time dB $L_{Ar,T}$ (30 minutes)	Night-time dB $L_{Aeq,T}$ (15-30 minutes)
55 <small>Note 1</small>	50 <small>Note 1</small>	45 <small>Note 1</small>

**Note 1:** There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.



## SCHEDULE C: Control & Monitoring

### C.1.1. Process Control <sup>Note 1</sup>

<i>Monitoring of Incinerator</i>		
<b>Control Parameter</b>	<b>Monitoring (continuous unless otherwise stated in licence)</b>	<b>Key Equipment <sup>Note 2</sup></b>
Combustion	Combustion chamber temperature <sup>Note 3</sup>	Thermocouple
Exhaust gas	% O <sub>2</sub> in exhaust gas	O <sub>2</sub> analyser
Exhaust gas	Exhaust gas temperature	Thermocouple
Exhaust gas	Exhaust gas pressure	Pressure monitor
Exhaust gas	Water vapour content <sup>Note 4</sup>	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
<i>Monitoring of Boiler</i>		
<b>Control Parameter</b>	<b>Monitoring (continuous unless otherwise stated in licence)</b>	<b>Key Equipment</b>
Flue gas	Pressure	Pressure sensors
Flue gas	Temperature	Thermocouple
NO <sub>x</sub>	Concentration and Reagent	NO <sub>x</sub> Analyser and Reagent dosage rate
Feed water supply	Water rate and water level	Flow meter and level
<i>Monitoring of Energy Recovery</i>		
<b>Control Parameter</b>	<b>Monitoring (continuous unless otherwise stated in licence)</b>	<b>Key Equipment</b>
Energy Recovery	Steam Flow, Condenser Control, Turbine Control	Flow meter, Temperature, Pressure analysers

## C.1.1 (Continued)

<i>Flue gas cleaning</i>		
<b>Location</b>	<b>Item/Parameter</b>	<b>Monitoring Equipment</b>
First stage dioxin/furan and heavy metals removal duct	Flue gas temperature	Thermocouple
	Flue gas pressure	Pressure transmitters
Spray Drier Absorber	Expanded clay dosing	Dosage rate meter and dosing bin weight
	Expanded clay silo	Low level alarm
	HCl and SO <sub>2</sub> concentration	Inline flue gas analyser
	Lime dosage rate	Flow meter
	Lime slurry buffer tank	Low level alarm
	Rotary atomiser	Weekly cleaning
	Outlet temperature	Thermocouple
LAB Loop	Activated Carbon dosing	Dosage rate meter and dosing bin weight
	Hydrated lime dosing	Dosage rate meter
	Activated carbon and hydrated lime supply silos	Low level alarms on both silos
	Pressure differential across LAB Loop	Pressure sensors on either side of loop
Baghouse Filter	Pressure differential across filters	Differential pressure indicator
	Temperature of discharge hopper	Thermocouple
	Discharge hopper	High level alarm
Reagent recirculation	Re-circulated flue gas cleaning residues supply hopper	Low and high level alarms
Maturation silo	Maturation time in silo	Flow meters at inlet and outlet
ID Fan	Flue gas pressure	Pressure sensors at inlet
<i>Residues</i>		
	<b>Item/Parameter</b>	<b>Monitoring Equipment (where applicable)</b>
Residue Silos:	Silo Capacity	High Level Alarms
	Silo emissions to air	HEPA Filter Integrity
Solidification:	Ash	Quantity & Type of ash
	Cement/Iron Silicate & Water	Quantity

**Note 1:** Or other monitoring equipment agreed in advance by the Agency

**Note 2:** The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the system.

**Note 3:** Near the inner wall of the combustion chamber (or other representative location agreed by the Agency).

**Note 4:** Not necessary if gases are dried prior to analysis.

**C.1.2. Monitoring of Emissions to Air**

<b>Emission Point Reference No.: A1-1 (Stack)</b>		
<b>Parameters</b>	<b>Monitoring Frequency</b>	<b>Analysis Method / Technique <sup>Note 1</sup></b>
Total dust	Continuous	Iso-kinetic/gravimetric
PM <sub>10</sub>	Quarterly	To be agreed by the Agency
PM <sub>2.5</sub>	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)	<b>Biannual measurement, average value over sample period of between 6 and 8 hours</b>	To be agreed by Agency
Sulphur dioxide ( SO <sub>2</sub> )	Continuous	Infra red analyser
Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Continuous	Infra red analyser
Nitrous oxide (N <sub>2</sub> O)	Quarterly	To be agreed by the Agency
Cadmium (as Cd) and thallium (as Tl), and their compounds	<b>Biannual measurement, average value over sample period of between 6 and 8 hours</b>	To be agreed by the Agency
Mercury (as Hg) and its compounds	<b>Biannual measurement, average value over sample period of between 6 and 8 hours</b>	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	<b>Biannual measurement, average value over sample period of between 6 and 8 hours</b>	To be agreed by the Agency
Dioxins/furans	Continuous sampling with analysis every two weeks for duration of test programme Biannual measurement, average value over sample period of between 6 and 8 hours.	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

<b>Emission Point Reference No.: A1-2 (Back-up Diesel Fired Electricity Generation Plant)</b>		
<b>Parameter</b>	<b>Monitoring Frequency <sup>Note 2</sup></b>	<b>Analysis Method/Technique</b>
CO	On installation	Flue gas analyser/datalogger
NO <sub>x</sub>	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 Storm Water Emissions***

**Emission Point Reference No:** SW-1

**Description of Treatment:** Oil removal

<b>Control Parameter</b>	<b>Monitoring</b>	<b>Key Equipment</b>
<b>Oil removal</b>	Mineral oil content in water	Forecourt separator, Class I separator

### ***C.2.2. Monitoring of Storm Water Emissions***

**Emission Point Reference No:** SW-1

**Monitoring locations:** Monitoring Chamber 1 (MSW1-1) prior to attenuation pond.  
Monitoring Chamber 2 (MSW1-2) at outlet of attenuation pond.

<b>Parameter <sup>Note 1</sup></b>	<b>Monitoring Frequency</b>	<b>Analysis Method/Technique</b>
<b>pH</b>	Continuous	pH meter and recorder
<b>TOC</b>	Continuous	TOC analyser and recorder
<b>Conductivity</b>	Continuous	Conductivity meter and recorder

**Note 1:** Trigger levels of contamination to be established in accordance with Condition 6.17.

### ***C.2.3. Monitoring of Emissions to Water***

There shall be no process emissions to water.

### C.3.1. Control of Emissions to Sewer

There shall be no emissions to sewer.

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### C.3.2. Monitoring of Emissions to Sewer

There shall be no emissions to sewer.

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### C.4 Monitoring of Incinerator Residues

<b>Incinerator Residue Monitoring Parameter and Frequency</b>		
<b>Waste Description</b>	<b>Parameters to be measured</b>	<b>Frequency <sup>Note 1</sup></b>
Bottom Ash	TOC, metals <sup>Note 2</sup> and their compounds, <b>total soluble fraction, heavy metals soluble fraction</b> , chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCBs.	Quarterly
	Classification (hazardous/non-hazardous)	<b>Weekly during hazardous waste incineration test programmes, quarterly thereafter</b>
Boiler Ash	TOC, metals <sup>Note 2</sup> and their compounds, <b>total soluble fraction, heavy metals soluble fraction</b> , chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCBs.	Quarterly
	Classification (hazardous/non-hazardous)	Annually
Flue gas treatment residues	TOC, metals <sup>Note 2</sup> and their compounds, <b>total soluble fraction, heavy metals soluble fraction</b> , chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCBs.	Biannually
	Classification (hazardous/non-hazardous)	Annually
Other <sup>Note 3</sup>		

**Note 1:** All analysis to be undertaken at an accredited laboratory, **where possible**, employing accredited procedures.

**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:** Analytical requirements to be determined on a case by case basis.

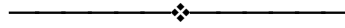


### C.5 Meteorological Monitoring

**Monitoring Location:** On-site weather monitoring station AA2

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

**Note 1:** World Metrological Organisation Standards and Recommendations.



## C.6 Ambient Monitoring

### C.6.1 Ambient Groundwater Monitoring

**Monitoring Locations:** Upgradient: AGW1-1  
Downgradient: AGW1-2 and AGW1-3

Parameter	Monitoring Frequency	Analysis Method/Techniques
TOC	Monthly	Standard Method
Ammonia (NH <sub>4</sub> ),	Monthly	Standard Method
Conductivity	Monthly	Standard Method
pH	Biannually	pH electrode/meter
Nitrate	Biannually	Standard Method
Nitrite	Biannually	Standard Method
Chloride	Biannually	Standard Method
Fluoride	Biannually	Standard Method
Metals (Cd, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V, Sn) and their compounds	Biannually	Standard Method
Organohalogens <sup>Note1</sup>	Biannually	GC-MS
Total coliforms	Biannually	Standard Method
Faecal coliforms	Biannually	Standard Method

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

### C.6.2 Ambient Noise Monitoring

No additional noise monitoring is required in this schedule

### C.6.3 Soil Monitoring

**Location:** As per the 'Baseline report' <sup>Note 1</sup>.

Parameter	Monitoring Frequency	Analysis Method/Techniques
Relevant hazardous substances <sup>Note 2</sup>	Every ten years	Standard Method

**Note 1:** As per the 'Baseline Report', submitted with the licence application. Additional or alternative locations may be agreed with the Agency.

**Note 2:** The relevant hazardous substances for monitoring in soil shall be as per the 'baseline report' submitted with the application, or otherwise agreed with the Agency.

## SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content <sup>Note 1</sup>
<p><b>Waste recovery report.</b></p> <p>Emissions from the installation.</p> <p>Waste management record, <b>including summary of rejected waste loads.</b></p> <p>Resource consumption summary.</p> <p>Complaints summary.</p> <p>Schedule of Environmental Objectives and Targets.</p> <p>Environmental management programme – report for previous year.</p> <p>Environmental management programme – proposal for current year.</p> <p>Pollutant Release and Transfer Register – report for previous year.</p> <p>Pollutant Release and transfer Register – proposal for current year.</p> <p>Noise monitoring report summary.</p> <p>Ambient monitoring summary.</p> <p>Tank and pipeline testing and inspection report.</p> <p>Reported incidents summary.</p> <p>Energy efficiency audit report summary.</p> <p>Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.</p> <p>Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharges.</p> <p>Development/Infrastructural works summary (completed in previous year or prepared for current year).</p> <p>Reports on financial provision made under this licence, management and staffing structure of the installation, and a programme for public information.</p> <p>Review of decommissioning management plan.</p> <p>Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).</p> <p>Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on-site change including financial provisions).</p> <p><b>Summary record of the use of the emergency generator.</b></p> <p><b>Summary of audits of waste disposal, treatment and recovery sites for the incinerator residues from installation.</b></p> <p><b>Report of particulates monitoring.</b></p> <p><b>Waste activities carried out at the facility.</b></p> <p><b>Quantity and composition of waste received, recovered and disposed of during the reporting period and each previous year (relevant EWC codes to be used).</b></p> <p><b>Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.</b></p> <p><b>Review of nuisance controls.</b></p> <p>Any other items specified by the Agency.</p>

**Note 1:** Content may be revised subject to the agreement of the Agency.

Signed on behalf of the said Agency \_\_\_\_\_  
 On the xx day of xxxxx, 200X      xxxxxxxxxxxx      **Authorised Person**