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Ireland

WASTE LICENCE
FOR A WASTE MANAGEMENT FACILITY
INCLUDING A NON-HAZARDOUS WASTE
INCINERATOR

Proposed Decision

Waste Licence Application Register Number:	167-1
Applicant:	Indaver Ireland (Branch of Indaver NV)
Location of Facility:	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.

This licence is for the operation of a materials recovery facility and an incinerator to burn non-hazardous waste and to recover energy in the form of steam and electricity (incineration plant) for export to the national grid at Carranstown, Duleek, County Meath. The facility covers an area of approximately 10 hectares (25 acres).

Only residual non-hazardous waste (household, commercial and industrial) may be accepted at the facility. The licence allows up to 170,000 tonnes of waste per annum to be processed at the facility. This includes acceptance of 20,000 t/a to the Materials Recycling facility and 150,000 t/a to the incineration plant.

Infrastructure for the incineration plant includes, waste reception area, furnace, boiler, energy recovery system, facilities for the treatment of exhaust gases (5 stage treatment system), on-site facilities for handling and storage of residues and waste water, stack, devices and systems for controlling, recording and monitoring the incineration process. The plant will have two incineration lines with a design capacity of 10 tonnes per hour each, which equates to 75,000 tonnes per line per annum at 7500 hours operation or in total 150,000 tonnes per annum. The waste throughput, which depends on the calorific value of the waste, is controlled by the plant design thermal input. The heat produced from the process will be used to generate approximately 14MW of electricity, of which 3MW will be used on site with the remaining 11MW being exported to the national grid.

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

The licence sets out in detail the conditions under which Indaver Ireland (Branch of Indaver NV), 4 Haddington Terrace, Dun Laoghaire, County Dublin will operate and manage this facility.

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DECISION & REASONS FOR THE DECISION

Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that the waste activity, or activities, licensed hereunder will comply with the requirements of Section 40(4) of the Waste Management Acts 1996 to 2003.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, all submissions received from other parties and the report of its inspector and the Programme Manager.

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2003, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Acts to grant this waste licence to Indaver Ireland (Branch of Indaver NV) to carry on the waste activities listed below at Carranstown, Duleek, County Meath subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2003

Class 7.	Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule (including evaporation, drying and calcination).
Class 8.	Incineration on land or at sea.
Class 12.	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

*Licensed Waste Recovery Activities, in accordance with the Fourth Schedule
of the Waste Management Acts 1996 to 2003*

Class 2.	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
Class 3.	Recycling or reclamation of metals and metal compounds.
Class 4.	Recycling or reclamation of other inorganic materials.
Class 6.	Recovery of components used for pollution abatement.
Class 9.	Use of any waste principally as a fuel or other means to generate energy.
Class 13.	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

Part II Activities Refused

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

PART III

Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts 1996 to 2003, (the Acts), unless otherwise defined in this section.

Abnormal Operations	Any technical stoppage, disturbance, or failure of any of the purification devices or the measurement devices, during which the concentrations in the discharges to the air may exceed the prescribed emission limit values.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
AER	Annual Environmental Report.
Adequate Lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence.
Appropriate Facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Techniques.
Bi-annually	All or part of a period of six consecutive months.
Biennially	Once every two years.
Biodegradable Waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
BOD	5 day Biochemical Oxygen Demand.
Breakdown	Any technical stoppage, disturbance, or failure of the purification devices or the measurement devices.
CCTV	Closed Circuit Television.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Condition	A condition of this licence.
Consignment Note	All movements of hazardous waste within Ireland must be accompanied by a “C1” consignment note issued by a local authority under the Waste Management (Movement of Hazardous Waste) Regulations (SI No. 147 of 1998). Transfrontier shipment notification and movement/tracking form numbers are required for all exports of waste from, into or through the state under the Waste Management (Transfrontier Shipment of Waste) Regulations (SI No. 149 of 1998).

Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Containment Boom	A boom which can contain spillages and prevent them from entering drains or watercourses.
Daily	During all days of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	08.00 to 22.00 hours.
dB(A)	Decibels (A weighted).
Dioxins and Furans	As defined in Council Directive 2000/76/EC on the incineration of waste.
DO	Dissolved Oxygen.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4
Emission Limits	Those limits, including concentration limits and deposition levels established in <i>Schedule B: Emission Limits</i> , of this licence.
EMP	Environmental Management Programme.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	Any site or premises used for the purposes of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
GC/MS	Gas Chromatography/Mass Spectroscopy.
HFO	Heavy Fuel Oil.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
Incident	The following shall constitute an incident for the purposes of this licence:- a) An emergency; b) Abnormal operation; c) Breakdown; d) Any emission which does not comply with the requirements of this licence; e) Any trigger level specified in this licence which is attained or exceeded.
Industrial Waste	As defined in Section 5(1) of the Waste Management Acts, 1996 to 2003.
Inert Waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically

react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.

Incineration Plant	As defined in Council Directive 2000/76/EC on the incineration of waste.
ICP	Inductively Coupled Plasma Spectroscopy.
K	Kelvin.
kPa	Kilo Pascals.
Leq	Equivalent continuous sound level.
Licensee	Indaver Ireland (Branch of Indaver NV).
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Local Authority	Meath County Council
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mass Flow Limit	An Emission Limit Value which is expressed as the maximum mass of a substance which can be emitted per unit time.
Mass Flow Threshold	A mass flow rate, above which, a concentration limit applies.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Night-time	22.00 to 08.00
Noise Sensitive Location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation/facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Nominal Capacity	As defined in Council Directive 2000/76/EC on the incineration of waste.
OD	Ordinance datum Malin head
Oil Separator	Device installed according to the draft European Standard prEN 858 (Installations for the separation of light liquids, e.g. oil and petrol).
PER	Pollution Emission Register.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Recyclable Materials	Those waste types, such as cardboard, batteries, gas cylinders, etc, which may be recycled.
Residue	As defined in Council Directive 2000/76/EC on the incineration of waste.

Regional Fisheries Board	Eastern Regional Fisheries Board.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with greater than 2% dry matter.
SOP	Standard Operating Procedure.
Standard Methods	As detailed in “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) 20th Ed. 1998, American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed in writing by the Agency.
TOC	Total Organic Carbon.
The Agency	Environmental Protection Agency.
Treatment	Treatment means the physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with no more than one measurement in any one week.
WWTP	Waste Water Treatment Plant.

CONDITIONS

CONDITION 1. SCOPE

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I Activities Licensed and as set out in the licence application and subject to the conditions of this licence.
- 1.2. For the purposes of this licence, the facility is the area of land outlined in red on Figure B2.1: 'OS Map Showing Site Boundary' of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2003 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.4. The maximum tonnage to be accepted at the facility shall not exceed 170,000 tonnes per annum.
- 1.5. Waste disposal and recovery activities at this facility shall be limited to the waste categories and quantities as set out in *Schedule A: Limitations*, of this licence.
- 1.6. No hazardous wastes or liquid wastes shall be accepted at the facility.
- 1.7. No composting or other biological transformation processes shall be carried out on site.
- 1.8. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.
- 1.9. The facility shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence become part of this licence.
- 1.10. No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in
 - (a) a material change or increase in:
 - The nature or quantity of any emission,
 - The abatement/treatment or recovery systems,
 - The range of processes to be carried out,
 - The fuels, raw materials, intermediates, products or wastes generated, or
 - (b) any changes in:
 - Site management infrastructure or control with adverse environmental significance,shall be carried out or commenced without prior notice to, and without the prior agreement of, the Agency.
- 1.11 Having regard to the nature of the works and arrangements necessary in connection with the commencement of the waste activities this licence shall have effect for five years from the date the licence is granted.

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

CONDITION 2. MANAGEMENT OF THE FACILITY

2.1 Facility Management

- 2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation or as otherwise required by the Agency.
- 2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

2.2 Management Structure

- 2.2.1 Prior to the commencement of waste activities, the licensee shall submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in writing to the Agency. Written details of the management structure shall include the following information:
 - a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
 - b) details of the responsibilities for each individual named under a) above; and
 - c) details of the relevant education, training and experience held by each of the persons nominated under a) above.

2.3 Environmental Management System (EMS)

- 2.3.1 The licensee shall establish and maintain an Environmental Management System. The EMS shall be updated on an annual basis and submitted to the Agency as part of the Annual Environmental Report (AER).
- 2.3.2 The EMS shall include as a minimum the following elements:
 - 2.3.2.1 Management and Reporting Structure.
 - 2.3.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall prepare a schedule of Environmental Objectives and Targets. The Schedule shall as a minimum provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste, and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).
 - 2.3.2.3 Environmental Management Programme (EMP)
 - (i) The licensee shall, not later than six months from the date of commencement of waste activities, submit to the Agency for agreement an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.3.2.2. Once agreed

the EMP shall be established and maintained by the licensee. It shall include:

- (a) designation of responsibility for targets;
 - (b) the means by which they may be achieved;
 - (c) 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.

2.3.2.4 Documentation

- (i) The licensee shall establish and 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.

2.3.2.5 Corrective Action

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

2.3.2.6 Awareness and Training

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

2.3.2.7 Communications Programme

The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

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

CONDITION 3. INFRASTRUCTURE AND OPERATION

- 3.1 The licensee shall establish all infrastructure referred to in the licence application and in this licence prior to the commencement of the licensed activities or as required and specified by the conditions of this licence.
- 3.2 Monitoring Infrastructure
- 3.2.1 Prior to commencement of waste acceptance at the facility, the licensee shall install and maintain a minimum of two downgradient and one upgradient monitoring boreholes to allow for sampling and analyses of groundwater in overburden and bedrock. All wellheads shall be adequately protected to prevent contamination.
- 3.2.2 Meteorological Station
- 3.2.2.1 The licensee shall operate a weather monitoring station on the site of the facility at a location agreed by the Agency which records the requirements specified in *Schedule C5: Meteorological Monitoring*, of this licence.
- 3.2.2.2 The licensee shall provide and maintain in a prominent location on the facility a windsock, or other wind direction indicator, which shall be visible from the public roadway outside the site.
- 3.2.3 Monitoring equipment shall be vibration isolated in accordance with manufacturers' instructions.
- 3.2.4 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.
- 3.2.5 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 3.2.6 The licensee shall maintain all sampling and monitoring points, and clearly label and name all sampling and monitoring locations, so that they may be used for representative sampling and monitoring.
- 3.3 Facility Notice Board
- 3.3.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.
- 3.3.2 The board shall clearly show:-
- a) the name of the licence holder;
 - b) the name and telephone number of the facility;
 - c) the waste acceptance hours;
 - d) an emergency out of hours contact telephone number;
 - e) the waste licence reference number; and
 - f) where environmental information relating to the facility can be obtained.

- 3.4 Facility Security
- 3.4.1 Security and stockproof fencing and gates as described in Attachment D1.A - *Facility Security Arrangements* of the application shall be installed and maintained. The security fence and gates shall be at the locations shown on Drawing No. 266-22-DR-006 of the licence application - '*Site Layout Plan*', revision D and dated 28/04/03. The base of the fencing shall be set in the ground.
- 3.4.2 Prior to the acceptance of waste at the facility, CCTV shall be provided and maintained at the facility as described in Attachment D1.A - *Facility Security Arrangements* of the licence application.
- 3.5 Waste Inspection and Quarantine Areas
- 3.5.1 An impermeable Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility. The waste inspection and quarantine areas shall be clearly identified and segregated from each other.
- 3.5.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required.
- 3.5.3 Drainage from these areas shall be directed to a storage tank and used as process water in the incineration plant.
- 3.6 The licensee shall provide and maintain two weighbridges at the facility.
- 3.7 Fire water/storm water retention shall be provided as detailed in the licence application.
- 3.8 The licensee shall provide the following residual storage capacity:
- (i) bottom ash: 1500m³;
 - (ii) boiler ash: 100m³;
 - (iii) fly ash /flue gas cleaning ash: 200m³; and
 - (iv) gypsum: 40m³.
- 3.9 Prior to the date of commencement of the waste activities at the facility, the licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Such measures shall at a minimum include the following:-
- 3.9.1 Dust curtains or equivalent, subject to the agreement of the Agency, on the entry/exit points from the buildings where waste is accepted. All other doors in this building shall be kept closed where possible.
- 3.9.2 Installation and maintenance of negative pressure at the waste reception area of the incineration plant to ensure no significant escape of odours or dust.
- 3.9.3 Installation of an odour management system.
- 3.10 Prior to the commencement of waste activities the licensee shall ensure that adequate standby and back up equipment is provided on site to provide for contingency arrangements in the event of a breakdown of critical waste handling, treatment or abatement equipment.
- 3.11 Tank and Drum Storage Areas
- 3.11.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.

- 3.11.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:-
 - a) 110% of the capacity of the largest tank or drum within the bunded area; or
 - b) 25% of the total volume of substance which could be stored within the bunded area.
- 3.11.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.11.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.11.5 The integrity and water tightness of all bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated to the satisfaction of the Agency and shall be reported to the Agency following installation and prior to their use as a storage area. The licensee shall repeat the test at five year intervals and include the results of the tests in the AER.
- 3.12 The licensee shall provide and maintain a Wastewater Treatment System at the facility for the treatment of wastewater arising only from domestic (toilets and water services) use on-site as described in Attachment D1.K&L Sewerage to the licence application. Any percolation area shall satisfy the criteria set out in the *Wastewater Treatment Manual, Treatment Systems for Single Houses*, published by the Environmental Protection Agency.
- 3.13 Surface Water Management.
 - 3.13.1 Effective surface water management infrastructure shall be provided and maintained at the facility during construction and operation of the facility.
 - 3.13.2 All surface water runoff from impermeable surfaced areas and buildings shall be collected in a storage tank for use as process water in the incineration plant.
- 3.14 Drainage system
 - 3.14.1 Prior to the commencement of waste activities, all wastewater gullies, drainage grids and manhole covers shall be painted with red squares whilst all surface water discharge gullies, drainage grids and manhole covers shall be painted with blue triangles. These colour codes shall be maintained so as to be visible at all times during facility operation, and any identification designated in this licence (e.g. SW1) shall be inscribed on these manholes.
 - 3.14.2 The licensee shall install and maintain a settlement chamber and oil separators at the facility. All surface water discharges shall pass through an oil separator prior to discharge. The oil separator shall be a Class II full retention separator and the separator shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).
 - 3.14.3 All sludge and drainage from the drainage system, bunds, silt traps and oil separators shall be collected for safe disposal.
 - 3.14.4 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility.
- 3.15 Existing 200 mm Diameter Gas Main
 - 3.15.1 The pathway for the existing 200 mm diameter gas main shall be clearly delineated on site. An on site way leave that provides a minimum width of 20 metres either side of the mains shall be provided by the licensee.

- 3.16 Waste Acceptance / Removal Hours and Hours of Operation
- 3.16.1 Waste may be accepted at the facility (Materials Recycling facility and Incineration plant) only between the hours of 0800 to 1830 Monday to Friday inclusive and 0800 to 1400 on Saturdays.
 - 3.16.2 Waste shall not be accepted at the facility (Materials Recycling facility and Incineration plant) on Sundays and Bank Holidays without the written approval of the Agency.
 - 3.16.3 Waste may be removed from the facility (Materials Recycling facility and Incineration plant) only between the hours of 0800 to 1830 Monday to Friday inclusive and 0800 to 1400 on Saturdays.
 - 3.16.4 The Materials Recycling facility may be operated only between the hours of 0800 to 1900 hours Monday to Friday inclusive and 0800 to 1430 on Saturdays.
- 3.17 Materials Recycling Facility
- 3.17.1 Prior to the commencement of waste activities the licensee shall provide and maintain a building and associated infrastructure for the Materials Recycling facility at the location shown on Drawing No. 2666-22-DR-006: Site Layout Plan.
 - 3.17.2 The access to the Materials Recycling facility shall be clearly delineated and shall be separate to that of the Incineration plant.
- 3.18 Materials Recycling Facility - Operational Controls
- 3.18.1 Prior to the commencement of waste recycling activities, the licensee shall put in place procedures for the processing of waste streams at the Materials Recycling facility.
 - 3.18.2 The floor of the Materials Recycling facility shall, with the exception of those areas used for the storage of waste, be cleared of waste at the end of each working day.
 - 3.18.3 Leachate from the Materials Recycling facility shall drain to a storage tank for use as process water in the incineration plant.
- 3.19 Incineration Plant
- 3.19.1 Prior to the commencement of waste activities the licensee shall provide and maintain an incineration plant as specified in the licence application, which shall incorporate the following:
 - (i) The stack elevation of the incineration plant (Emission Point Reference No. A1-1) shall at minimum be 95.3m OD.
 - (ii) Appropriate seismic design of the foundation.
- 3.20 Incineration plant - Test programme/Commissioning Plan
- 3.20.1 The licensee shall at least three months prior to the date of plant commissioning, submit to the Agency for its agreement a Test Programme/Commissioning Plan.
 - 3.20.2 The Test Programme/Commissioning Plan shall as a minimum:
 - (a) Verify the residence time as well as the minimum temperature and the oxygen content of the exhaust gas which will be achieved during normal operation and under the most unfavourable operating conditions anticipated.

- (b) Demonstrate that each combustion chamber will be able to achieve 850°C for two seconds on a continuous basis.
 - (c) Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence.
 - (d) Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.
 - (e) Confirm that all measurement equipment or devices (including thermocouples) used for the purpose of establishing compliance with this licence has been subjected, in situ, to its normal operating temperature to prove its operation under such conditions.
- 3.20.3 The Test Programme/Commissioning Plan shall be implemented as agreed and a report on its implementation shall be submitted to the Agency on completion.
- 3.21 The Incineration plant shall not be operated (outside of the agreed Test Programme/Commissioning Plan) until such time as it is authorised to do so by the Agency.
- 3.22 Incineration Plant operations – additional requirements.
- 3.22.1 The plant shall be operated in accordance with the criteria for operation and control as determined in the test programme in Condition 3.20.
 - 3.22.2 The nominal capacity of the plant shall be 20 tonnes per hour.
 - 3.22.3 Prior to the commencement of waste activities the licensee shall establish and maintain standard operating procedures for the operation of the Incineration plant. These shall incorporate the process controls identified in *Schedule C: Control and Monitoring*, of this licence.
 - 3.22.4 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.
 - 3.22.5 Even under the most unfavourable of conditions, the incineration plant shall be operated in such a way that, after the last injection of combustion air, the gas resulting from the process is raised, in a controlled and homogeneous fashion, for a duration of two seconds to a temperature of 850°C, as measured near the inner wall or at another representative point of the combustion chamber as authorised by the Agency. Waste shall be charged into the incinerator only when these operating conditions are being complied with and when the continuous monitoring shows that the emission limit values are not being exceeded.
 - 3.22.6 Each line of 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.
 - 3.22.7 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 75/716/EEC, liquefied gas or natural gas.
 - 3.22.8 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 emissions limit values.

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

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

- (a) a smoke detection system with alarm and water cannon for fire control; and
- (b) a detector for the presence of explosive gases.

3.23 In the case of abnormal operating conditions the licensee shall, as soon as practicable,

- (a) shut down incineration plant operations; and
- (b) shut down process lines.

The licensee shall not resume incineration operations without the agreement of the Agency.

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

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

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

3.27 The drainage system, bunds, silt traps and oil separators shall be properly maintained at all times.

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

***REASON:** To provide for adequate infrastructure and appropriate operation of the facility to ensure protection of the environment.*

CONDITION 4 INTERPRETATION

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

4.1.1 Continuous Monitoring

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

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

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

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

4.1.2 Non-Continuous Monitoring

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

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

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

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

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

4.2.1 Temperature 273 K; pressure 101.3 kPa; 11 % oxygen; dry gas, in exhaust gas of incineration plants.

4.3 Noise

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

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

CONDITION 5 EMISSIONS

- 5.1 No specified emission from the facility shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.
- 5.2 The licensee shall ensure that there are no discharges of waste water from the cleaning of exhaust gas to surface water, sewer or ground.
- 5.3 The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 5.4 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at noise sensitive locations.
- 5.5 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 5.6 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.

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

CONDITION 6 CONTROL AND MONITORING

- 6.1 The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule C: Control and Monitoring* of this licence.
- 6.2 The licensee shall carry out a noise survey of the site operations within three months after the commencement of the licensed activity and annually thereafter. The survey programme shall be submitted to the Agency in writing at least one month before the survey is to be carried out. The survey programme shall be in accordance with *Schedule C: Control & Monitoring*, of this licence or as otherwise agreed by the Agency. A record of the survey results shall be available for inspection by any authorised persons of the Agency, at all reasonable times and a summary report of this record shall be included as part of the AER.
- 6.3 Subject to the requirements and provisions of Article 11 of the Council Directive 2000/76/EC on the incineration of waste, the Agency may amend the frequency, locations, methods and scope of monitoring as required by this licence and shall notify the licensee accordingly. The licensee shall provide such information concerning such amendments as may be requested in writing by the Agency and such alterations shall be carried out within any timescale nominated by the Agency.

- 6.4 Monitoring and analysis equipment shall be operated and maintained so that all monitoring results accurately reflect any emission, discharge or environmental parameter.
- 6.5 All persons conducting the sampling, monitoring and interpretation as required by this licence shall be suitably competent.
- 6.6 Measurements for the determination of concentrations of air and water polluting substances shall be carried out representatively.
- 6.7 Sampling and analysis of all pollutants including dioxins and furans as well as reference measurement methods to calibrate automated measurement systems shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.8 The appropriate installation and functioning of the automated monitoring equipment for emissions into air and water shall be subject to an annual surveillance test. Calibration shall be carried out by means of parallel measurements with reference methods at least every three years.
- 6.9 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the waste activities are being carried on, unless alternative sampling or monitoring has been agreed, in writing, by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.
- 6.10 The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.
- 6.11 The readouts from continuous emission monitors shall report monitoring compliance information that enables direct comparison with the emission limit values specified in *Schedule B: Emission Limits*, of this licence.
- 6.12 Prior to the acceptance of waste at the facility, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels (ammonia, TOC and chloride as a minimum).
- 6.13 Monitoring off-site shall be subject to the agreement of the property owner(s) where appropriate.
- 6.14 The drainage system, bunds, silt traps and oil separators shall be inspected weekly.
- 6.15 Residues from the incineration plant shall be subject to the monitoring and analysis specified in *Schedule C4: Monitoring of Residues from Incineration Plant*, of this licence, prior to determining the route for disposal or recycling. The monitoring and analysis shall establish the physical and chemical characteristics and polluting potential of the residues.

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

CONDITION 7 RESOURCE USE AND ENERGY EFFICIENCY

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The licensee shall consult with the Agency on the nature and extent of the audit and shall develop an audit programme to the satisfaction of the Agency.

The audit programme shall be submitted to the Agency in writing at least one month before the audit is to be carried out. The energy efficiency audit report shall be submitted to the Agency within one month of completion of audit and shall include:

- 7.1.1 A review of opportunities for increasing the overall energy efficiency of the facility over the coming year.
- 7.1.2 Identify progress with those opportunities identified in the previous report.
- 7.1.3 Identify the net usable energy produced per tonne of waste processed (i.e. energy consumption of the facility and unused energy discharged from cooling operations to be deducted).

The audit and report shall be repeated at intervals as required by the Agency.

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

7.3 The licensee shall identify opportunities for

- 7.3.1 The reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible.
- 7.3.2 The recovery/recycling of residues.
- 7.3.3 Optimisation of fuel and raw material usage on site.

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

7.4 Within twelve months of completion of the audit specified in Condition 7.1 the licensee shall undertake a study to identify the opportunities to maximise the use or recovery of heat generated during the incineration process.

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

CONDITION 8 MATERIALS HANDLING

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

8.2 Waste Acceptance/Removal and Characterisation Procedures

- 8.2.1 Wastes shall be accepted at/removed from the facility only from/by an authorised or exempted carrier under National or European legislation or Protocols. Copies of the waste collection permits must be maintained at the facility.
- 8.2.2 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the appropriate storage capacity available for such waste.
- 8.2.3 Prior to commencement of waste acceptance at the facility, the licensee shall establish and maintain detailed written procedures for the acceptance and handling of wastes. These procedures shall include the following:

- (a) Waste inspection at the point of entry to the facility and waste characterisation and waste profiling from known customers or new customers accepted at the facility.
 - (b) Methods for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes. 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.
 - (c) Waste weighing, documentation and reception.
 - (d) The manner in which waste will be handled for disposal or recovery. This shall include bunker management procedures at the incineration plant (mixing, periodic emptying and cleaning).
 - (e) The licensee shall, where possible, prior to accepting the waste at the incineration plant, determine the mass of each category of waste in accordance with, and by reference to, the relevant EWC codes as outlined by Commission Decision 2000/532 of 3rd May 2000, as amended.
- 8.3 Any waste deemed unsuitable for processing at the facility or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.
- 8.4 The licensee shall ensure that waste from the incineration plant and materials recovery facility, prior to being sent for disposal or recovery off site, is:-
- 8.4.1 Segregated, classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.
 - 8.4.2 Stored in designated areas, protected as may be appropriate, against spillage and leachate run-off.
 - 8.4.3 Stockpiled in such a manner as to minimise dust generation.
- 8.5 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended) shall be consigned for recovery without the prior agreement of the Agency.
- 8.6 The licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.
- 8.7 Waste shall be accepted at the facility only from known customers or new customers subject to initial waste profiling and waste characterisation off-site.
- 8.8 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.
- 8.9 Lime grits shall not be mixed with residues.
- 8.10 Bottom ash and gypsum shall be stored at dedicated areas within the building on concrete hardstanding with contained drainage.

- 8.11 Boiler ash and flue gas cleaning residues shall be stored at dedicated areas within the building in silos (vented through self cleaning filter), bulk sacks or bins on concrete hardstanding with contained drainage.
- 8.12 Metals for recycling that are recovered from the ash shall be stored at a dedicated area within the building on concrete hardstanding with contained drainage.
- 8.13 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.
- 8.14 Waste sent off-site for recovery or disposal shall be conveyed only by holders of waste collection permits issued under National or European legislation or Protocols to an appropriate facility authorised to accept such waste. The waste shall be transported from the site of the activity to the site of recovery/disposal in a manner which will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.

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

CONDITION 9 ACCIDENT PREVENTION AND EMERGENCY RESPONSE

- 9.1. The licensee shall, prior to commencement of waste activities ensure that a documented Accident Prevention Policy is in place which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment.
- 9.2. The licensee shall, prior to commencement of waste activities submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.3. In the event of an incident the licensee shall immediately:-
- a) note the date, time and place of the incident;
 - b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - c) isolate the source of any such emission;
 - d) evaluate the environmental pollution, if any, caused by the incident;
 - e) identify and execute measures to minimise emissions/malfunctions and the effects thereof;
 - f) provide a proposal to the Agency for its agreement within one month of the incident occurring to:-
 - i) identify and put in place measures to avoid reoccurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.

9.4 Emergencies

- 9.4.1 In the event of a 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 facility shall be transferred directly to an appropriate facility;
 - (b) stored or awaiting processing at the facility shall, subject to the agreement of the Agency, be transferred to an appropriate facility within three days of the shutdown.
- 9.4.2 All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 9.4.3 A fire outbreak at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.
- 9.4.4 In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity or the quality of the water supply this shall be treated as an emergency.

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

CONDITION 10 REMEDIATION, DECOMMISSIONING, RESTORATION AND AFTERCARE

- 10.1 The licensee shall within twelve months of the date of grant of this licence submit to the Agency for its agreement a Decommissioning and Aftercare plan for the facility. This plan shall be updated when required by the Agency.
- 10.2 Following the termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

REASON: *To provide for the restoration of the facility.*

CONDITION 11 NOTIFICATION, RECORDS AND REPORTS

- 11.1 In the event of an incident occurring on the facility, the licensee shall: -
- a) notify the Agency as soon as practicable and in any case not later than 10.00 a.m. the following working day after the occurrence of any incident;
 - b) submit a written record of the incident, including all aspects described in Condition 9.3(a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;
 - c) in the event of any incident which relates to discharges to surface water, notify the Eastern Regional Fisheries Board as soon as practicable and in any case not later than 10:00 a.m. on the following working day after such an incident; and

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

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

- a) A copy of this licence and associated referenced documents;
- b) all written procedures produced by the licensee which relate to the licensed activities;
- c) all reports and proposals prepared in accordance with the conditions of this licence;
- d) all written records specified in Condition 11.3; and
- e) all notifications to the Agency.

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

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

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

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

- a) the date;
- b) the name of the carrier (including if appropriate, the waste collection permit details);
- c) the vehicle registration number;
- d) the name of the producer(s)/collector(s) of the waste as appropriate;
- e) the name of the waste facility (if appropriate) from which the load originated or to which the load departed, including the waste licence or waste permit register number;
- f) a description of the type of waste including the associated EWC codes;
- g) the quantity of the waste, recorded in tonnes;
- h) the name of the person checking the load;
- i) where loads of wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed; and
- j) where applicable a consignment note number (including transfrontier shipment notification and movement/tracking form numbers, as appropriate).

11.3.3 For waste accepted at or dispatched from the facility: -

- a) the type, relevant EWC code and total tonnage of waste accepted at the facility for disposal on a daily, monthly and annual basis;
- b) the type, relevant EWC code and total tonnage of waste accepted at the facility 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 facility on an hourly, daily, monthly and annual basis;
 - f) the type, relevant EWC code and total tonnage of waste recovered at the facility on a monthly and annual basis; and
 - g) Details of any approved waste mixing.
- 11.3.4 Off site profiling and characterisation of customer waste.
- 11.3.5 All training undertaken by facility staff.
- 11.3.6 Details of all wastes consigned abroad for Recovery and classified as 'Green' in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended). The rationale for the classification must form part of the record.
- 11.3.7 All incidents.
- 11.3.8 All complaints from third parties.
- 11.4 The written records of all complaints relating to the operation of the activity shall give details of the following:-
- a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and,
 - e) the response made to each complainant.
- 11.5 Data management
- 11.5.1 The licensee shall, within six months of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.
- 11.5.2 The licensee shall submit all records of sampling, analysis, measurements, incidents, inspections, examinations, tests, malfunction, breakdown, calibrations, maintenance or remedial works and reports and notifications to the Agency on a quarterly basis unless otherwise specified by a condition of this licence. Such records, reports and notifications shall:
- a) be sent to the Agency's Office of Environmental Enforcement, 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.

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

11.6 Annual Environmental Report

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

11.6.2 The AER shall include as a minimum:

- a) The information specified in *Schedule D: Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.
- b) A report of annual audits undertaken by the licensee of the waste disposal, treatment and recovery sites for the residues and other wastes dispatched from the facility.
- c) Pollution Emission Register (PER)
 - (i) The substances to be included in the PER shall be as outlined in, and shall be estimated in accordance with, any relevant guidelines or methodology issued by the Agency.

11.7 Written records of off-site waste profiling and characterisation shall be retained by the licensee for all active customers and for a two year period following termination of licensee/customer agreements.

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

CONDITION 12 FINANCIAL CHARGES AND PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €63,513 or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2003. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month of the date upon which demanded by the Agency. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2003, and all such payments shall be made within one month of the date upon which demanded by the Agency.

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

12.2 Financial Provision for Closure, Decommissioning and Aftercare

- 12.2.1 Prior to the acceptance of waste, the licensee shall arrange for a comprehensive and fully costed Environmental Liabilities Risk Assessment for the facility to be carried out. The Environmental Liabilities Risk Assessment shall have particular regard to any accidents, emergencies, or other incidents, which might occur at the facility and their effect on the environment. The Environmental Liabilities Risk Assessment shall include the cost of making such Financial Provision as is required for the purposes of Section 53(1) of the Waste Management Acts, 1996 to 2003. The Financial Provision shall include the costs entered into or incurred in the carrying on of the activities to which this licence relates or will relate including the closure, restoration, remediation and aftercare of the facility.
- 12.2.2 The licensee shall prior to the acceptance of waste establish and maintain a fund, or provide a written guarantee, for the costs determined under Condition 12.2.1. The type of fund established and means of its release/recovery shall be agreed by the Agency prior to its establishment.
- 12.2.3 The amount of financial provision, held under Condition 12.2.2 shall be reviewed and revised as necessary, but at least annually. Any proposal for such a revision shall be submitted to the Agency for its agreement.
- 12.2.4 The licensee shall within two weeks of establishment, purchase, renewal or revision of the financial provision required under Condition 12.2.2, forward to the Agency written proof of such indemnity.
- 12.2.5 Unless otherwise agreed any revision to the fund shall be computed using the following formula:

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

Where:

Cost = Revised restoration and aftercare cost.

ECOST = Existing restoration and aftercare cost.

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

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

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

SCHEDULE A: Limitations

A.1 Waste Categories and Quantities for Acceptance at the Materials Recycling Area

Maximum annual quantity to be accepted shall not exceed: 20,000 tonnes.

Waste Type	European Waste Catalogue (EWC)	
Dry Recyclables Note 1	Wood	20 01 38
	Paper	20 01 01
	Glass	20 01 02
	Plastics	20 01 39
	Metals	20 01 40
	Mixed municipal / residual	20 03 01

Note 1: Dry recyclables from household commercial and industrial waste.

A.2 Waste Categories and Quantities for Acceptance at the Incineration plant

Maximum annual quantity to be accepted shall not exceed: 150,000 tonnes.

Waste Type	European Waste Catalogue (EWC)
Residual Municipal Waste. ^{Note 1}	20 03 01
Medicines other than those mentioned in 20 01 29	20 01 32
Street-cleaning residues	20 03 03
Municipal waste not otherwise specified	20 03 99
Other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11	19 12 12
Septic tank sludges	20 03 04
Animal-tissue waste	02 02 02
Sludges from treatment of urban waste water	19 08 05
Sludges from the physico / chemical treatment other than those mentioned in 19 02 05	19 02 06

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

Schedule B: Emission Limits

B.1 Emission limits to Air.

Emission Point Reference No.:	A1-1 (Stack Emission)		
Location:	Flue gas treatment building		
Volume to be emitted:	Maximum rate per hour:	151,000 m ³	
Minimum Discharge height:	65 m above ground		

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

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

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

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

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

Note 5: Taken in any 24 hour period.

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

Note 7: 95 % of all measurements determined as 10-minute average values shall not exceed the emission limit value.

B.2 *Emission limits to Water*

No Schedule

B.3 *Emission limits to Sewer*

No Schedule

B.4 *Noise emission limits*

Day dB(A) L_{eq}(30 minutes)	Night dB(A) L_{eq}(30 minutes)
55	45

SCHEDULE C: Control and Monitoring

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

C.1.1 Process Control

<i>Monitoring of Incinerator</i>		
Control Parameter	Monitoring (continuous unless otherwise stated in licence)	Key Equipment^{Note 1}
Combustion	Combustion chamber temperature ^{Note 2}	Thermocouple
Exhaust gas	% O ₂ in exhaust gas	O ₂ analyser
Exhaust gas	Exhaust gas temperature	Thermocouple
Exhaust gas	Exhaust gas pressure	Pressure monitor
Exhaust gas	Water vapour content ^{Note 3}	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>		
Control Parameter	Monitoring (continuous unless otherwise stated in licence)	Key Equipment
Flue gas	Pressure	Pressure sensors
Flue gas	Temperature	Thermocouple
NO _x	Concentration and Reagent	NO _x Analyser and Reagent dosage rate
Feed water supply	Water rate and water level	Flow meter and level
<i>Monitoring of Energy Recovery</i>		
Control Parameter	Monitoring (continuous unless otherwise stated in licence)	Key Equipment
Energy Recovery	Steam Flow, Condenser Control, Turbine Control	Flow meter, Temperature, Pressure analysers

C.1.1 (Continued)

<i>Flue gas cleaning</i>		
<i>Location</i>	<i>Item/Parameter</i>	<i>Monitoring Equipment</i>
Evaporating Spray Towers:	Flue gas temperature	Thermocouple
	Flue gas pressure	Pressure sensors
	Water dosage rate	Flow meter
	Nozzles	Weekly inspection
Activated Carbon/Lime Mixture Injection:	Activated Carbon / Lime Mixture dosing	Dosage rate meter
	Supply silo level	Low level alarm
Baghouse Filter:	Pressure Differential Across Filters	Differential Pressure Indicator
	Collection Unit level	High level alarm on collector unit
Wet Flue Gas Cleaning:	Flue Gas Temperature	Thermocouple
	Water Input	Flow meter
	pH	Meter
	Scrubber Liquid Flow	Flow meter
	Reagent Dosage Rate	Flow meter
	Scrubbing Liquid level	Low Level Alarm
	Scrubber solution dissolved salt levels	Chemical Analysis
Tail End Flue Gas Cleaning:	Activated Carbon / Lime Mixture	Dosage rate
Plume Abatement:	Plume Temperature	Thermocouple
<i>Residues</i>		
	<i>Item/Parameter</i>	<i>Monitoring Equipment (where applicable)</i>
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: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the system.

Note 2: Near the inner wall of the combustion chamber (or other representative location agreed by the Agency).

Note 3: Not necessary if gases are dried prior to analysis.

C.1.2 Monitoring of Emissions to Air

Emission Point Reference No.: A1-1 (Stack)		
Parameters	Monitoring Frequency	Analysis Method / Technique ^{Note 1}
Total dust	Continuous	Iso-kinetic/gravimetric
Gaseous and vaporous organic substances, expressed as total organic carbon	Continuous	Flame Ionisation Detector
Hydrogen chloride (HCl)	Continuous	Infra red analyser
Hydrogen fluoride (HF)	Quarterly	To be agreed with Agency
Sulphur dioxide (SO ₂)	Continuous	Infra red analyser
Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Continuous	Infra red analyser
Nitrous oxide (N ₂ O)	Quarterly	To be agreed by the Agency
Cadmium (as Cd) and thallium (as Tl), and their compounds	Quarterly	To be agreed by the Agency
Mercury (as Hg) and its compounds	Quarterly	To be agreed by the Agency
Antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) and their compounds	Quarterly	To be agreed by the Agency
Dioxins/furans	Continuous sampling with analysis every two weeks. Biannual measurement, average value over sample period of between 6 and 8 hours. (Quarterly for first year of operation)	Continuous sampling method as per application. Other measurements as per CEN method (EN 1948, part 1,2, and 3).
Carbon monoxide (CO)	Continuous	Infra red analyser
Emission Point Reference No.: A2-1 (Back-up Gas Fired Electricity Generation Plant)		
Parameter	Monitoring Frequency ^{Note 2}	Analysis Method/Technique
CO	On installation	Flue gas analyser/datalogger
Nox	On installation	Flue gas analyser
Particulates	On installation	Isokinetic/Gravimetric
TOC	On installation	Flame ionisation

Note 1: Or other methods agreed in advance by the Agency.

Note 2: Monitoring to be carried out on installation and thereafter as instructed by the Agency.

C.2.1 Control of emissions to Water.

No Schedule

C.2.2 Monitoring of emissions to Water

No Schedule

C.3.1 Control of emissions to Sewer.

No Schedule

C.3.2 Monitoring of emissions to Sewer

No Schedule

C.4 Monitoring of Residues from Incineration Plant

<i>Residue Monitoring Parameter and Frequency</i>		
Waste Description	Parameters to be measured	Frequency
Bottom Ash, Boiler Ash	TOC, metals (Ba, Cd, Mo, Sb, Se, Zn, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V, Sn) and their compounds, chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCBs.	Quarterly
Electro filter ash, Flue gas residuals and Gypsum	TOC, metals (Ba, Cd, Mo, Sb, Se, Zn, Tl, Hg, Pb, Cr, Cu, Mn, Ni, As, Co, V, Sn) and their compounds, chloride, fluoride, sulphate, dioxins/furans and dioxin-like PCBs.	Biannually

C.5 Meteorological Monitoring

Monitoring Location: To be agreed by the Agency.

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

Note1: World Metrological Organisation Standards and Recommendations.

C.6.1 Ambient Groundwater Monitoring

Monitoring Locations: Two downgradient and one upgradient monitoring boreholes.

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Biannually	pH electrode/meter
BOD	Biannually	Standard Method
Nitrate	Biannually	Standard Method
Nitrite	Biannually	Standard Method
Total Ammonia	Biannually	Standard Method
Conductivity	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 ^{Note 1}	Biannually	GC-MS

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

C.6.2 Ambient Noise Monitoring

Monitoring Locations: At stations ANB-1, ANB-2 and ANB-3. ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Annual	Standard ^{Note 2}
L(A) ₁₀ [30 minutes]	Annual	Standard ^{Note 2}
L(A) ₉₀ [30 minutes]	Annual	Standard ^{Note 2}
Frequency Analysis(1/3 Octave band analysis)	Annual	Standard ^{Note 2}

Note 1: Noise stations to be relabelled N1, N2 AND N3 etc.

Note 2: "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content

Reporting Period.
Details of waste activities carried out at the facility.
Summary of quantity and composition of waste received, recovered and disposed of in reporting period.
Summary report on emissions.
Summary of noise survey.
Summary of all environmental monitoring.
Resource and energy consumption summary.
Tank, drum, pipeline and bund testing and inspection report.
Summary of Reported Incidents and Complaints.
Summary of audits of waste disposal, treatment and recovery sites for the residues from facility.
Environmental management programme – report for previous year.
Environmental management programme – proposal for current year.
Pollution emission register – report for previous year.
Pollution emission register – proposal for current year.
Any other items specified by the Agency.

Signed on behalf of the said Agency
on the 26th day of October, 2004

Dr. Jonathan Derham, **Authorised Person**