EPA Application Form

7.4.2 - Emissions to Atmosphere - Minor and Potential Emissions - Attachment

Organisation Name: *	Amazon Data Services Ireland Limited
Application I.D.: *	LA016198

* indicates required field

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 consistent 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 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.

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 main and fugitive emissions to atmosphere, complete the separate '*Emissions to Atmosphere - Main* and *Fugitive Emissions'* attachment.

EMISSIONS TO ATMOSPHERE - Minor Emissions - one row per emission point

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

Complete the table below with summary details for all minor emission points to atmosphere.

Emission Point Code [1]	Easting [2]	Northing [3]	Description of source of emission(s)	Emission details [4]				Abatement system employed (if relevant)
				Parameter/ Material	mg/Nm^3 [5]	kg/h	kg/year	
A3-1	298543	235052	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel [A] vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-2	298549	235051	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-3	298563	235049	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A

[1] The following convention should be observed when labelling minor atmospheric emission points: A3-1, A3-2, A3-3,…etc.
[2] Six Digit GPS Irish National Grid Reference.
[3] Six Digit GPS Irish National Grid Reference.
[4] The maximum emission should be stated for each parameter emitted; the concentration should be based on the maximum 30 minute mean and must be the **PRE-ABATEMENT** level.
[5] Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0oC101.3kPa). Wet/dry should be clearly stated. Include reference oxygen conditions for combustion sources.
[A] ADSIL is committed to using HVO where available for the emergency operation of the generators. HVO will be the preferred fuel source supplied to the generators. Where insufficient quantities of HVO are available, a blend of HVO and diesel will be supplied to the generators. In the absence of HVO, diesel will be supplied to the generators. Where a blend of HVO and diesel is supplied to the generators, the ratio of HVO : diesel supplied will vary with the availability of HVO.

Emission Point Code [1]	Easting [2]	Northing [3]	Description of source of emission(s)	Emission details [4]				Abatement system employed (if relevant)
				Parameter/ Material	mg/Nm^3[5]	kg/h	kg/year	
			emergency event (i.e. fire)					
A3-4	298569	235048	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-5	298583	235046	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-6	298589	235045	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-7	298603	235043	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-8	298609	235042	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-9	298622	235040	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A

Emission Point Code [1]	Easting [2]	Northing [3]	Description of source of emission(s)	Emission details [4]				Abatement system employed (if relevant)
				Parameter/ Material	mg/Nm^3[5]	kg/h	kg/year	
A3-10	298629	235039	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-11	298636	235038	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-12	298642	235037	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-13	298649	235036	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-14	298655	235035	Critical Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-15	298661	235038	House Emergency Generator Belly Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A

Emission Point Code [1]	Easting [2]	Northing [3]	Description of source of emission(s)	Emission details [4]				Abatement system employed (if relevant)
				Parameter/ Material	mg/Nm^3[5]	kg/h	kg/year	
A3-16	298561	235019	Fire Sprinkler Pump Belly Fuel Tank Breathing Vent - Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-17	298565	235014	Fire Sprinkler Pump Belly Fuel Tank Breathing Vent - Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A
A3-18	298537	235057	Top up Fuel Tank Breathing Vent – Storage tank over-pressurisation during emergency event (i.e. fire)	Diesel vapour (trace)	Not Monitored	Not Monitored	Not Monitored	N/A

*add rows to the table as necessary

Note: Map(s)/drawing(s) uploaded under 'Site Plans' in Tab 3 of the application form should identify the emission and monitoring points.

EMISSIONS TO ATMOSPHERE – Potential Emissions to Atmosphere

Potential emissions are emissions that are not active under normal operation and would include by-passes or pressure relief valves.

Complete the table below with summary details of all potential emissions to atmosphere

Emission Point Code [6]	Description of source of emission	Malfunction which could cause an emission	Emission details (Potential max. emissions) [7]		
			Parameter/Material	mg/Nm^3 (*correct to 15% O_2)	kg/hour
A4-1	Emergency Generator 1 - (7.73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-2	Emergency Generator 2 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-3	Emergency Generator 3 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00

[6] The following convention should be observed when labelling potential atmospheric emission points: A4-1, A4-2, A4-3,…etc.

[7] Estimate the potential maximum emission for each malfunction identified.

Emission Point Code [6]	Description of source of emission	Malfunction which could cause an emission	Emission details (Potential max. emissions) [7]		
			Parameter/Material	mg/Nm^3 (*correct to 15% O_2)	kg/hour
A4-4	Emergency Generator 4 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-5	Emergency Generator 5 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-6	Emergency Generator 6 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-7	Emergency Generator 7 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-8	Emergency Generator 8 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71	NO_x: 18.66 SO_2: 0.085

Emission Point Code [6]	Description of source of emission	Malfunction which could cause an emission	Emission details (Potential max. emissions) [7]		
			Parameter/Material	mg/Nm^3 (*correct to 15% O_2)	kg/hour
				PM: 10.60 CO: 175.20	PM: 0.24 CO: 4.00
A4-9	Emergency Generator 9 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-10	Emergency Generator 10 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-11	Emergency Generator 11 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-12	Emergency Generator 12 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00

Emission Point Code [6]	Description of source of emission	Malfunction which could cause an emission	Emission details (Potential max. emissions) [7]		
			Parameter/Material	mg/Nm^3 (*correct to 15% O_2)	kg/hour
A4-13	Emergency Generator 13 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-14	Emergency Generator 14 - (7. 73 MWth)	Critical emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 817.80 SO_2: 3.71 PM: 10.60 CO: 175.20	NO_x: 18.66 SO_2: 0.085 PM: 0.24 CO: 4.00
A4-15	House Emergency Generator 1 - (2.50 MWth)	House emergency generator operating in an emergency event	CO, NO_x, SO_2, $PM_{10/2.5}$	NO_x: 724.92 SO_2: 3.71 PM: 4.49 CO: 38.15	NO_x: 5.25 SO_2: 0.027 PM: 0.033 CO: 0.28
A4-16	Fire Sprinkler Pump – (0.57 MWth)	Sprinkler pump generator operating in an emergency event	Diesel vapor trace	Not monitored	Not monitored
A4-17	Fire Sprinkler Pump – (0.57 MWth)	Sprinkler pump generator operating in an emergency event	Diesel vapor trace	Not monitored	Not monitored

*add rows to the table as necessary