

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

TECHNICAL AMENDMENT D  
TO  
INDUSTRIAL EMISSIONS LICENCE

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

## ***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 Licence Reg. No. W0167-03 granted on 02/06/2015 and amended on 21/06/2016, 30/05/2017 and 24/09/2019 as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

The Agency has applied the Commission Implementing Decision of 2019/2010 of 12 November 2019 establishing Best Available Techniques (BAT) Conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration as a reference when setting licence conditions.

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 any European Site. In this context, particular attention was paid to the European Site(s) at River Boyne and River Blackwater SAC (Code: 002299), Boyne Coast and Estuary SAC (Code: 001957), River Boyne and River Blackwater SPA (Code: 004232), Boyne Estuary SPA (Code: 004080), River Nanny Estuary and Shore SPA (Code: 004158).

The activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, 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 any European Site and accordingly determined that an Appropriate Assessment of the activity was not required.

- The installation is not located in any European site.
- This amendment is for the purposes of updating the licence to ensure compliance with the Commission Implementing Decision for waste incineration (2019/2010/EU). This amendment updates the licence conditions and maintains or tightens the emission limit values to ensure the operation of the installation is in line with the latest developments in best available techniques (BAT) and to achieve a high level of protection of the environment.
- The proposed changes do not substantially change the nature or extent of the operations at the installation.

## *Technical Amendment*

In pursuance of the powers conferred on it by Section 96(1)(b) of the Environmental Protection Agency Act 1992 as amended, the Agency amends the licence, granted to Indaver Ireland Limited, The Highline, 1<sup>st</sup> Floor, Bakers Point, Pottery Road, Dun Laoghaire, County Dublin for an installation located at Carranstown, Duleek, County Meath.

Henceforth, the licence shall be read in conjunction with Amendment A issued on 21/06/2016, Amendment B issued on 30/05/2017 and Amendment C issued on 24/09/2019 and the amendments set out below.

This Technical Amendment is limited to the following Glossary of Terms/Condition(s)/Schedule(s):

## **Amendments**

### **Amended Glossary of Terms**

*Insert the following into the Glossary of Terms, of the existing licence as amended:*

<b>Boiler efficiency</b>	Ratio between the energy produced at the boiler output (e.g. steam, hot water) and the waste's and auxiliary fuel's energy input to the furnace (as lower heating values).
<b>Bottom ash treatment plant</b>	Plant treating slags and/or bottom ashes from the incineration of waste in order to separate and recover the valuable fraction and to allow the beneficial use of the remaining fraction. This does not include the sole separation of coarse metals at the incineration plant.
<b>Channelled emissions</b>	Emissions of pollutants into the environment through any kind of duct, pipe, stack, chimney, funnel, flue, etc.
<b>CID 2019/2010</b>	Commission Implementing Techniques (EU) 2019/2010 of 12 November 2019 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and the Council, for waste incineration.
<b>Continuous measurement</b>	Measurement using an automated measuring system permanently installed on site.
<b>Diffuse Emissions</b>	Non-channelled emissions (e.g. of dust, volatile compounds, odour) into the environment, which can result from 'area' sources (e.g. tankers) or 'point' sources (e.g. pipe flanges).
<b>Dust</b>	Total Particulate matter (in air).

<b>Fly ashes</b>	Particles from the combustion chamber or formed within the flue-gas stream that are transported in the flue-gas.
<b>Hazardous waste</b>	Hazardous waste as defined in Article 3(2) of Directive 2008/98/EC of the European Parliament and of the Council <sup>1</sup> .
<b>Incineration of waste</b>	The combustion of waste, either alone or in combination with fuels, in an incineration plant.
<b>Major plant upgrade</b>	A major change in the design or technology of a plant with major adjustments or replacements of the process and/or abatement technique(s) and associated equipment.
<b>Municipal waste</b>	<p>‘Municipal waste’ means:</p> <p>(a) Mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;</p> <p>(b) Mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households;</p> <p>Municipal waste does not include waste from production, agriculture, forestry, fishing, septic tanks and sewage network and treatment, including sewage sludge, end-of-life vehicles or construction and demolition waste. This definition is without prejudice to the allocation of responsibilities for waste management between public and private actors.</p>
<b>Non-hazardous waste</b>	‘Non-hazardous waste’ means waste which is not covered by the definition of hazardous waste.
<b>NO<sub>x</sub></b>	The sum of nitrogen monoxide (NO) and nitrogen dioxide (NO <sub>2</sub> ), expressed as NO <sub>2</sub> .
<b>OTNOC</b>	Other than normal operating conditions.
<b>PCDD/F</b>	Polychlorinated dibenzo-p-dioxins and -furans.
<b>Periodic Measurement</b>	Measurement at specified time intervals using manual or automated methods.
<b>Residues</b>	Any liquid or solid waste which is generated by an incineration plant or by a bottom ash treatment plant.

<sup>1</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

<b>Sewage sludge</b>	Residual sludge from the storage, handling and treatment of domestic, urban or industrial waste water. For the purposes of these BAT conclusions, residual sludges constituting hazardous waste are excluded.
<b>Slags and/or bottom ashes</b>	Solid residues moved from the furnace once wastes have been incinerated.
<b>TOC content (in solid residues)</b>	Total organic carbon content. The quantity of carbon that is converted into carbon dioxide by combustion and which is not liberated as carbon dioxide by acid treatment.
<b>TVOC</b>	Total volatile organic carbon, expressed as C (in air).
<b>Valid half-hourly average</b>	A half-hourly average is considered valid when there is no maintenance or malfunction of the automated measuring system.

## Amended Condition

*Replace Condition 2.3, of the existing licence as amended with the following:*

### 2.3 Environmental Management System (EMS)

2.3.1 The licensee shall maintain and implement an Environmental Management System (EMS). The EMS shall be reviewed by senior management 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 A statement of the commitment, leadership and accountability of management, including senior management for the implementation of an effective EMS.
- 2.3.2.2 An environmental policy, defined by Management, that includes a commitment to continuous improvement of the environmental performance of the installation.
- 2.3.2.3 Management and Reporting Structure and responsibility for environmental aspects, including for the planning and provision of financial and human resources to manage and implement the EMS.
- 2.3.2.4 An analysis of the organisation's regulatory and environmental obligations, including the potential risks to the environment from the activity.
- 2.3.2.5 The procedures required by this licence, including procedures for;
  - 2.3.2.5.1 Ensuring compliance with environmental legislation;
  - 2.3.2.5.2 Ensuring employee awareness of and involvement in complying with environmental legislation; and

2.3.2.5.3 Checking performance and developing performance indicators by sectoral benchmarking on a regular basis, including for energy efficiency.

2.3.2.6 Schedule of Environmental Objectives and Targets.

The licensee shall maintain and implement a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, as referred to in the conditions of this licence, including an evaluation of practicable options for:

- (i) Energy and resource efficiency;
- (ii) The reduction in water consumption;
- (iii) The use of cleaner technology, cleaner production;
- (iv) Odour and noise management;
- (v) The prevention, reduction and minimisation of waste including waste reduction targets;
- (vi) The impacts from eventual decommissioning of the installation; and
- (vii) A monitoring and measurement programme.

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.

2.3.2.7 Environmental Management Programme (EMP)

The licensee shall maintain and implement an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.3.2.6 above. The EMP shall include:

- Designation of responsibility for targets;
- The means by which they may be achieved; and
- The time within which they may be achieved.

The EMP shall be reviewed annually.

A report on the programme, including the success in meeting agreed targets and an evaluation of non-conformities and associated corrective actions and the potential for further non-conformities to occur 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.

2.3.2.8 Documentation

- (i) The licensee shall maintain and implement an environmental management documentation system.

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

2.3.2.9 Corrective and Preventative Action

- (i) The licensee shall maintain and implement 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 initiate any feasible preventative actions to prevent recurrence of the breach.
- (iii) All corrective and preventative actions shall be documented.

2.3.2.10 Internal Audits

The licensee shall maintain and implement 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 this licence. Audit reports and records of the resultant corrective and preventative actions shall be maintained as part of the EMS in accordance with Condition 2.3.2.9.

2.3.2.11 Awareness, Training and Competence

The licensee shall maintain and implement procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment to ensure awareness and competence in their work area. Appropriate records of training shall be maintained.

2.3.2.12 Public Awareness and Communications Programme

- (i) The licensee shall maintain and implement 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.
- (ii) The Public Awareness & Communications Programme shall, as a minimum, include the following:
- (iii) Maintain information at the installation as required in Condition 11.4 which shall be available for inspection at all reasonable times;
- (iv) 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;
- c) 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.

2.3.2.13 Maintenance Programme

The licensee shall maintain and implement 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.

2.3.2.14 Efficient Process Control

The licensee shall maintain and implement 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.

2.3.2.15 The licensee shall establish, maintain and implement a waste stream management plan, which shall incorporate an appropriate combination of techniques listed in BAT 9 and BAT 11 of CID 2019/2010.

2.3.2.16 The licensee shall establish, maintain and implement a residues management plan, which shall include measures aiming to:

- (i) Minimise the generation of residues;
- (ii) Optimise the reuse, regeneration, recycling of, and/or energy recovery from the residues; and
- (iii) Ensure the proper disposal of residues.



2.3.2.17 Other than Normal Operation Conditions (OTNOC)

The licensee shall establish, maintain and implement a risk-based OTNOC management plan in order to reduce the frequency of OTNOC and to reduce emissions to air from the incineration plant during periods of other than normal operating conditions, including start-up and shut-down periods. The programme shall include the elements set out in BAT 18 of CID 2019/2010.

2.3.2.18 An accident management plan with incorporates all elements outlined in Section 2.4 of CID 2019/2010.

2.3.2.19 The licensee shall establish, maintain and implement diffuse dust emissions management in order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes which shall include the management features listed in BAT 23 of CID 2019/2010.



## Amended Condition

*Amend Condition 3.20, of the existing licence as amended to read as follows:*

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, in order to improve the environmental performance of the plant and reduce emissions to air, in accordance with BAT 16 of CID 2019/2010. 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 environmental performance levels from the incineration of waste as set out in Schedule C.7 Environmental Performance Levels for unburnt substances in slags and bottom ashes from the incineration of Waste.
- 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 that may cause higher emissions than those resulting from the burning of gas oil, as defined in Council Directive 2016/802/EU, 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.
- 3.20.13 The licensee shall blend and mix wastes prior to incineration for the purposes of improving the overall environmental performance of the incineration of waste in accordance with BAT 14 of CID 2019/2010.
- 3.20.14 The licensee shall maintain and implement an advanced control system for the incineration plant to control the combustion efficiency and support the minimisation of emissions in accordance with BAT 14 of CID 2019/2010.
- 3.20.15 The licensee shall maintain and implement procedures for the adjustment of the plant's settings in accordance with BAT 15 of CID 2019/2010.



## Amended Condition

*Amend Condition 3.21, of the existing licence as amended to read as follows:*

### 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 approved by the Agency.

### 3.21.2 In the case of abnormal operations:

- (a) 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
- (b) The cumulative duration of abnormal operation over one calendar year shall be less than 60 hours, and
- (c) The total dust content of the emissions from the A1-1 stack 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* for CO and TVOC shall not be exceeded.



## New Conditions

*Append the following conditions at the end of Condition 3 of the existing licence as amended:*

3.30 The licensee shall ensure that the flue gas cleaning system is operated within its design range in accordance with BAT 17 of CID 2019/2010.

3.31 The hours of operation of the emergency diesel generator reference no. (A1-2) shall not exceed 500 hours annually, as a rolling average over a five-year period. The licensee shall record the hours of operation to the satisfaction of the Agency.



## Amended Condition

*Amend Condition 4.1. of the existing licence as amended to read as follows:*

4.1 Emission limit values for emissions to atmosphere 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 volatile organic carbon:	30 %
Hydrogen chloride:	40 %
Hydrogen fluoride:	40 %
Ammonia:	40 %
Volumetric Flow:	10%

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.



## **Amend Condition**

*Amend Condition 6.2 of the existing licence as amended to read as follows:*

### **6.2 Noise**

6.2.1 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.

6.2.2 The licensee shall ensure that noise emissions arising from the site activities are prevented, or where that is not practicable, minimised, by using one or a combination of techniques listed in BAT 37 of CID 2019/2010.

#### **6.2.3 Noise Management Plan**

6.2.3.1 The licensee shall prepare, maintain and implement, to the satisfaction of the Agency, a Noise Management Plan.

6.2.3.2 The plan shall be submitted within six months of the date of grant of this licence.

6.2.3.3 The plan shall outline noise reduction and abatement measures.

6.2.3.4 The plan shall be prepared in accordance with the Agency's Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) and incorporate management techniques listed in Section 2.4 of WI CID 2019/2010.

6.2.3.5 The plan shall be implemented within twelve months of the date of grant of this licence.

6.2.3.6 The plan shall be reviewed annually.



## Amend Condition

*Amend Condition 6.3 of the existing licence as amended to read as follows:*

- 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) and the CID (2019/2010), the frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended as required or approved by the Agency following evaluation of test results.



## Amend Condition

*Amend Condition 6.12 of the existing licence as amended to read as follows:*

- 6.12 The licensee shall prepare and implement a programme, to the satisfaction of the Agency, for the identification and reduction of diffuse emissions using all appropriate techniques listed in BAT 21 of CID 2019/2010. This programme shall be included in the Environmental Management Programme.



## New Conditions

*Append the following conditions at the end of Condition 6 of the existing licence as amended:*

- 6.19 Odour Management Plan
- 6.19.1 The licensee shall prepare, maintain and implement, to the satisfaction of the Agency, an Odour Management Plan.
  - 6.19.2 The plan shall be submitted within twelve months of the date of grant of this licence.
  - 6.19.3 The plan shall outline odour reduction and abatement measures.
  - 6.19.4 The plan shall as a minimum address the storage and handling of wastes and other materials with a potential for causing odour.
  - 6.19.5 The plan shall be prepared in accordance with the Agency's Odour Emissions Guidance Note (Air Guidance Note AG9) and incorporate management techniques listed in 2.4 of CID 2019/2010.
  - 6.19.6 The plan shall be reviewed annually.

- 6.20 The licensee shall monitor channelled emissions to air from the incineration plant during OTNOC in accordance with BAT 5 of CID 2019/2010.



## **New Conditions**

*Append the licence to insert the following conditions at the end of Condition 7 of the existing licence as amended:*

- 7.4 The licensee shall carry out a performance test, after each modification of the incineration plant that could significantly affect the energy efficiency, the gross electrical efficiency or the gross energy efficiency. Where a performance test at full load cannot be carried out for technical reasons, the gross electrical efficiency or the gross energy efficiency can be determined taking into account the design values at performance test conditions.
- 7.5 For the incineration of municipal solid waste, the gross electrical efficiency shall not be less than 20%.
- This is expressed in the General Considerations of CID 2019/2010.
- 7.6 The licensee shall use an appropriate combination of the techniques in BAT 20 of CID 2019/2010 to increase the energy efficiency of the incineration plant.
- 7.7 The licensee shall maintain and operate a heat recovery boiler in accordance with BAT 19 of CID 2019/2010.



## Amended Schedule

Replace Schedule B.1 Emissions to Air, of the existing licence as amended with the following table:

**B.1 Emission Limits to Air**

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

Parameters <sup>Note 1</sup>	Units	Half Hour Average		Daily Average	Periodic	
		A	B			
<b>Total dust</b>	mg/m <sup>3</sup>	30 <sup>Note 2</sup>	10 <sup>Note 2</sup>	5	-	
<b>Total volatile organic carbon, expressed as C (TVOC)</b>	mg/m <sup>3</sup>	20 <sup>Note 2</sup>	10 <sup>Note 2</sup>	10	-	
<b>Hydrogen chloride (HCl)</b>	mg/m <sup>3</sup>	60 <sup>Note 2</sup>	10 <sup>Note 2</sup>	8	-	
<b>Hydrogen fluoride (HF)</b>	mg/m <sup>3</sup>	4 <sup>Note 2</sup>	2 <sup>Note 2</sup>	<1 <sup>Note 3</sup>	-	
<b>Sulphur dioxide (SO<sub>2</sub>)</b>	mg/m <sup>3</sup>	200 <sup>Note 2</sup>	50 <sup>Note 2</sup>	40	-	
<b>NO<sub>x</sub>, expressed as NO<sub>2</sub></b>	mg/m <sup>3</sup>	400 <sup>Note 2</sup>	200 <sup>Note 2</sup>	180	-	
<b>Cadmium (as Cd) and thallium (as Tl), and their compounds</b> <sup>Note 4</sup>	mg/m <sup>3</sup>	-	-	-	0.05 <sup>Note 5</sup>	0.02 <sup>Note 6, Note 10</sup>
<b>Mercury (as Hg) and its compounds</b> <sup>Note 4</sup>	mg/m <sup>3</sup>	-	-	-	0.05 <sup>Note 5</sup>	0.02 <sup>Note 6, Note 10, Note 11</sup>
<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 4</sup>	mg/m <sup>3</sup>	-	-	-	0.5 <sup>Note 5</sup>	0.3 <sup>Note 6, Note 10</sup>
<b>Dioxins/furans (TEQ)</b> <sup>Note 7</sup>	ng/m <sup>3</sup>	-	-	-	0.1 <sup>Note 5</sup>	0.06 <sup>Note 6</sup>
<b>Carbon monoxide (CO)</b>	mg/m <sup>3</sup>	100 <sup>Note 8</sup>		50 <sup>Note 9</sup>	-	
<b>Ammonia (NH<sub>3</sub>)</b>				15		

**Note 1:** In accordance with Article 3(13) of the IED 2010/75/EU 'emission limit levels associated with the best available techniques' means the range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in the BAT conclusions, expressed as an average over a given period of time, under specified reference conditions.

**Note 2:** Either none of the half-hourly average values shall exceed any of the emission limit values set out in column A, or, where relevant 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 3:** For HF, "Average over the sampling period" as defined in the Waste Incineration CID (EU) (2019/2010) can be applied as an alternative to "daily average" sampling period.



- Note 4:** 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 5:** Emission limit value applicable until 11 November 2023.
- Note 6:** Emission Limit Value applicable from 12 November 2023.
- Note 7:** 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 8:** 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 9:** At least 97% of the daily average values over the year shall not exceed the emission limit value.
- Note 10:** Average value of three consecutive measurements of at least 30 minutes each.
- Note 11:** A “daily average” sampling period can be applied as an alternative to “average over the sampling period” as defined in the Waste Incineration CID (EU) (2019/2010).



## Amended Schedule

*Replace Schedule C.1.2 Monitoring of Emissions to Air, of the existing licence as amended with the following tables:*

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

<i>Emission Point Reference No.:</i>	<i>A1-1 (Stack) <sup>Note 1</sup></i>	
<b>Parameters</b>	<b>Monitoring Frequency</b>	<b>Analysis Method / Technique <sup>Note 2</sup></b>
<b>Flow</b>	Continuous	Standard Method
<b>Total dust</b>	Continuous	Generic EN standards and EN13284-2
<b>PM<sub>10</sub></b>	Quarterly	Generic EN standards
<b>PM<sub>2.5</sub></b>	Quarterly	Generic EN standards
<b>TVOC</b>	Continuous	Generic EN standards
<b>Hydrogen chloride (HCl)</b>	Continuous	Generic EN standards
<b>Hydrogen fluoride (HF)</b>	Continuous <sup>Note 3</sup>	Generic EN standards
<b>Sulphur dioxide (SO<sub>2</sub>)</b>	Continuous	Generic EN standards
<b>NO<sub>x</sub>, expressed as NO<sub>2</sub></b>	Continuous	Generic EN standards
<b>Nitrous oxide (N<sub>2</sub>O)</b>	Quarterly	EN 21258
<b>Cadmium (as Cd) and thallium (as Tl), and their compounds</b>	Quarterly	EN14385
<b>Mercury (as Hg) and its compounds</b>	Quarterly <sup>Note 6</sup>	Generic EN standards and EN 13211
<b>Antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr),</b>	Biannually	Generic EN standards

<b>cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) and their compounds</b>		
<b>Dioxins/furans</b>	Continuous sampling with analysis every two weeks during duration of test programmes. 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)
<b>Carbon monoxide (CO)</b>	Continuous	Generic EN standards
<b>Ammonia (NH<sub>3</sub>)</b>	Continuous	Generic EN standards
<b>Dioxin-like PCBs</b>	Once every six months <sup>Note 7</sup>	EN 1948-1, EN 1948-2, EN 1948-3
<b>Benzo[a]pyrene</b>	Once every year	No EN standard available <sup>Note 8</sup>
<b>Carbon dioxide (CO<sub>2</sub>)</b>	Continuous	Continuous

**Note 1:** Monitoring during OTNOC shall be carried out in accordance with the description provided in BAT 5 of the WICID (2019/2010).

**Note 2:** Or other methods approved in advance by the Agency.

**Note 3:** The continuous measurement of HF may be replaced by periodic measurements with a minimum frequency of once every six months if the HCl emission levels are proven to be sufficiently stable. No EN standard is available for periodic measurement of HF.

**Note 4:** Applicable until 11 November 2023.

**Note 5:** Applicable from 12 November 2023.

**Note 6:** Average over the sampling period.

**Note 7:** Monitoring shall not apply where the emissions of dioxin-like PCBs are proven to be less than 0.01 ng WHO-TEQ/Nm<sup>3</sup>, following approval by the Agency.

**Note 8:** If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.



<i>Emission Point Reference No.: A1-2 (Back-up Diesel Fired Electricity Generation Plant)</i>		
<b>Parameter</b>	<b>Monitoring Frequency</b>	<b>Analysis Method/Technique</b>
<b>CO</b>	At least once every five years, or when three times the maximum permitted annual operating hours have elapsed	Flue gas analyser/datalogger
<b>NO<sub>x</sub></b>	As required by the Agency	Flue gas analyser
<b>Particulates</b>	As required by the Agency	Isokinetic/Gravimetric
<b>TOC</b>	As required by the Agency	Flame ionisation



### **Amended Schedule**

*Append the licence to insert the following Schedule C.7 Environmental Performance Levels for unburnt substances in slags and bottom ashes from the incineration of waste, at the end of the Schedules of the existing licence as amended:*

#### ***C.7 Environmental Performance Levels for unburnt substances in slags and bottom ashes from the incineration of waste***

<b>Parameter</b>	<b>Environmental Performance Level</b>	<b>Monitoring Frequency</b>
<b>TOC content in slags and bottom ashes</b> <small>Note 1</small>	3 Dry wt-%	Once every three months
<b>Loss of ignition of slags and bottom ashes</b> <small>Note 1</small>	5 Dry wt-%	Once every three months

**Note 1:** Either the environmental performance level for TOC content or for the loss of ignition applies.



This Technical Amendment shall be cited as Amendment D to the licence.

**Sealed by the Seal of the Agency on this the 11<sup>th</sup> day of July 2023**

**PRESENT when the seal of the Agency was affixed hereto**

  
\_\_\_\_\_  
**Ray Cullinane, Authorised Person**

