

EPA Application Form

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

Organisation Name: *

Indaver Ireland Limited

Application I.D.: *

LA010332

Authorisation Application Form

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

Authorisation Application Form

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 may 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 main and fugitive 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.

Authorisation Application Form

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 Point Code	Emission Point Grid Ref.		Typical Days Usage/ Year	Measures to reduce /minimise / prevent emissions (list techniques) ¹ <i>Where EQS considerations require measures stricter than BAT, highlight these measures in bold</i>	Source of Waste Gases ²	Minimum Discharge Height Above Ground (m)	Reference Conditions			
	Easting ³	Northing ⁴					Pressure ⁵	Temp. ⁶	% Oxygen ⁷	Moisture ⁸
A1-1	306332 (ING) / 706260 (ITM)	270967 (ING) / 770982 (ITM)	333	Flue gas from the incinerator is treated using the following: - Injection of ammonia solution into the boiler (reduce NO _x levels) also known as Selective Non-Catalytic Reduction (SNCR)	Incineration	65	101.325	273.15	11	Dry

¹ Detailed descriptions and schematics of all abatement systems should be included in the Operational Report (Tab 4.8 – ‘Reports’).

² **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).

³ **Six Digit GPS Irish National Grid Reference.**

⁴ **Six Digit GPS Irish National Grid Reference.**

⁵ **Options:** 101.325kPa or No correction.

⁶ **Options:** 273.15K or No correction.

⁷ **Options:** 3%, 6%, 10%, 11%, 15%, 18% or No correction.

⁸ **Options:** Wet or Dry.



Authorisation Application Form

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 ⁹ (where applicable)	Secondary Fuel Type ¹⁰ (where applicable)	LCP Plant Reference (where applicable)	Waste incineration or co-incineration plant reference (where applicable)
A1-1	Waste	Other (Gas Oil)	N/A	Indaver Carranstown Waste to Energy Plant

*add rows to the table as necessary

⁹ Options: Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other or None

¹⁰ Options: Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other or None



Authorisation Application Form

Emission Points with Solvent Emissions Only

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

Emission Point Code	Are specific Hazardous Substances ¹¹ Emitted?	Mass Flow of Emitted Hazardous Substances (g/hour)	Halogenated VOCs ¹² Emitted?	Mass Flow of Emitted Halogenated VOCs (g/hour)
N/A	N/A	N/A	N/A	N/A

*add rows to the table as necessary

¹¹ 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.

¹² Halogenated volatile organic compounds which are assigned or need to carry the hazard statements H341 or H351.

Authorisation Application Form

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. *

Emission Point Code	Monitoring Point Code ¹³	Monitoring Point Grid Reference	
		Easting ¹⁴	Northing ¹⁵
A1-1	A1-1	306332 (ING) / 706260 (ITM)	270967 ING) / 770982 (ITM)

*add rows to the table as necessary

¹³ To include monitoring and sampling points

¹⁴ Six Digit GPS Irish National Grid Reference

¹⁵ Six Digit GPS Irish National Grid Reference

Authorisation Application Form

Waste Gas - Abatement /Treatment Control Note 1

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

Emission Point Code: A1-1

Control ¹⁶ parameter	Monitoring to be carried out ¹⁷	Additional notes (where relevant)
Monitoring of Incinerator <small>Note 2</small>		
Combustion	Combustion chamber temperature <small>Note 3</small>	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 <small>Note 4</small>	Standard method
Furnace pressure	Pressure in the furnace	Pressure monitors
Waste input	Feed rate	Low level detector and visual
Hydrocarbon	Hydrocarbon levels	LEL Detector
Burnout of waste in the furnace	CCTV monitoring of flame	CCTV Camera
Monitoring of Boiler		

¹⁶ List the operating parameters of the treatment/abatement system which control its function.

¹⁷ List the monitoring of the control parameter to be carried out.

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

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

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

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

Authorisation Application Form

Control ¹⁶ parameter	Monitoring to be carried out ¹⁷	Additional notes (where relevant)
Flue gas	Pressure	Pressure sensors
Flue gas	Temperature	Thermocouple
NOx	Concentration and Reagent	NO _x Analyser and Reagent dosage rate
Feed water supply	Water rate and water level	Flow meter and level
Monitoring of Energy Recovery		
Energy Recovery	Steam Flow, Condenser Control, Turbine Control	Flow meter, temperature, pressure analysers
Flue gas cleaning		
Flue gas temperature	Thermocouple	
Flue gas pressure	Pressure transmitters	
Expanded clay dosing	Dosage rate meter and dosing bin weight	First Stage dioxin/furan and heavy metals removal in flue gas duct
Expanded clay silo	Low level alarm	
HCL and SO ₂ concentration	Inline flue gas analyser	Inlet to Spray Drier Absorber
Lime dosage rate	Flow meter	Lime Milk preparation and delivery to Rotary atomiser
Lime slurry buffer tank	Low level alarm	
Rotary atomiser	Weekly cleaning	Spray Drier Absorber
Outlet temperature	Thermocouple	Outlet of Spray Drier Absorber
Activated Carbon dosing	Dosage rate meter and dosing bin weight	Second stage dioxin/furan and heavy metal removal in LAB Loop
Hydrated lime dosing	Dosage rate meter	
Activated carbon and hydrated lime supply silos	Low level alarms on both silos	

Authorisation Application Form

Control ¹⁶ parameter	Monitoring to be carried out ¹⁷	Additional notes (where relevant)
Pressure differential across LAB Loop	Pressure sensors on either side of loop	
Pressure differential across filters	Differential pressure indicator	Baghouse Filter
Temperature of discharge hopper	Thermocouple	
Discharge hopper	High level alarm	
Re-circulated flue gas cleaning residues supply hopper	Low and high level alarms	Reagent recirculation
Maturation time in silo	Flow meters at inlet and outlet	Maturation silo
Flue gas pressure	Pressure sensors at inlet	ID Fan
Residues		
Silo Capacity	High level alarms	Boiler ash and flue gas cleaning residue silos
Silo emissions to Air	HEPA Filter Integrity	
Boiler Ash & Flue Gas Cleaning Residues	Quantity & Type of ash	Load cells on silos & Weighbridge weights on residues exported from site.
Water, boiler ash and flue gas cleaning residue addition to pre-treatment process	Quantity & Types	Load cells on dosing vessels to control the process. Weighbridge weights recorded for pre-treated residues sent off site.

*add rows to the table as necessary

Authorisation Application Form

Waste Gas Emissions

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

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸						BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Daily ²¹	Average Month ²²	Average Annual ²³	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²⁴	Compliant with BAT Monitoring Requirement?
A1-1	Flow rate	A1-1	250,000 Nm ³ /h <i>Note 1</i>	-	200,000 Nm ³ /h <i>Note 2</i>	-	-	N/A	N/A	Continuous	EN ISO 16911-1:2013	Yes
A1-1	Total Dust	A1-1	30 mg/Nm ³ <i>Note 3</i>	10 mg/Nm ³ <i>Note 4</i>	10 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	2 - 5mg/Nm ³ <i>Note 5</i> 5mg/Nm ³ <i>Note 6</i>	Continuous	Iso-kinetic / gravimetric or as otherwise agreed with the Agency	Yes

¹⁸ 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 www.epa.ie.

¹⁹ Specify the proposed limit **and the units.**

²⁰ Specify the proposed limit **and the units.**

²¹ Specify the proposed limit **and the units.**

²² Specify the proposed limit **and the units.**

²³ Specify the proposed limit **and the units.**

²⁴ 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](#)'.

Note 1: Max 30-minute flow rate

Note 2: Max daily average flow rate

Note 3: Half-hourly averages for all samples, OR

Note 4: Half hourly average for 97% of sample

Note 5: BAT-AELs range based on WI BAT Conclusions Document June 2019

Note 6: BAT-AEL for Normal Operating Conditions (NOC)

Authorisation Application Form

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸						BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Daily ²¹	Average Month ²²	Average Annual ²³	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²⁴	Compliant with BAT Monitoring Requirement?
A1-1	Gaseous and vaporous organic substances, expressed as total organic carbon	A1-1	20 mg/Nm ³ <i>Note 3</i>	10 mg/Nm ³ <i>Note 4</i>	10 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	<3 - 10 mg/Nm ³ <i>Note 5</i> 10 mg/Nm ³ <i>Note 6</i>	Continuous	Flame Ionisation Detector or as otherwise agreed with the Agency	Yes
A1-1	Hydrogen chloride (HCl)	A1-1	60 mg/Nm ³ <i>Note 3</i>	10 mg/Nm ³ <i>Note 4</i>	10 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	<2 – 8 mg/Nm ³ <i>Note 5</i> 8 mg/Nm ³ <i>Note 6</i>	Continuous	Infra-red analyser or as otherwise agreed with the Agency	Yes
A1-1	Hydrogen fluoride (HF)	A1-1	4 mg/Nm ³ <i>Note 3</i>	2 mg/Nm ³ <i>Note 4</i>	1 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	<1 mg/Nm ³ <i>Note 5</i>	Biannual measurement, sample period of a minimum of 30 minutes and a maximum of 8 hours	IC (Ion chromatography) or as otherwise agreed with the Agency	Yes
A1-1	Sulphur dioxide (SO ₂)	A1-1	200 mg/Nm ³ <i>Note 3</i>	50 mg/Nm ³ <i>Note 4</i>	50 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	5-40 mg/Nm ³ <i>Note 5</i> 40 mg/Nm ³ <i>Note 6</i>	Continuous	Infra-red analyser or as otherwise agreed with the Agency	Yes
A1-1	Oxides of nitrogen (NO and NO ₂ , expressed as NO ₂)	A1-1	400 mg/Nm ³ <i>Note 3</i>	200 mg/Nm ³ <i>Note 4</i>	200 mg/Nm ³	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	50-150 mg/Nm ³ <i>Note 5</i> 180 mg/Nm ³ <i>Note 9</i>	Continuous	Infra-red analyser or as otherwise agreed with the Agency	Yes
A1-1	Cadmium (Cd) and Thallium (Tl) and their compounds	A1-1	-	-	-	-	0.05 mg/Nm ³	IE Licence W0167-03 & IE Directive (2010/75/EU)	0.005 - 0.02 mg/Nm ³ <i>Note 5</i> 0.02 mg/Nm ³ <i>Note 6</i>	Biannual measurement, sample period of a minimum of 30 minutes and a	ICP-MS (Inductively coupled plasma mass spectrometry / as otherwise agreed with the Agency)	Yes

Authorisation Application Form

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸						BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Daily ²¹	Average Month ²²	Average Annual ²³	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²⁴	Compliant with BAT Monitoring Requirement?
										maximum of 8 hours		
A1-1	Mercury (Hg) and its compounds	A1-1	-	-	-	-	0.05 mg/Nm ³	IE Licence W0167-03 & IE Directive (2010/75/EU)	BAT AEL's for an existing plant, during Normal Operating Conditions, demonstrated stable & low (as per correspondence with the Agency on BREF-Mercury Monitoring Proposal dated 29 th July 2022). 0.005 – 0.02 mg/Nm ³ <i>Note 5</i> 0.02 mg/Nm ³ <i>Note 6</i>	Biannual measurement, sample period of a minimum of 30 minutes and a maximum of 8 hours	CV-AFS (Atomic fluorescence spectrometry) / as otherwise agreed with the Agency	Yes
A1-1	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	A1-1	-	-	-	-	0.5 mg/Nm ³	IE Licence W0167-03 & IE Directive (2010/75/EU)	0.01 - 0.3 mg/Nm ³ <i>Note 5</i> 0.3 mg/m ³ <i>Note 6</i>	Biannual measurement, sample period of a minimum of 30 minutes and a maximum of 8 hours	ICP-MS (Inductively coupled plasma mass spectrometry) / as otherwise agreed with the Agency	Yes

Authorisation Application Form

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸						BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Daily ²¹	Average Month ²²	Average Annual ²³	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²⁴	Compliant with BAT Monitoring Requirement?
	V) and their compounds											
A1-1	Dioxins / furans (TEQ)	A1-1	-	-	-	-	0.1 ng/Nm ³	IE Licence W0167-03 & IE Directive (2010/75/EU)	<0.01 – 0.06 ng I-TEQ/Nm ³ <i>Note 5</i> 0.06 ng I-TEQ/Nm ³ <i>Note 6</i>	Biannual measurement, average value over sample period of between 6 and 8 hours. Continuous sampling with analysis every two weeks for duration of test programme.	Other measurements as per CEN method (EN 1948, parts 1,2, and 3) or as otherwise agreed with the Agency Continuous sampling method as per application.	Yes
A1-1	Ammonia (NH ₃)	A1-1	-	-	-	-	-	-	2 – 10 mg/ Nm ³ <i>Note 5</i> 15 mg/Nm ³ <i>Note 10</i>	Continuous	Infra-red analyser, Generic EN standards or as agreed with the Agency	Yes
A1-1	Carbon Monoxide (CO)	A1-1	150 mg/Nm ³ (10 min average) <i>Note 7</i>	100 mg/Nm ³ (30 min average) <i>Note 7</i>	50 mg/Nm ³ <i>Note 8</i>	-	-	IE Licence W0167-03 & IE Directive (2010/75/EU)	10 – 50 mg/Nm ³ <i>Note 5</i> 50 mg/Nm ³ <i>Note 6</i>	Continuous	Infra-red analyser or as agreed with the Agency	Yes

* 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' linked above

*add rows to the table as necessary

Note 7: At least 95% of all 10-minute values taken in any 24-hour period shall not exceed 150 mg/m3 or all the half-hourly average values taken in the same period shall not exceed 100 mg/m3.



Authorisation Application Form

Note 8: *At least 97% of the daily average values over the year shall not exceed the emission limit value.*

Note 9: *BAT AEL for existing plants with SNCR systems installed*

Note 10: *BAT AEL for existing plants fitted with SNCR and without wet abatement systems installed*



Authorisation Application Form

Minor and/or Potential Emissions to Atmosphere²⁵

Are there any minor or potential emission point(s) to atmosphere at the installation/facility? (Yes/No) *

If 'Yes' complete and upload the *Emissions to Atmosphere – Minor and Potential Emissions* template with details of minor and potential emissions (select Document Type: 'Minor - Potential Emissions' in the application form)

Emissions to Atmosphere - Minor - Potential Emissions file name:

²⁵ Refer to page 3 for guidance on what constitutes a minor or potential emission.

Authorisation Application Form

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?²⁶ **(Yes/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	Yes	Dust being emitted from ash hall, tipping hall, boiler ash and flue gas residue loading areas and the pre-treatment plant.	Dust levels will be compliant with ambient air quality levels at all locations beyond the site boundary.	<i>mg/m²/day</i>	<i>Dust deposition</i>
VOC²⁷	No	N/A	N/A	%	<i>of solvent input</i>
Ammonia	Yes	Ammonia release from big bags of pre-treated flue gas residue and boiler ash in the pre-treatment plant.	N/A	<i>ug/m³</i>	<i>at the nearest European Site</i>
Odour	Yes	The two potential sources of odour are from the tipping hall and bunker area and from incoming and outgoing waste trucks.	Trace	<i>Odour Units</i>	<i>at boundary of installation</i>

²⁶ For waste activities, dust and odour emissions should be considered and described in the table below where applicable.

²⁷ 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.

Authorisation Application Form

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

In accordance with IEL W0167-03, Indaver have implemented a fugitive emission and odour management plans which identify, monitor and reduce fugitive emissions from the site.

In relation to potential dust emissions there is a risk of dust being emitted from ash hall, tipping hall, boiler ash and flue gas residue loading areas and the pre-treatment plant. Mitigation measures in place include the following:

- Negative pressure.
- Doors to tipping hall, bottom ash hall and exit points closed where possible.
- Good Housekeeping and Good Working Practice.
- Regular dust checks are carried out as part of the infrastructure checks in addition to internal audits.
- Wet scrubber in Pre-treatment Plant.
- Covered waste trucks.
- Paved/hard standing where appropriate.

Fugitive gaseous emissions, in the form of hydrogen and ammonia, can be emitted from big bags of pre-treated flue gas residue and boiler ash in the pre-treatment plant or from deslaggers in bottom ash hall. Control measures, which are in place, include extraction units in the bagging area and over the deslaggers and the use of hydrogen gas handheld monitors, which are passed over each bag to monitor the amount of hydrogen gas being released.

As previously mentioned the two main potential sources of odour arise from the tipping hall and the movement of waste trucks on site. To control odours a combination of minimisation, containment and treatment techniques and operational procedures are in place and include the following:

- Negative pressure in the bunker prevents odour from escaping.
- Doors to tipping hall and exit points closed where possible.
- Spraying of odour-masking or neutralising chemicals at the tipping hall door where appropriate.
- Good Housekeeping and Good Working Practice.
- Regular odour checks are carried out as part of the infrastructure checks in addition to internal audits.
- Air flow through the tipping hall and bunker area was improved through the installation of additional smoke vents.

Authorisation Application Form

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;

Authorisation Application Form

- 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.