

# **EPA Application Form**

# 7.4.1 - Emissions to Atmosphere - Main and Fugitive Emissions - Attachment

Organisation Name: *	Anglo Beef Processors Ireland Unlimited Company
Application I.D.: *	P0040-03



# **Amendments to this Application Form Attachment**

Version No.	Date	Amendment since previous version	Reason
V.1.0	July 2017	N/A	Online application form attachment
As above	Mar 2017	Identification of required fields	Assist correct completion of attachment



#### **EMISSIONS TO ATMOSPHERE**

Emissions to air/atmosphere include the following:

#### **Main Emissions**

Main emissions include all emissions of environmental significance. Where a **mass emission threshold** is specified in a BAT document (BAT Conclusions, National BAT note or BREF), emissions which exceed this threshold prior to abatement are regarded as significant, i.e., 'main emissions'. (In some cases emissions below the threshold can still be significant and qualify as Main Emissions).

#### **Minor Emissions**

Emissions below the mass emission threshold <u>may</u> be considered minor emissions and therefore do not generally need to be specifically controlled by the conditions or schedules of the licence (i.e., setting of ELVs, abatement control measures, or monitoring requirements). Emissions may also be deemed minor by virtue of their source/nature (e.g., laboratory fume hoods, workspace extractions, passive vents from storage tanks, HVAC exhausts), or composition (e.g., water vapour emissions).

For combustion plant such as boilers, these can be considered minor where the rated thermal input is < 1MW where natural gas is the main fuel, and for liquid and solid fuels where its < 250kW.

In completing the separate 'Emissions to Atmosphere - Minor and Potential' attachment for minor emissions, the applicant should supply sufficient information to justify the determination of the emission as minor. Notwithstanding this guidance, the Agency may consider any emission to be significant (i.e., a main emission) on the basis of environmental impact.

#### **Fugitive Emissions**

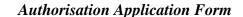
Fugitive emissions include emissions from non-point sources and diffuse sources.

#### **Potential Emissions**

These are emissions which only operate under abnormal process conditions. Typical examples include bursting discs, pressure relief valves, and emergency generators. Bypasses and flares may also fall within this category, depending on how they are operated or designed to operate. Although the Agency does not normally set controls in licences for potential emissions, it may do so for the purposes of environmental protection.

This attachment collects information on <u>main</u> and <u>fugitive</u> emissions to atmosphere. Waste gas means the final gaseous emission from a stack or abatement equipment.

For minor and potential emissions to atmosphere, complete the separate 'Emissions to Atmosphere - Minor and Potential' attachment.





Main Emissions to Atmosphere - Waste Gas Emission Point Details - one row per emission point \*

Complete the following table with summary details for all main emission points to atmosphere.

(Guidance on completing the table is included in Note i at the end of this attachment)

The applicant should address in particular any emissions which may contain the principal polluting substances listed in the First Schedule of Environmental Protection Agency (Integrated Pollution Control) (Licensing) Regulations 2013/ (Industrial Emissions) (Licensing) Regulations 2013.

Please note that the determination of any emission limit values and monitoring requirements in a proposed licence if granted will be based on the information supplied hereunder.

Emission	Emission Poi	int Grid Ref.	Typical		Source of Waste	Minimum Discharge Height Above Ground (m)		Reference	Conditions	
Point Code	Easting <sup>3</sup>	Northing <sup>4</sup>	Days Usage/ Year	Measures to reduce /minimise / prevent emissions (list techniques) <sup>1</sup> Where EQS considerations require measures stricter than BAT, highlight these measures in <b>bold</b>	Gases <sup>2</sup>		Pressure 4567	Temp.	7 % Oxygen	Moisture 8

<sup>&</sup>lt;sup>1</sup> Detailed descriptions and schematics of all abatement systems should be included in the Operational Report (Tab 4.8 – 'Reports').

<sup>&</sup>lt;sup>2</sup> **Options:** Boiler, Gas Turbine, Incineration, Co-Incineration, CHP, Kiln, Engine, Indirect drying activity (e.g. milk drying), Other Combustion activity (e.g., oven), Distillation/Chemical reaction, Solvent based coating activity, Other coating activity (provide description), Composting Tunnels, General extraction from buildings or Other (provide a description if 'Other' is selected).

<sup>&</sup>lt;sup>3</sup> Six Digit GPS Irish National Grid Reference. <sup>4</sup> Six Digit GPS Irish National Grid Reference.

 $<sup>^{\</sup>rm 4}$  Options: 101.325kPa  $\underline{\text{or}}$  No correction.

<sup>&</sup>lt;sup>5</sup> **Options:** 273.15K or No correction.

 $<sup>^{6}</sup>$  Options: 3%, 6%, 10%, 11%, 15%, 18%  $\underline{or}$  No correction.

<sup>&</sup>lt;sup>7</sup> **Options:** Wet <u>or</u> Dry.



AEP-1	262206	112131	365	Biofiltration Bed		To be determined		273.15K		Wet
					Rendering off		101.325		No	
					gases		kPa		correction	
AEP-2	262131	112135	365	Thermal Oxidisation		40		273.15K	17%	Dry
					Rendering off		101.325			
					gases		kPa			
BEP-3	262112	112127	365	Standby Boiler		14.6		273.15K	3%	Dry
					Boiler		101.325			

<sup>\*</sup>add rows to the table as necessary

# **Emission Points from Combustion, Incineration or Co-incineration Sources Only**

Complete the table below for each emission point to atmosphere from a combustion source, waste incineration or co-incineration plant



Emission Point Code	Primary Fuel Type <sup>8</sup> (where applicable)	Secondary Fuel Type <sup>9</sup> (where applicable)	LCP Plant Reference (where applicable)	Waste incineration or coincineration plant reference (where applicable)
AEP – 2	Natural Gas, Diesel, Tallow	Not Applicable	Not Applicable	Not Applicable
BEP – 3	Natural Gas, Diesel, Tallow	Not Applicable	Not Applicable	Not Applicable

<sup>\*</sup>add rows to the table as necessary

<sup>&</sup>lt;sup>8</sup> **Options:** Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other <u>or</u> None

<sup>&</sup>lt;sup>9</sup> **Options:** Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other <u>or</u> None



Emission Point Code	Are specific Hazardous Substances <sup>10</sup> Emitted?	Mass Flow of Emitted Hazardous Substances (g/hour)	Halogenated VOCs <sup>11</sup> Emitted?	Mass Flow of Emitted Halogenated VOCs (g/hour)
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

#### **Emission Points with Solvent Emissions Only**

Complete the table below for each emission point associated with a solvent activity

\*add rows to the table as necessary

<sup>&</sup>lt;sup>10</sup> Emissions of volatile organic compounds referred to in Article 58 (Substances or mixtures which, because of their content of volatile organic compounds classified as carcinogens, mutagens, or toxic to reproduction under Regulation (EC) No. 1272/2008, are assigned or need to carry the hazard statements H340, H350,H350i, H360D or H360F) of the Industrial Emissions Directive.

<sup>&</sup>lt;sup>11</sup>Halogenated volatile organic compounds which are assigned or need to carry the hazard statements H341 or H351.



		Monitoring Poin	t Grid Reference	
Emission Point Code	Monitoring Point Code 12	Easting <sup>13</sup>	Northing <sup>14</sup>	
AEP – 1	AEP – 1	262204	112131	
AEP – 2	AEP – 2	262131	112135	
BEP – 3	BEP – 3	262112	112127	

# **Waste Gas Emission Monitoring Points**

Complete the table below for each emission point, by entering the Emission Point Code, the associated Monitoring Point Code and the grid reference of the Monitoring Point. \*

\*add rows to the table as necessary

<sup>12</sup> To include monitoring and sampling points

<sup>&</sup>lt;sup>13</sup> Six Digit GPS Irish National Grid Reference

<sup>&</sup>lt;sup>14</sup> Six Digit GPS Irish National Grid Reference



# **Waste Gas - Abatement /Treatment Control**

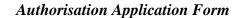
Complete the table below for each emission point with an abatement/treatment system (one table per emission point)

**Emission Point Code: AEP-1** 

Control <sup>15</sup> parameter	Monitoring to be carried out <sup>16</sup>	Additional notes (where relevant)
Pressure drop across filter	Daily	
Fan operation	Daily	
Olfactory assessment	Daily	
Sprinkler system	Daily	
Visual inspection of bed condition and depth	Weekly	
Temperature	Weekly	
Gas loading	Weekly	Calculation
Bed material – pH	Quarterly	
Bed material – moisture content	Quarterly	
Bed material – oils, fats & grease	Quarterly	
Bed material – total viable counts	Biannually	
Bed material – Ammonia	Quarterly	
Odour Assessment on Bio-filter	Biannually	
(H2S, Mercaptan, Ammonia) Drager Tubes	Weekly	

<sup>&</sup>lt;sup>15</sup> List the operating parameters of the treatment/abatement system which control its function.

<sup>&</sup>lt;sup>16</sup> List the monitoring of the control parameter to be carried out.





\*add rows to the table as necessary

**Emission Point Code: AEP-2** 

Control <sup>17</sup> parameter	Monitoring to be carried out <sup>18</sup>	Additional notes (where relevant)
Combustion temperature >greater than 700°C	Continuous	

 $<sup>^{\</sup>rm 17}$  List the operating parameters of the treatment/abatement system which control its function.

<sup>&</sup>lt;sup>18</sup> List the monitoring of the control parameter to be carried out.

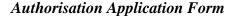


**Emission Point Code: BEP-3** 

Control <sup>19</sup> parameter	Monitoring to be carried out <sup>20</sup>	Additional notes (where relevant)
Not Applicable		

 $<sup>^{19}</sup>$  List the operating parameters of the treatment/abatement system which control its function.

<sup>&</sup>lt;sup>20</sup> List the monitoring of the control parameter to be carried out.





#### **Waste Gas Emissions**

Complete the table below for all main emission points to atmosphere (include one row for each identified parameter) \*

				Propose	ed Emission	n Limits <sup>21</sup>		ВАТ		Sampling / Monitori for Monitoring - AG2 In Methods	_
Emission Point Code	Parameter	Monitoring Point Code	Max. Hourly <sup>22</sup>	Max. Daily <sup>232425</sup>	Average Month 23		How was the Proposed Emission Limit Derived?	Associated Emission Range (if applicable)	Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method <sup>26</sup>	Compliant with BAT Monitoring Requirement?

<sup>&</sup>lt;sup>21</sup> For emissions outside the BAT Conclusion, BREF or BAT guidance limit, a full evaluation of the existing abatement/treatment system must be provided. **A planned programme of improvement towards meeting upgraded standards is required**. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring emissions within the limits set out in the BAT Conclusion(s), BREF(s) or BAT guidance note(s). These notes can be found on the EPA website at <a href="https://www.epa.ie">www.epa.ie</a>.

<sup>&</sup>lt;sup>22</sup> Specify the proposed limit <u>and</u> the units.

<sup>&</sup>lt;sup>23</sup> Specify the proposed limit <u>and</u> the units.

<sup>&</sup>lt;sup>24</sup> Specify the proposed limit <u>and</u> the units.

<sup>&</sup>lt;sup>25</sup> Specify the proposed limit **and** the units.

<sup>&</sup>lt;sup>26</sup> For continuous monitoring 'EN15267 approved CEMS' is the standard method. For periodic monitoring please refer to the EPA guidance document 'AG2 Index of Preferred Methods'.



AEP-1	Volumetric Flow	AEP-1	150,000 m³/hr	3,600,000 m³/day	-	-	Flow Monitoring	n/a	Quarterly	Flow meter	n/a
AEP-1	Ammonia	AEP-1	-	50 ppm v/v	-	-	EPA BAT Guidance	50 ppm v/v	Weekly	Colorimetric indicator tube	Yes
AEP-1	Amines	AEP-1	-	5 ppm v/v	-		EPA BAT Guidance	5 ppm v/v	Biannually	NIOSH Manual of Analytical Methods 2010	Yes
AEP-1	Hydrogen Sulphide & Mercaptans	AEP-1	-	5 ppm v/v	-	-	EPA BAT Guidance	5 ppm v/v	Weekly	Colorimetric indicator tube	Yes

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits <sup>20</sup>				BAT Associated	Sampling / Monitoring  EPA Guidance for Monitoring - AG2 Index of  Preferred Methods			
			Max. Hourly <sup>21</sup>	Max. Daily <sup>22</sup>	Average Month	Average Annual	How was the Proposed Emission Limit Derived?	Emission Range (If applicable)	Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method <sup>25</sup>	Compliant with BAT Monitoring Requirement?
AEP-2	Volumetric Flow	AEP-2	150,000 m³/hr	3,600,000 m³/day	-	-	Monitoring Data	n/a	Biannually	Flow Meter	n/a
AEP-2	Nitrogen Oxides (as NO <sub>2</sub> )	AEP-2	650 mg/m <sup>3</sup>			Monitoring Data	n/a	Biannually	EN 14792	Yes	
AEP-2	Sulphur Dioxide (as SO₂)	AEP-2	400 mg/m³			Monitoring Data	n/a	Biannually	EN/TS 17021	Yes	
AEP-2	Total Volatile Organic Compounds (as C)	AEP-2	10 mg/m <sup>3</sup>			EPA BAT Guidance	50 mg/m <sup>3</sup>	Biannually	EN 12619	Yes	
AEP-2	Particulate Matter (as PM <sub>2.5</sub> )	AEP-2	30 mg/m			EPA BAT Guidance	5 – 50 mg/m <sup>3</sup>	Biannually	EN 13284-1	Yes	
BEP-3	Sulphur Dioxide (as SO <sub>2</sub> )	BEP-3	350 mg/Nm <sup>3</sup> (Liquid Fuels other than gas oil)			Emission limit values Liquid Fuels other than gas oil. Schedule 2 Table 2 of MCP Regs S.1. 595 of 2017 existing		Annually	Flue Gas Analyser	Yes	
BEP-3	Nitrogen Oxides (as NO <sub>2</sub> )	BEP-3	650 mg/Nm <sup>3</sup> (Liquid Fuels other than gas oil)			Emission limit values Liquid Fuels other than gas oil. Schedule 2 Table 2 of MCP Regs S.1. 595 of 2017 existing		Annually	Flue Gas Analyser	Yes	
BEP-3	Particulate Matter	EP-2.2	30 mg/Nm <sup>3</sup> (Liquid Fuels other than gas oil)			Emission limit values Liquid Fuels other		Annually	Flue Gas Analyser	Yes	

epa epa	Authorisation Ap	plication Form			
		than gas oil. Schedule 2 Table 2 of MCP Regs S.1. 595 of 2017 existing			* F0
continuous monitoring 'EN15267 approved	d CEMS' is the standard method. For periodic monitoring please refer t		ment 'AG2 Index of P	referred Methods' linked above	
*add rows to the table as necessary					
Minor and/or Potential E	Emissions to Atmosphere <sup>27</sup>				
Are there any minor <u>or</u> potenti (Yes/No) *	al emission point(s) to atmosphere at the installati	on/facility?	No		
If ' <b>Yes</b> ' complete and upload the	Emissions to Atmosphere – Minor and Potential	Emissions template	e with details o	f minor and potential emiss	sions (select

n/a

<sup>27</sup>Refer to page 3 for guidance on what constitutes a minor or potential emission.

Type: 'Minor - Potential Emissions' in the application form)

**Emissions to Atmosphere - Minor - Potential Emissions** file name:



# **Fugitive Emission to Atmosphere**

Fugitive emissions must be controlled by way of appropriate controls and techniques to minimise emissions. (Additional information on fugitive emission is included in Note ii at the end of this attachment)

Are there any sources of fugitive emissions at the installation/facility?<sup>27</sup> (Yes/No) \*

No

If 'Yes' provide summary details of the fugitive emissions in the table below:

Type of Fugitive Emission	Emission Type Applicable? (Yes/No)	Description of fugitive emissions source(s)	Maximum Level	Units	Descriptor/Location
Dust	No			mg/m²/day	Dust deposition
VOC <sup>28</sup>	No			%	of solvent input
Ammonia	No			ug/m³	at the nearest European Site
Nitrogen	No			kgN/ha/yr	at the nearest European Site
Odour	No	Tallow tanks, Effluent Pump Sump, Condensate Tank, Site Yard, Raw Materials Intake, Pipe work manholes, Spillages, Building Doors, MBM Handling, Building Integrity		Odour Units	at sensitive receptors

For waste activities, dust and odour emissions should be considered and described in the table below where applicable.

Provide details of the techniques to be used to reduce / minimise / prevent fugitive emissions in text bow below

In relation to activities listed in Chapter V (for installations using Organic Solvents) of the Industrial Emissions Directive (2010/75/EU):

specify how the requirements in relation to fugitive emissions will be met.



Note i

Complete the table for each emission point having regard to the guidance hereunder.

The following convention should be observed when labelling emission points:

**Boiler Emissions** A1-1, A1-2, A1-3,...etc. **Main** 

**Emissions** A2-1, A2-2, A2-3,...etc.

Minor Emissions A3-1, A3-2, A3-3,...etc. (NOTE: Minor emission points are to be included in the 'Emissions to Atmosphere - Minor and Potential'

attachment)

Potential Emissions A4-1, A4-2, A4-3,...etc. (NOTE: Potential emission points are to be included in the 'Emissions to Atmosphere - Minor and Potential' attachment)

A National Grid Reference (12 digit, 6E, 6N) must be provided for each emission point.

Measures are usually required to reduce, minimise or prevent emissions from occurring. They may involve the application of a single technique or a combination of techniques including process integrated, recovery, abatement and treatment techniques. List all techniques proposed/employed. Technique(s) employed must comply with BAT. Highlight additional measures required for the purposes of protecting the environment i.e. AQS considerations. The measures or techniques to be taken must be capable of complying with the proposed/known emission level(s). The measures required shall be informed by the following:

- 1. BAT techniques with BAT-AEL
- 2. BAT techniques without BAT-AEL
- 3. Stricter measures/techniques than BAT (due to AQS)
- 4. BAT determined by competent authority in consultation with the applicant
- 5. Measures to minimise pollution over long distances or in the territory of other states.
- 6. Emerging techniques
- 7. Less strict measures than BAT (due to derogation)

#### 8. Other measures

Select from the drop down list the source of the emission as it helps explain the nature of the emission.

Particular attention should be paid to ensuring that emissions data (volumetric flow and pollutant concentrations) are presented at the required reference conditions for oxygen, temperature, pressure and moisture.

## Note ii Fugitive emissions include the following:

- Dust from area sources such as a quarry.
- Odour from volume sources such as a pig unit, waste water treatment plant, waste handling etc.
- VOCs from processes using solvent not captured in waste gases.



• Ammonia and nitrogen from pig and poultry units. **Processes that can give rise to fugitive emissions include:** o Leaks from valve seals, pump seals and flanges; o Breathing and working losses from liquid storage facilities; o Dust emissions from solids stored in the open; o Loading and unloading operations; o Cleaning operations; and, o Emissions from waste water treatment (e.g. volatile organics).

The measures taken to reduce/ prevent fugitive emissions to atmosphere must be addressed, and the facilities and operations required to control emissions must be detailed.