Headquarters,
Johnstown Castle Estate,
County Wexford, Ireland

GREENHOUSE GAS EMISSIONS PERMIT

Permit Register Number:	IE-GHG179-10502-4
Operator:	Microsoft Ireland Operations Limited 70 Sir John Rogerson's Quay Dublin 2 Dublin D02 R296
Installation Name:	Microsoft Dublin Data Centre Campus
Site Name:	Dublin Data Centre DB 3-4-5-6-7-8-9-10-11-12-13
Location:	U74 and Unit 75 Grangecastle Business Park Clondalkin Dublin 22 Ireland

Introductory Note

This introductory note does not form a part of the Greenhouse Gas Emissions Permit.

This Greenhouse Gas Emissions Permit authorises the holder to undertake named activities resulting in emissions of Carbon Dioxide from the listed emission sources. It also contains requirements that must be met in respect of such emissions, including monitoring and reporting requirements. This Greenhouse Gas Emissions Permit places an obligation on the Operator to surrender allowances to the Agency equal to the annual reportable emissions of carbon dioxide equivalent from the installation in each calendar year, no later than four months after the end of each such year.

Contact with Agency:

If you contact the Agency about this Greenhouse Gas Emissions Permit please quote the following reference: Greenhouse Gas Emissions Permit Nº IE-GHG179-10502.

All correspondence in relation to this permit should be addressed to:

Email: help.ets@epa.ie

By Post: Climate Change Unit, Environmental Protection Agency
P.O. Box 3000, Johnstown Castle Estate,
Co. Wexford

Updating of the permit:

This Greenhouse Gas Emissions Permit may be updated by the Agency, subject to compliance with Condition 2. The current Greenhouse Gas Emissions Permit will normally be available on the Agency's website at www.epa.ie and ETSWAP.

Surrender of the permit:

Before this Greenhouse Gas Emissions Permit can be wholly or partially surrendered, a written application must be made to the on-line ETS portal, and written permission received from, the Agency through ETSWAP.

Transfer of the permit or part of the permit:

Before this Greenhouse Gas Emissions Permit can be wholly or partially transferred to another Operator a joint written application to transfer this Greenhouse Gas Emissions Permit must be made (by both the existing and proposed Operators) to, and written permission received from, the Agency through the on-line ETS portal ETSWAP.

Licence held pursuant to the Environmental Protection Agency Act 1992, as amended. (as of the date of this permit)**:**

Status Log

Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG179-10502-4	04 February 2021	25 June 2021	Addition of 52 new emission sources (generators) associated with buildings 9, 10, 11, 12 and 13 operating on F1 (gas oil).

Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG179-10502-1	GHG Permit Application	09 December 2015	29 February 2016	
IE-GHG179-10502-2	GHG Variation	19 October 2016	06 January 2017	The addition of 16 new emission sources (S6-1 to S6-15 and FP-2), corresponding emission points (EP6-1 to EP6-15 and EP-FP2) and measurement devices at the new datacentre building and update of all relevant tables; The name and address of the installation was updated to include DUB06 building; The inclusion of the Installation Number; Some updates to roles and responsibilities throughout the Management Section.
IE-GHG179-10502-3	GHG Variation	29 January 2018	27 March 2018	1. Addition of 32 emission sources (31 generators (S7-1 to S7-16 and S8-1 to S8-15) and 1 fire pump FP-3) associated with D7 and D8 buildings and their corresponding emission points. 2. Change of Installation name to Microsoft Dublin Data Centre Campus and update of site name to include buildings 7 and 8.

End of Introductory Note

Glossary of Terms

For the purposes of this permit the terms listed in the left hand column shall have the meaning given in the right hand column below:

The Agency	Environmental Protection Agency.
Agreement	Agreement in writing.
Allowance	Permission to emit to the atmosphere one tonne of carbon dioxide equivalent during a specified period issued for the purposes of Directive 2003/87/EC by the Agency or by a designated national competent authority of a Member State of the European Union.
Annual Reportable Emissions	Reportable Emissions of carbon dioxide made in any calendar year commencing from 1 January 2005 or the year of commencement of the activity, whichever is the later.
A & V Regulation	Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council and any amendments or revisions thereto.
Category A Installation	As defined in Article 19.2 (a) of the M&R Regulation.
Category B Installation	As defined in Article 19.2 (b) of the M&R Regulation.
Category C Installation	As defined in Article 19.2 (c) of the M&R Regulation.
The Directive	Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.
Emissions	The release of greenhouse gases into the atmosphere from sources in an installation.
EPA	Environmental Protection Agency.
Fall-Back Methodology	As defined in Article 22 of the M&R Regulation.
GHG	Greenhouse gas.
GHG Permit	Greenhouse gas emissions permit.
Greenhouse Gas	Any of the gases in Schedule 2 of the Regulations.
IPC/IE	Integrated Pollution Control/Industrial Emissions.
Installation	Any stationary technical unit where one or more activities listed in Schedule 1 to the Regulations are carried out. Also any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution. References to an installation include references to part of an installation.

Installation with low emissions	As defined in Article 47 of the M&R Regulation.
Major Source Streams	As defined in Article 19.3 (c) of the M&R Regulation.
M&R Regulation	Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and any amendments or revisions thereto.
Mis-statement	An omission, misrepresentation or error in the Operators reported data, not considering the uncertainty permissible pursuant to Article 12(1)(a) of Regulation (EU) no 601/2012.
N/A	Not applicable.
Monitoring Plan	The Plan submitted and approved in accordance with Condition 3.1 of this permit and attached at Appendix 1.
Non-conformity	Any act or omission by the Operator, either intentional or unintentional, that is contrary to the greenhouse gas emissions permit and the requirements of the Monitoring Plan.
The National Administrator	The person so designated in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC.
The Operator (for the purposes of this permit)	Microsoft Ireland Operations Limited
"operator"	Any person who operates or controls an installation or to whom decisive economic power over the functioning of the installation has been delegated.
Person	Any natural or legal person.
Reportable emissions	The total releases to the atmosphere of carbon dioxide (expressed in tonnes of carbon dioxide equivalent) from the emission sources specified in Table 2 and arising from the Schedule 1 activities which are specified in Table 1.
The Regulations	European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 (S.I. No 490 of 2012) and any amendments or revisions thereto.
The Verifier	A legal person or another legal entity carrying out verification activities pursuant to Regulation (EU) No 600/2012 and accredited by a national accreditation body pursuant to Regulation (EC) No 765/2008 and Regulation (EU) No 600/2012 or a natural person otherwise authorised, without prejudice to Article 5(2) of Regulation (EC) No 765/2008, at the time a verification report is issued.
The Registry	The Registry as provided for under Article 19 of Directive 2003/87/EC.

Schedule 1	Schedule 1 to the Regulations.

Reasons for the Decision

The Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this permit, the Operator is capable of monitoring and reporting emissions in accordance with the requirements of the Regulations.

Activities Permitted

Pursuant to the Regulations the Agency issues this Greenhouse Gas Emissions Permit, subject to any subsequent revisions, corrections or modifications it deems appropriate, to:

The Operator:

Microsoft Ireland Operations Limited
70 Sir John Rogerson's Quay
Dublin 2
Dublin
D02 R296

Company Registration Number: 256796

to carry out the following

Categories of activity:

Annex 1 Activity
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

at the following installation(s):

Microsoft Dublin Data Centre Campus **Installation number:** 208162

located at

U74 and Unit 75
Grangecastle Business Park
Clondalkin
Dublin 22
Ireland

subject to the five conditions contained herein, with the reasons therefor and associated tables attached thereto.

Conditions

Condition 1. The Permitted Installation

1.1 This permit is being granted in substitution for the previous GHG permit granted to the Operator as listed in the Status Log of this GHG permit.

1.2 The Operator is authorised to undertake the activities and/or the directly associated activities specified in Table 1 below resulting in the emission of carbon dioxide:

Table 1 - Activities which are listed in Schedule 1 of the Regulations and other directly associated activities carried out on the site:

Installation No.: 208162

Activity Description
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

Directly Associated Activity Description
N/A

1.3 Carbon dioxide from Schedule 1 activities shall be emitted to atmosphere only from the emission sources as listed in Table 2 below:

Table 2 Emission Sources and Capacities:

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S3-1	Stack 3-1 - Emergency Backup Generator 1A	<900	MW
S3-2	Stack 3-2 - Emergency Backup Generator 1B	<900	MW
S3-3	Stack 3-3 - Emergency Backup Generator 2A	<900	MW
S3-4	Stack 3-4 - Emergency Backup Generator 2B	<900	MW
S3-5	Stack 3-5 - Emergency Backup Generator 3A	<900	MW
S3-6	Stack 3-6 - Emergency Backup Generator 3B	<900	MW
S3-7	Stack 3-7 - Emergency Backup Generator 4A	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S3-8	Stack 3-8 - Emergency Backup Generator 4B	<900	MW
S3-9	Stack 3-9 - Emergency Backup Generator 4C	<900	MW
S3-10	Stack 3-10 - Emergency Backup Generator 5A	<900	MW
S3-11	Stack 3-11 - Emergency Backup Generator 5B	<900	MW
S3-12	Stack 3-12 - Emergency Backup Generator 5C	<900	MW
S3-13	Stack 3-13 - Emergency Backup Generator R1	<900	MW
S3-14	Stack 3-14 - Emergency Backup Generator R2	<900	MW
S3-15	Stack 3-15 - Emergency Backup Generator R3	<900	MW
S4-1	Stack 4-1 Emergency Backup Generator 1A	<900	MW
S4-2	Stack 4-2 Emergency Backup Generator 1B	<900	MW
S4-3	Stack 4-3 Emergency Backup Generator 1C	<900	MW
S4-4	Stack 4-4 Emergency Backup Generator 2A	<900	MW
S4-5	Stack 4-5 Emergency Backup Generator 2B	<900	MW
S4-6	Stack 4-6 Emergency Backup Generator 2C	<900	MW
S4-7	Stack 4-7 Emergency Backup Generator 3A	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S4-8	Stack 4-8 Emergency Backup Generator 3B	<900	MW
S4-9	Stack 4-9 Emergency Backup Generator 3C	<900	MW
S4-10	Stack 4-10 Emergency Backup Generator R1	<900	MW
S4-11	Stack 4-11 Emergency Backup Generator A1	<900	MW
S5-1	Stack 5-1 Emergency Backup Generator 1A	<900	MW
S5-2	Stack 5-2 Emergency Backup Generator 1B	<900	MW
S5-3	Stack 5-3 Emergency Backup Generator 1C	<900	MW
S5-4	Stack 5-4 Emergency Backup Generator 2A	<900	MW
S5-5	Stack 5-5 Emergency Backup Generator 2B	<900	MW
S5-6	Stack 5-6 Emergency Backup Generator 2C	<900	MW
S5-7	Stack 5-7 Emergency Backup Generator 3A	<900	MW
S5-8	Stack 5-8 Emergency Backup Generator 3B	<900	MW
S5-9	Stack 5-9 Emergency Backup Generator 3C	<900	MW
S5-10	Stack 5-10 Emergency Backup Generator 4A	<900	MW
S5-11	Stack 5-11 Emergency Backup Generator 4B	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S5-12	Stack 5-12 Emergency Backup Generator 4C	<900	MW
S5-13	Stack 5-13 Emergency Backup Generator R1	<900	MW
S5-14	Stack 5-14 Emergency Backup Generator A1	<900	MW
S5-15	Stack 5-15 Emergency Backup Generator A2	<900	MW
FP-1	Fire Pump	<900	MW
S6-1	Stack 6-1 Colo1 Emergency Backup Generator 01	<900	MW
S6-2	Stack 6-2 Colo1 Emergency Backup Generator 02	<900	MW
S6-3	Stack 6-3 Colo1 Emergency Backup Generator 03	<900	MW
S6-4	Stack 6-4 Colo2 Emergency Backup Generator 01	<900	MW
S6-5	Stack 6-5 Colo2 Emergency Backup Generator 02	<900	MW
S6-6	Stack 6-6 Colo2 Emergency Backup Generator 03	<900	MW
S6-7	Stack 6-7 Colo3 Emergency Backup Generator 01	<900	MW
S6-8	Stack 6-8 Colo3 Emergency Backup Generator 02	<900	MW
S6-9	Stack 6-9 Colo3 Emergency Backup Generator 03	<900	MW
S6-10	Stack 6-10 Colo4 Emergency Backup Generator 01	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S6-11	Stack 6-11 Colo4 Emergency Backup Generator 02	<900	MW
S6-12	Stack 6-12 Colo4 Emergency Backup Generator 03	<900	MW
S6-13	Stack 6-13 Reserve Emergency Backup Generator 01	<900	MW
S6-14	Stack 6-14 MDF1 Emergency Backup Generator 01	<900	MW
S6-15	Stack 6-15 MDF2 Emergency Backup Generator 01	<900	MW
FP-2	DUB06 Fire pump	<900	MW
S7-1	Stack 7-1 Colo1 Emergency Backup Generator 01	<900	MW
S7-2	Stack 7-2 Colo1 Emergency Backup Generator 02	<900	MW
S7-3	Stack 7-3 Colo1 Emergency Backup Generator 03	<900	MW
S7-4	Stack 7-4 Colo2 Emergency Backup Generator 01	<900	MW
S7-5	Stack 7-5 Colo2 Emergency Backup Generator 02	<900	MW
S7-6	Stack 7-6 Colo2 Emergency Backup Generator 03	<900	MW
S7-7	Stack 7-7 Colo3 Emergency Backup Generator 01	<900	MW
S7-8	Stack 7-8 Colo3 Emergency Backup Generator 02	<900	MW
S7-9	Stack 7-9 Colo3 Emergency Backup Generator 03	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S7-10	Stack 7-10 Colo4 Emergency Backup Generator o1	<900	MW
S7-11	Stack 7-11 Colo4 Emergency Backup Generator 02	<900	MW
S7-12	Stack 7-12 Colo4 Emergency Backup Generator 03	<900	MW
S7-13	Stack 7-13 Reserve Emergency Backup Generator 01	<900	MW
S7-14	Stack 7-14 MDF1 Emergency Backup Generator 01	<900	MW
S7-15	Stack 7-15 MDF2 Emergency Backup Generator 01	<900	MW
S7-16	Stack 7-16 Office Emergency Backup Generator 01	<900	MW
FP-3	DUB07/08 Fire Pump	<900	MW
S8-1	Stack 8-1 Colo1 Emergency Backup Generator 01	<900	MW
S8-2	Stack 8-2 Colo1 Emergency Backup Generator 02	<900	MW
S8-3	Stack 8-3 Colo1 Emgency Backup Generator 03	<900	MW
S8-4	Stack 8-4 Colo2 Emergency Backup Generator 01	<900	MW
S8-5	Stack 8-5 Colo2 Emergency Backup Generator 02	<900	MW
S8-6	Stack 8-6 Colo2 Emergency Backup Generator 03	<900	MW
S8-7	Stack 8-7 Colo3 Emergency Back up Generator 01	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S8-8	Stack 8-8 Colo3 Emergency Backup Generator 02	<900	MW
S8-9	Stack 8-9 Colo3 Emergency Backup Generator 03	<900	MW
S8-10	Stack 8-10 Colo4 Emergency Backup Generator 01	<900	MW
S8-11	Stack 8-11 Emergency Backup Generator 02	<900	MW
S8-12	Stack 8-12 Emergency Backup Generator 03	<900	MW
S8-13	Stack 8-13 Reserve Backup Generator 01	<900	MW
S8-14	Stack 8-14 MDF1 Emergency Backup Generator 01	<900	MW
S8-15	Stack 8-15 MDF2 Emergency Backup Generator 01	<900	MW
S9-1	Stack 9-1 Colo1 Emergency Backup Generator 01	<900	MW
S9-2	Stack 9-2 Colo1 Emergency Backup Generator 02	<900	MW
S9-3	Stack 9-3 Colo1 Emergency Backup Generator 03	<900	MW
S9-4	Stack 9-4 Colo1 Emergency Backup Generator 04	<900	MW
S10-1	Stack 10-1 Colo1 Emergency Backup Generator 01	<900	MW
S10-2	Stack 10-2 Colo1 Emergency Backup Generator 02	<900	MW
S10-3	Stack 10-3 Colo1 Emergency Backup Generator 03	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S10-4	Stack 10-4 Colo1 Emergency Backup Generator 04	<900	MW
S12-1	Stack 12-1 Colo1 Emergency Backup Generator 01	<900	MW
S12-2	Stack 12-2 Colo1 Emergency Backup Generator 02	<900	MW
S12-3	Stack 12-3 Colo1 Emergency Backup Generator 03	<900	MW
S12-4	Stack 12-4 Colo1 Emergency Backup Generator 04	<900	MW
AD-01	ADMIN09-GEN01 Emergency Backup Generator 01	<900	MW
AD-02	ADMIN10-GEN01 Emergency Backup Generator 01	<900	MW
AD-03	ADMIN12-GEN01 Emergency Backup Generator 01	<900	MW
S9-5	Stack 9-5 Colo2 Emergency Backup Generator 01	<900	MW
S9-6	Stack 9-6 Colo2 Emergency Backup Generator 02	<900	MW
S9-7	Stack 9-7 Colo2 Emergency Backup Generator 03	<900	MW
S9-8	Stack 9-8 Colo2 Emergency Backup Generator 04	<900	MW
S9-9	Stack 9-9 Colo3 Emergency Backup Generator 01	<900	MW
S9-10	Stack 9-10 Colo3 Emergency Backup Generator 02	<900	MW
S9-11	Stack 9-11 Colo3 Emergency Backup Generator 03	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S9-12	Stack 9-12 Colo3 Emergency Backup Generator 04	<900	MW
S10-5	Stack 10-5 Colo2 Emergency Backup Generator 01	<900	MW
S10-6	Stack 10-6 Colo2 Emergency Backup Generator 02	<900	MW
S10-7	Stack 10-7 Colo2 Emergency Backup Generator 03	<900	MW
S10-8	Stack 10-8 Colo2 Emergency Backup Generator 04	<900	MW
S10-9	Stack 10-9 Colo3 Emergency Backup Generator 01	<900	MW
S10-10	Stack 10-10 Colo3 Emergency Backup Generator 02	<900	MW
S10-11	Stack 10-11 Colo3 Emergency Backup Generator 03	<900	MW
S10-12	Stack 10-12 Colo3 Emergency Backup Generator 04	<900	MW
S12-5	Stack 12-5 Colo2 Emergency Backup Generator 01	<900	MW
S12-6	Stack 12-6 Colo2 Emergency Backup Generator 02	<900	MW
S12-7	Stack 12-7 Colo2 Emergency Backup Generator 03	<900	MW
S12-8	Stack 12-8 Colo2 Emergency Backup Generator 04	<900	MW
S12-9	Stack 12-9 Colo3 Emergency Backup Generator 01	<900	MW
S12-10	Stack 12-10 Colo3 Emergency Backup Generator 02	<900	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S12-11	Stack 12-11 Colo3 Emergency Backup Generator 03	<900	MW
S12-12	Stack 12-12 Colo3 Emergency Backup Generator 04	<900	MW
S13-1	Stack 13-1 Colo1 Emergency Backup Generator 01	<900	MW
S13-2	Stack 13-2 Colo1 Emergency Backup Generator 02	<900	MW
S13-3	Stack 13-3 Colo1 Emergency Backup Generator 03	<900	MW
S13-4	Stack 13-4 Colo1 Emergency Backup Generator 04	<900	MW
S13-5	Stack 13-5 Colo2 Emergency Backup Generator 01	<900	MW
S13-6	Stack 13-6 Colo2 Emergency Backup Generator 02	<900	MW
S13-7	Stack 13-7 Colo2 Emergency Backup Generator 03	<900	MW
S13-8	Stack 13-8 Colo2 Emergency Backup Generator 04	<900	MW
AD-04	ADMIN13- GEN01 Emergency Backup Generator 01	<900	MW
S11-1	Stack 11-1 Colo1 Emergency Backup Generator 01	<900	MW
S11-2	Stack 11-2 Colo1 Emergency Backup Generator 02	<900	MW
S11-3	Stack 11-3 Colo1 Emergency Backup Generator 03	<900	MW
S11-4	Stack 11-4 Colo1 Emergency Backup Generator 04	<900	MW

1.4 The activity shall be controlled, operated and maintained so that emissions of carbon dioxide shall take place only as set out in this GHG Emissions Permit. The permit does not control emissions of gases other than carbon dioxide. All agreed plans, programmes and methodologies required to be carried out under the terms of this permit, become part of this permit.

1.5 This GHG Permit is for the purposes of GHG emissions permitting under the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 and any amendments to the same only and nothing in this permit shall be construed as negating the Operator's statutory obligations or requirements under any other enactments or regulations unless specifically amended by the Regulations.

1.6 Any reference in this permit to 'installation' shall mean the installation as described in the Greenhouse Gas Emissions Permit application and any amendments approved by the Agency.

Reason: To describe the installation and clarify the scope of this permit.

Condition 2. Notification

2.1 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in a change in:

2.1.1 the nature or functioning of the installation;

2.1.2 the capacity of the installation as detailed in this permit;

2.1.3 the fuels used at the installation;

2.1.4 the range of activities to be carried out at the installation

that may require updating of the GHG permit shall be carried out or commenced without prior notice to and without the prior written agreement of the Agency.

2.2 The Operator shall notify the Agency in writing of the cessation of all or part of any activity listed in Table 1 of this permit no later than one month from the date of cessation or by 31 December of the year of cessation, whichever is sooner.

2.3 The Operator shall apply for an update of this GHG Permit where there is a change to the Operator name and/or registered address of the Operator, within seven days of the change.

2.4 For installations or parts of installations which have not come into operation when the application for this permit was made the Operator shall notify the Agency of the date of commencement of the activity within seven days of commencement.

2.5 The Operator shall notify the Agency in writing within three days of becoming aware of any factors which may prevent compliance with the conditions of this permit.

2.6 The Operator shall submit to the Agency by 21 January of each year a declaration of operability. The declaration submitted shall be in the format required by the Agency.

2.7 All notifications required under Condition 2 above shall be made to the address given in the Explanatory Note included with this permit.

Reason: To provide for the notification of updated information on the activity.

Condition 3. Monitoring and Reporting

3.1 The Operator shall monitor and record greenhouse gas emissions on site in accordance with the M&R Regulation and the approved Monitoring Plan attached at Appendix 1 to this GHG permit and

in compliance with any other guidance approved by the Agency for the purposes of implementing the Directive and/or the Regulations.

3.2 The Operator shall modify the monitoring plan in any of the following situations:

3.2.1 new emissions occur due to new activities carried out or due to the use of new fuels or materials not yet contained in the monitoring plan;

3.2.2 the change of availability of data, due to the use of new measurement instrument types, sampling methods or analysis methods, or for other reasons, leads to higher accuracy in the determination of emissions;

3.2.3 data resulting from the previously applied monitoring methodology has been found incorrect;

3.2.4 changing the monitoring plan improves the accuracy of the reported data, unless this is technically not feasible or incurs unreasonable costs;

3.2.5 the monitoring plan is not in conformity with the requirements of the M&R Regulation and the Agency requests a change;

3.2.6 it is necessary to respond to the suggestions for improvement of the monitoring plan contained in the verification report.

The Operator shall notify any proposals for modification of the monitoring plan to the Agency without undue delay. Any significant modifications of the monitoring plan, as defined in Article 15 of the M&R Regulation, shall be subject to approval by the Agency. Where approved these changes shall be implemented within a timeframe agreed by the Agency.

3.3 Temporary changes to the monitoring methodology:

3.3.1 Where it is for technical reasons temporarily not feasible to apply the tier in the monitoring plan for the activity data or each calculation factor of a fuel or material stream as approved by the Agency, the Operator shall apply the highest achievable tier until the conditions for application of the tier approved in the monitoring plan have been restored. The Operator shall take all necessary measures to allow the prompt restoration of the tier in the approved monitoring plan. The Operator shall notify the temporary change to the monitoring methodology without undue delay to the Agency specifying:

(i) The reasons for the deviation from the tier;

(ii) in detail, the interim monitoring methodology applied by the Operator to determine the emissions until the conditions for the application of the tier in the monitoring plan have been restored;

(iii) the measures the Operator is taking to restore the conditions for the application of the tier in the approved monitoring plan;

(iv) the anticipated point in time when application of the approved tier will be resumed.

3.3.2 A record of all non-compliances with the approved monitoring plan shall be maintained on-site and shall be available on-site for inspection by authorised persons of the Agency and/or by the Verifier at all reasonable times.

3.4 The Operator shall appoint a Verifier to ensure that, before their submission, the reports required by Condition 3.5 below are verified in accordance with the criteria set out in Schedule 5 of the Regulations, the A&V Regulation and any more detailed requirements of the Agency.

3.5 The written report of the verified annual reportable emissions and the verification report in respect of each calendar year shall be submitted to the Agency by the Operator no later than 31 March of

the following year. The reports shall be in the format required by the Agency and meet the criteria set out in the M&R and A&V Regulations.

3.6 The Operator shall enter the verified annual reportable emissions figure for the preceding year into the Registry no later than 31 March of the following year. This figure shall be electronically approved by the Verifier in the registry no later than 31 March of each year.

3.7 Where an Operator is applying the Fall-Back methodology, the Operator shall assess and quantify each year the uncertainties of all parameters used for the determination of the annual emissions in accordance with the ISO Guide to the Expression of Uncertainty in Measurement or another equivalent internationally accepted standard and include the verified results in the written report of the verified annual reportable emissions to be submitted to the Agency by 31 March each year.

3.8 An Operator shall submit to the Agency for approval a report containing the information detailed in (i) or (ii) below, where appropriate, by the following deadlines:

(a) for a category A installation, by 30 June every four years;

(b) for a category B installation, by 30 June every two years;

(c) for a category C installation, by 30 June every year.

(i) Where the Operator does not apply at least the tiers required pursuant to the first subparagraph of Article 26(1) and to Article 41(1) of the M&R Regulation, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply the required tiers. Where evidence is found that measures needed for reaching those tiers have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan and submit proposals for implementing appropriate measures and its timing.

(ii) Where the Operator applies a fall-back monitoring methodology, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply at least tier 1 for one or more major or minor source streams. Where evidence is found that measures needed for reaching at least tier 1 for those source streams have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan, submit proposals and a timeframe for implementing appropriate measures.

3.9 Where the verification report states outstanding non conformities, misstatements or recommendations for improvements the Operator shall submit a report to the Agency for approval by 30 June of the year in which the verification report is issued. This requirement does not apply to the Operator of an installation with low emissions where the verification report contains recommendations for improvements only. The report shall describe how and when the Operator has rectified or plans to rectify the non-conformities identified and to implement recommended improvements. Where recommended improvements would not lead to an improvement of the monitoring methodology this must be justified by the Operator. Where the recommended improvements would incur unreasonable costs the Operator shall provide evidence of the unreasonable nature of the costs. The Operator shall implement the improvements specified by the Agency in response to the report submitted in accordance with this Condition in accordance with a timeframe set by the Agency.

3.10 The Operator shall make available to the Verifier and to the Agency any information and data relating to emissions of carbon dioxide which are required in order to verify the reports referred to in Condition 3.5 above or as required by the Agency to facilitate it in establishing benchmarks and/or best practice guidance.

3.11 Provision shall also be made for the transfer of environmental information, in relation to this permit, to the Agency's computer system, as may be requested by the Agency.

3.12 The Operator shall retain all information as specified in the M&R Regulation for a period of at least 10 years after the submission of the relevant annual report.

3.13 A record of independent confirmation of capacities listed in this permit shall be available on-site for inspection by authorised persons of the Agency at all reasonable times.

3.14 The Operator shall keep records of all modifications of the monitoring plan. The records shall include the information specified in Article 16.3 of the M&R Regulation.

3.15 The Operator shall ensure that members of the public can view a copy of this permit and any reports submitted to the Agency in accordance with this permit at all reasonable times. This requirement shall be integrated with the requirements of any public information programme approved by the Agency in relation to any other permit or licence held by the Operator for the site.

Reason: *To provide for monitoring and reporting in accordance with the Regulations.*

Condition 4. Allowances

4.1 Surrender of Allowances

4.1.1 The Operator shall, by 30 April in each year, surrender to the Agency, or other appropriate body specified by the Agency, allowances equal to the annual reportable emissions in the preceding calendar year.

4.1.2 The number of allowances to be surrendered shall be the annual reportable emissions for the preceding calendar year plus such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due. This includes allowances to cover the amount of any annual reportable emissions in respect of which allowances were not surrendered in accordance with Condition 4.1.1 in the previous year, and the amount of any reportable emissions which were discovered during the previous year to have been unreported in reports submitted under Condition 3 in that or in earlier years.

4.1.3 In relation to activities or parts of activities which have ceased to take place and have been notified to the Agency in accordance with Condition 2.2 above, the Operator shall surrender to the Agency allowances equal to the annual reportable emissions from such activities in the preceding calendar year or part thereof, together with such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due as described in Condition 4.1.2 above.

4.1.4 The Operator may, from 2008 onwards, subject to the provisions of the Regulations and the relevant National Allocation Plan for that compliance year, surrender emission reduction units (ERUs) and certified emission reduction units (CERs) in place of allowances.

4.2 The holding, transfer, surrender and cancellation of allowances shall be in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC, any amendment or revision to the same and any guidance issued by the Agency or the National Administrator.

4.3 The Operator shall provide the National Administrator with all the necessary information for the opening of an Operator holding account for the installation described in Condition 1 of this permit within twenty working days of the issue of this permit, unless such an account is already open.

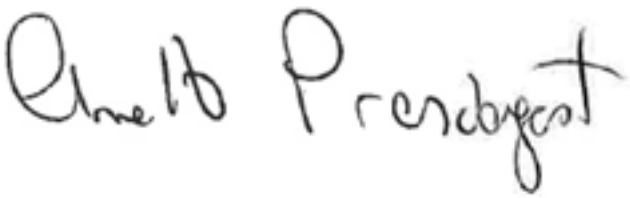
Reason: *To provide for the surrendering, holding, transfer and cancellation of allowances in respect of reported emissions.*

Condition 5. Penalties

5.1 Any Operator who fails to comply with Condition 4.1 above shall be subject to the provisions of the Regulations, including, but not limited to the payment of penalties.

Reason: To provide for the payment of excess emissions penalties as required under the Regulations.

Signed by the Authorised Person on this the 25 June 2021:



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Ms. Annette Prendergast
Inspector/ Authorised Person

Appendix 1 to Greenhouse Gas Emissions Permit Number IE-GHG179-10502

Monitoring Plan

1. Guidelines & Conditions

1. Directive 2003/87/EC as amended by Directive 2009/29/EC (hereinafter "the (revised) EU ETS Directive") requires operators of installations which are included in the European Greenhouse Gas Emission Trading Scheme (the EU ETS) to hold a valid GHG emission permit issued by the relevant Competent Authority and to monitor and report their emissions and have the reports verified by an independent and accredited verifier.

The Directive can be downloaded from:

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2003L0087:20090625:EN:PDF

2. The Monitoring and Reporting Regulation (Commission Regulation (EU) No 601/2012) (hereinafter the "MRR") defines further requirements for monitoring and reporting.

The MRR can be downloaded from:

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:181:0030:0104:EN:PDF

Article 12 of the MRR sets out specific requirements for the content and submission of the monitoring plan and its updates. Article 12 outlines the importance of the Monitoring plan as follows:

The monitoring plan shall consist of a detailed complete and transparent documentation of the monitoring methodology of a specific installation [or aircraft operator] and shall contain at least the elements laid down in Annex I.

Furthermore Article 74(1) states:

Member States may require the operator and aircraft operator to use electronic templates or specific file formats for submission of monitoring plans and changes to the monitoring plan as well as for submission of annual emissions reports tonne-kilometre data reports verification reports and improvement reports. Those templates or file format specifications established by the Member States shall at least contain the information contained in electronic templates or file format specifications published by the Commission

3. All Commission guidance documents on the Monitoring and Reporting Regulation will be published at the link below as they become available:

http://ec.europa.eu/clima/policies/ets/monitoring/index_en.htm

(a) Information sources:

EU Websites:

EU-Legislation: http://eur-lex.europa.eu/en/index.htm
EU ETS general: http://ec.europa.eu/clima/policies/ets/index_en.htm

Monitoring and Reporting in the EU ETS: http://ec.europa.eu/clima/policies/ets/monitoring/index_en.htm

Environmental Protection Agency Website:

http://www.epa.ie

Environmental Protection Agency Contact:

GHGpermit@epa.ie

2. Application Details

The Installation Name, Site Name and the address of the site of the installation are detailed below. The Site Name and address can be updated from the Organisation Details Page on the ETSWAP website. The Installation Name can only be updated by your Competent Authority.

Installation name	Microsoft Dublin Data Centre Campus
Site name	Dublin Data Centre DB 3-4-5-6-7-8-9-10-11-12-13
Address	U74 and Unit 75 Grangecastle Business Park Clondalkin Dublin 22 Ireland
Grid reference of site main entrance	DB3/4/5 E 303235, N 231447 DUB06/7/8/9/10/11/12/13 N 231524 E 304001
Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.	No
Has the regulated activity commenced at the Installation?	Yes
Date of Regulated Activity commencement	25 November 2008

This information is only required to identify the first relevant reporting year of an installation. If the installation was in operation from the beginning of 2008 and held a Greenhouse Gas Emissions Permit from this point, 1 January 2008 will be used where the actual date of commencement is not readily known.

3. About the Operator

The information about the "Operator" is listed below. The "Operator" is defined as the person who it is proposed will have control over the relevant Regulated Activities in the installation in respect of which this application is being made.

(b) Operator Details

The name of the operator and where applicable the company registration number are detailed below. These details can only be updated by the Environmental Protection Agency.

Operator name	Microsoft Ireland Operations Limited
Company Registration Number	256796

Operator Legal status

The legal status of the operator is:	Company / Corporate Body

(c) Company / Corporate Body

Is the trading / business name different to the operator name?	No

Registered office address

Address Line 1	70 Sir John Rogerson's Quay
Address Line 2	N/A
City/Town	Dublin 2
County	Dublin
Postcode	D02 R296

Principal office address

Is the principal office address different to the registered office address?	Yes

Address Line 1	Unit 74
Address Line 2	Grangecastle Business Park
City/Town	Clondalkin
County	Dublin
Postcode	D22 A259
Company registration number	256796

Holding company

Does the company belong to a holding company?	No

(d) Operator Authority

Does the operator named above have the authority and ability to:

a.	manage site operations through having day-to-day control of plant operation including the manner and rate of operation	Yes
b.	ensure that permit conditions are effectively complied with	Yes
c.	control monitor and report specified emissions	Yes
d.	be responsible for trading in Allowances so that at the	Yes

end of a reporting period allowances can be balanced against reported emissions.

4. Service Contact

e. Service Contact

Address	U74 and U75 Grangecastle Business Park Clondalkin Dublin 22 Ireland

5. Installation Activities

f. Installation Description

Below is a description of the installation and its activities, a brief outline description of the site and the installation and the location of the installation on the site. The description also includes a non-technical summary of the activities carried out at the installation briefly describing each activity performed and the technical units used within each activity.

Microsoft Dublin Data Centre Campus is a centre for the storage, processing, and management of data. As such, a significant portion of the electrical load is Information Technology (IT) equipment. In support of that, there are other power-using functions such as air handling and mechanical ventilation for the IT equipment, as well as offices and administration areas.

In normal operation, the facility uses power from the Irish Electricity grid, but has a number of emergency backup generators for use in the event of grid supply failure, or disturbance. In addition to the generators, 3 diesel driven fire pumps are installed as part of the site fire control system. To maintain a state of readiness, the generators and fire pump are run periodically for maintenance and testing. The fuel used is Sulphur Free diesel . The burning of this fuel generates Carbon Dioxide (CO2). There are no boilers or Combined Heat and Power (CHP) plant on site.

For the foreseeable future, the intended operation of the Generators is for back up purposes, therefore the facility would be considered to be a Low Emissions site, with forecasted emissions below 25,000 tonnes of CO2 per year. Microsoft proposes to monitor and report CO2 emissions following the measures outlined in Article 47 of the Monitoring and Reporting Regulation for installations with Low Emissions.

g. Annex 1 Activities

The table below lists the technical details for each Annex 1 activity carried out at the installation.

Note that 'capacity' in this context means:

- Rated thermal input (for combustion installations) which is defined as the rate at which fuel can be burned at the maximum continuous rating of the installation multiplied by the calorific value of the fuel and expressed as megawatts thermal.
- Production capacity for those specified Annex I activities for which production capacity determines ETS eligibility.

Annex 1 Activity	**Total Capacity**	**Capacity units**	**Specified Emissions**
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)	<900	MW	Carbon Dioxide

h. Site Diagram

The table below lists attachments (if available) that provide a simple diagram showing emissions sources source streams sampling points and metering/measurement equipment.

Attachment	**Description**
Site Layout Drg.pdf	DB3/4/5 Site Layout Drawing
DUB06 Overall site plan.pdf	DUB06 Site Layout Drawing
Campus_Location_Plan.pdf	Overall Campus Plan Drawing
DUB06_07_08 OVERALL SITE PLAN.pdf	DUB06/07/08 Site layout Drawing
Grange Castle - DUB09,10 12Aerial Map.pdf	Site Map of DUB09,10 and 12
DUB Full sitemap.jpg	DUB 06 07 08 09 10 12 map
DUB Full sitemap emission sources .jpg	09 10 12 and all of DUB Emission Sources
Site Digram DUB campus with emissions points 6, 7, 8, 9, 10, 11,12, 13.jpg	Site Diagram DUB campus with emissions points 6, 7, 8, 9, 10, 11,12, 13

i. Estimated Annual Emissions

Detail of the estimated annual emission of CO_2 equivalent. This information enables categorisation of the installation in accordance with Article 19 of the MRR and is based on the average verified annual emissions of the previous trading period data OR if this data is not available or is inappropriate a conservative estimate of annual average emissions including transferred CO_2 excluding CO_2 from biomass.

Estimated Annual Emissions (tonnes $CO_{2(e)}$)	1100
Justification for the use of a conservative estimate of CO_2 emissions.	The estimate is based on 2019 emissions of 550 tonnes CO2 related to 6 buildings. With the addition of 5 more buildings (DUB 09,10,11, 12 and 13), in end of 2020 and in 2021, the conservative estimated emissions are 1100 tonnes CO2.

Installation Category: A

6. Emissions Details

j. About your emissions

Annex I of the Monitoring and Reporting Regulations (MRR) requires that monitoring plans include a description of "the installation" and activities to be carried out and monitored including a list of emission sources and source streams. The information provided in this template relates to the Annex I activity(ies) comprised in the installation in question and should relate to a single installation. It includes any activities carried out by the operator and does not include related activities carried out by other operators.

k. Emission Sources

The table below lists all the emission sources at the installation, which may include directly associated activities/excluded activities.

Emission Source Reference	Emission Source Description
S3-1	Stack 3-1 - Emergency Backup Generator 1A
S3-2	Stack 3-2 - Emergency Backup Generator 1B
S3-3	Stack 3-3 - Emergency Backup Generator 2A
S3-4	Stack 3-4 - Emergency Backup Generator 2B
S3-5	Stack 3-5 - Emergency Backup Generator 3A
S3-6	Stack 3-6 - Emergency Backup Generator 3B
S3-7	Stack 3-7 - Emergency Backup Generator 4A
S3-8	Stack 3-8 - Emergency Backup Generator 4B
S3-9	Stack 3-9 - Emergency Backup Generator 4C
S3-10	Stack 3-10 - Emergency Backup Generator 5A
S3-11	Stack 3-11 - Emergency Backup Generator 5B
S3-12	Stack 3-12 - Emergency Backup Generator 5C
S3-13	Stack 3-13 - Emergency Backup Generator R1
S3-14	Stack 3-14 - Emergency Backup Generator R2
S3-15	Stack 3-15 - Emergency Backup Generator R3
S4-1	Stack 4-1 Emergency Backup Generator 1A
S4-2	Stack 4-2 Emergency Backup Generator 1B
S4-3	Stack 4-3 Emergency Backup Generator 1C
S4-4	Stack 4-4 Emergency Backup Generator 2A
S4-5	Stack 4-5 Emergency Backup Generator 2B
S4-6	Stack 4-6 Emergency Backup Generator 2C
S4-7	Stack 4-7 Emergency Backup Generator 3A

Emission Source Reference	**Emission Source Description**
S4-8	Stack 4-8 Emergency Backup Generator 3B
S4-9	Stack 4-9 Emergency Backup Generator 3C
S4-10	Stack 4-10 Emergency Backup Generator R1
S4-11	Stack 4-11 Emergency Backup Generator A1
S5-1	Stack 5-1 Emergency Backup Generator 1A
S5-2	Stack 5-2 Emergency Backup Generator 1B
S5-3	Stack 5-3 Emergency Backup Generator 1C
S5-4	Stack 5-4 Emergency Backup Generator 2A
S5-5	Stack 5-5 Emergency Backup Generator 2B
S5-6	Stack 5-6 Emergency Backup Generator 2C
S5-7	Stack 5-7 Emergency Backup Generator 3A
S5-8	Stack 5-8 Emergency Backup Generator 3B
S5-9	Stack 5-9 Emergency Backup Generator 3C
S5-10	Stack 5-10 Emergency Backup Generator 4A
S5-11	Stack 5-11 Emergency Backup Generator 4B
S5-12	Stack 5-12 Emergency Backup Generator 4C
S5-13	Stack 5-13 Emergency Backup Generator R1
S5-14	Stack 5-14 Emergency Backup Generator A1
S5-15	Stack 5-15 Emergency Backup Generator A2
FP-1	Fire Pump
S6-1	Stack 6-1 Colo1 Emergency Backup Generator 01
S6-2	Stack 6-2 Colo1 Emergency Backup Generator 02
S6-3	Stack 6-3 Colo1 Emergency Backup Generator 03
S6-4	Stack 6-4 Colo2 Emergency Backup Generator 01
S6-5	Stack 6-5 Colo2 Emergency Backup Generator 02
S6-6	Stack 6-6 Colo2 Emergency Backup Generator 03
S6-7	Stack 6-7 Colo3 Emergency Backup Generator 01
S6-8	Stack 6-8 Colo3 Emergency Backup Generator 02
S6-9	Stack 6-9 Colo3 Emergency Backup Generator 03
S6-10	Stack 6-10 Colo4 Emergency Backup Generator 01
S6-11	Stack 6-11 Colo4 Emergency Backup Generator 02
S6-12	Stack 6-12 Colo4 Emergency Backup Generator 03
S6-13	Stack 6-13 Reserve Emergency Backup Generator 01
S6-14	Stack 6-14 MDF1 Emergency Backup Generator 01
S6-15	Stack 6-15 MDF2 Emergency Backup Generator 01
FP-2	DUB06 Fire pump
S7-1	Stack 7-1 Colo1 Emergency Backup Generator 01

Emission Source Reference	Emission Source Description
S7-2	Stack 7-2 Colo1 Emergency Backup Generator 02
S7-3	Stack 7-3 Colo1 Emergency Backup Generator 03
S7-4	Stack 7-4 Colo2 Emergency Backup Generator 01
S7-5	Stack 7-5 Colo2 Emergency Backup Generator 02
S7-6	Stack 7-6 Colo2 Emergency Backup Generator 03
S7-7	Stack 7-7 Colo3 Emergency Backup Generator 01
S7-8	Stack 7-8 Colo3 Emergency Backup Generator 02
S7-9	Stack 7-9 Colo3 Emergency Backup Generator 03
S7-10	Stack 7-10 Colo4 Emergency Backup Generator o1
S7-11	Stack 7-11 Colo4 Emergency Backup Generator 02
S7-12	Stack 7-12 Colo4 Emergency Backup Generator 03
S7-13	Stack 7-13 Reserve Emergency Backup Generator 01
S7-14	Stack 7-14 MDF1 Emergency Backup Generator 01
S7-15	Stack 7-15 MDF2 Emergency Backup Generator 01
S7-16	Stack 7-16 Office Emergency Backup Generator 01
FP-3	DUB07/08 Fire Pump
S8-1	Stack 8-1 Colo1 Emergency Backup Generator 01
S8-2	Stack 8-2 Colo1 Emergency Backup Generator 02
S8-3	Stack 8-3 Colo1 Emgency Backup Generator 03
S8-4	Stack 8-4 Colo2 Emergency Backup Generator 01
S8-5	Stack 8-5 Colo2 Emergency Backup Generator 02
S8-6	Stack 8-6 Colo2 Emergency Backup Generator 03
S8-7	Stack 8-7 Colo3 Emergency Back up Generator 01
S8-8	Stack 8-8 Colo3 Emergency Backup Generator 02
S8-9	Stack 8-9 Colo3 Emergency Backup Generator 03
S8-10	Stack 8-10 Colo4 Emergency Backup Generator 01
S8-11	Stack 8-11 Emergency Backup Generator 02
S8-12	Stack 8-12 Emergency Backup Generator 03
S8-13	Stack 8-13 Reserve Backup Generator 01
S8-14	Stack 8-14 MDF1 Emergency Backup Generator 01
S8-15	Stack 8-15 MDF2 Emergency Backup Generator 01
S9-1	Stack 9-1 Colo1 Emergency Backup Generator 01
S9-2	Stack 9-2 Colo1 Emergency Backup Generator 02
S9-3	Stack 9-3 Colo1 Emergency Backup Generator 03
S9-4	Stack 9-4 Colo1 Emergency Backup Generator 04
S10-1	Stack 10-1 Colo1 Emergency Backup Generator 01
S10-2	Stack 10-2 Colo1 Emergency Backup Generator 02

Emission Source Reference	Emission Source Description
S10-3	Stack 10-3 Colo1 Emergency Backup Generator 03
S10-4	Stack 10-4 Colo1 Emergency Backup Generator 04
S12-1	Stack 12-1 Colo1 Emergency Backup Generator 01
S12-2	Stack 12-2 Colo1 Emergency Backup Generator 02
S12-3	Stack 12-3 Colo1 Emergency Backup Generator 03
S12-4	Stack 12-4 Colo1 Emergency Backup Generator 04
AD-01	ADMIN09-GEN01 Emergency Backup Generator 01
AD-02	ADMIN10-GEN01 Emergency Backup Generator 01
AD-03	ADMIN12-GEN01 Emergency Backup Generator 01
S9-5	Stack 9-5 Colo2 Emergency Backup Generator 01
S9-6	Stack 9-6 Colo2 Emergency Backup Generator 02
S9-7	Stack 9-7 Colo2 Emergency Backup Generator 03
S9-8	Stack 9-8 Colo2 Emergency Backup Generator 04
S9-9	Stack 9-9 Colo3 Emergency Backup Generator 01
S9-10	Stack 9-10 Colo3 Emergency Backup Generator 02
S9-11	Stack 9-11 Colo3 Emergency Backup Generator 03
S9-12	Stack 9-12 Colo3 Emergency Backup Generator 04
S10-5	Stack 10-5 Colo2 Emergency Backup Generator 01
S10-6	Stack 10-6 Colo2 Emergency Backup Generator 02
S10-7	Stack 10-7 Colo2 Emergency Backup Generator 03
S10-8	Stack 10-8 Colo2 Emergency Backup Generator 04
S10-9	Stack 10-9 Colo3 Emergency Backup Generator 01
S10-10	Stack 10-10 Colo3 Emergency Backup Generator 02
S10-11	Stack 10-11 Colo3 Emergency Backup Generator 03
S10-12	Stack 10-12 Colo3 Emergency Backup Generator 04
S12-5	Stack 12-5 Colo2 Emergency Backup Generator 01
S12-6	Stack 12-6 Colo2 Emergency Backup Generator 02
S12-7	Stack 12-7 Colo2 Emergency Backup Generator 03
S12-8	Stack 12-8 Colo2 Emergency Backup Generator 04
S12-9	Stack 12-9 Colo3 Emergency Backup Generator 01
S12-10	Stack 12-10 Colo3 Emergency Backup Generator 02
S12-11	Stack 12-11 Colo3 Emergency Backup Generator 03
S12-12	Stack 12-12 Colo3 Emergency Backup Generator 04
S13-1	Stack 13-1 Colo1 Emergency Backup Generator 01
S13-2	Stack 13-2 Colo1 Emergency Backup Generator 02
S13-3	Stack 13-3 Colo1 Emergency Backup Generator 03
S13-4	Stack 13-4 Colo1 Emergency Backup Generator 04

Emission Source Reference	Emission Source Description
S13-5	Stack 13-5 Colo2 Emergency Backup Generator 01
S13-6	Stack 13-6 Colo2 Emergency Backup Generator 02
S13-7	Stack 13-7 Colo2 Emergency Backup Generator 03
S13-8	Stack 13-8 Colo2 Emergency Backup Generator 04
AD-04	ADMIN13- GEN01 Emergency Backup Generator 01
S11-1	Stack 11-1 Colo1 Emergency Backup Generator 01
S11-2	Stack 11-2 Colo1 Emergency Backup Generator 02
S11-3	Stack 11-3 Colo1 Emergency Backup Generator 03
S11-4	Stack 11-4 Colo1 Emergency Backup Generator 04

The table below lists the emission sources which are linked to the Regulated Activities at the installation.

Emission Source Reference	Emission Source Description
S3-1	Stack 3-1 - Emergency Backup Generator 1A
S3-2	Stack 3-2 - Emergency Backup Generator 1B
S3-3	Stack 3-3 - Emergency Backup Generator 2A
S3-4	Stack 3-4 - Emergency Backup Generator 2B
S3-5	Stack 3-5 - Emergency Backup Generator 3A
S3-6	Stack 3-6 - Emergency Backup Generator 3B
S3-7	Stack 3-7 - Emergency Backup Generator 4A
S3-8	Stack 3-8 - Emergency Backup Generator 4B
S3-9	Stack 3-9 - Emergency Backup Generator 4C
S3-10	Stack 3-10 - Emergency Backup Generator 5A
S3-11	Stack 3-11 - Emergency Backup Generator 5B
S3-12	Stack 3-12 - Emergency Backup Generator 5C
S3-13	Stack 3-13 - Emergency Backup Generator R1
S3-14	Stack 3-14 - Emergency Backup Generator R2
S3-15	Stack 3-15 - Emergency Backup Generator R3
S4-1	Stack 4-1 Emergency Backup Generator 1A
S4-2	Stack 4-2 Emergency Backup Generator 1B
S4-3	Stack 4-3 Emergency Backup Generator 1C
S4-4	Stack 4-4 Emergency Backup Generator 2A
S4-5	Stack 4-5 Emergency Backup Generator 2B
S4-6	Stack 4-6 Emergency Backup Generator 2C
S4-7	Stack 4-7 Emergency Backup Generator 3A
S4-8	Stack 4-8 Emergency Backup Generator 3B

Emission Source Reference	Emission Source Description
S4-9	Stack 4-9 Emergency Backup Generator 3C
S4-10	Stack 4-10 Emergency Backup Generator R1
S4-11	Stack 4-11 Emergency Backup Generator A1
S5-1	Stack 5-1 Emergency Backup Generator 1A
S5-2	Stack 5-2 Emergency Backup Generator 1B
S5-3	Stack 5-3 Emergency Backup Generator 1C
S5-4	Stack 5-4 Emergency Backup Generator 2A
S5-5	Stack 5-5 Emergency Backup Generator 2B
S5-6	Stack 5-6 Emergency Backup Generator 2C
S5-7	Stack 5-7 Emergency Backup Generator 3A
S5-8	Stack 5-8 Emergency Backup Generator 3B
S5-9	Stack 5-9 Emergency Backup Generator 3C
S5-10	Stack 5-10 Emergency Backup Generator 4A
S5-11	Stack 5-11 Emergency Backup Generator 4B
S5-12	Stack 5-12 Emergency Backup Generator 4C
S5-13	Stack 5-13 Emergency Backup Generator R1
S5-14	Stack 5-14 Emergency Backup Generator A1
S5-15	Stack 5-15 Emergency Backup Generator A2
FP-1	Fire Pump
S6-1	Stack 6-1 Colo1 Emergency Backup Generator 01
S6-2	Stack 6-2 Colo1 Emergency Backup Generator 02
S6-3	Stack 6-3 Colo1 Emergency Backup Generator 03
S6-4	Stack 6-4 Colo2 Emergency Backup Generator 01
S6-5	Stack 6-5 Colo2 Emergency Backup Generator 02
S6-6	Stack 6-6 Colo2 Emergency Backup Generator 03
S6-7	Stack 6-7 Colo3 Emergency Backup Generator 01
S6-8	Stack 6-8 Colo3 Emergency Backup Generator 02
S6-9	Stack 6-9 Colo3 Emergency Backup Generator 03
S6-10	Stack 6-10 Colo4 Emergency Backup Generator 01
S6-11	Stack 6-11 Colo4 Emergency Backup Generator 02
S6-12	Stack 6-12 Colo4 Emergency Backup Generator 03
S6-13	Stack 6-13 Reserve Emergency Backup Generator 01
S6-14	Stack 6-14 MDF1 Emergency Backup Generator 01
S6-15	Stack 6-15 MDF2 Emergency Backup Generator 01
FP-2	DUB06 Fire pump
S7-1	Stack 7-1 Colo1 Emergency Backup Generator 01
S7-2	Stack 7-2 Colo1 Emergency Backup Generator 02

Emission Source Reference	Emission Source Description
S7-3	Stack 7-3 Colo1 Emergency Backup Generator 03
S7-4	Stack 7-4 Colo2 Emergency Backup Generator 01
S7-5	Stack 7-5 Colo2 Emergency Backup Generator 02
S7-6	Stack 7-6 Colo2 Emergency Backup Generator 03
S7-7	Stack 7-7 Colo3 Emergency Backup Generator 01
S7-8	Stack 7-8 Colo3 Emergency Backup Generator 02
S7-9	Stack 7-9 Colo3 Emergency Backup Generator 03
S7-10	Stack 7-10 Colo4 Emergency Backup Generator o1
S7-11	Stack 7-11 Colo4 Emergency Backup Generator 02
S7-12	Stack 7-12 Colo4 Emergency Backup Generator 03
S7-13	Stack 7-13 Reserve Emergency Backup Generator 01
S7-14	Stack 7-14 MDF1 Emergency Backup Generator 01
S7-15	Stack 7-15 MDF2 Emergency Backup Generator 01
S7-16	Stack 7-16 Office Emergency Backup Generator 01
FP-3	DUB07/08 Fire Pump
S8-1	Stack 8-1 Colo1 Emergency Backup Generator 01
S8-2	Stack 8-2 Colo1 Emergency Backup Generator 02
S8-3	Stack 8-3 Colo1 Emgency Backup Generator 03
S8-4	Stack 8-4 Colo2 Emergency Backup Generator 01
S8-5	Stack 8-5 Colo2 Emergency Backup Generator 02
S8-6	Stack 8-6 Colo2 Emergency Backup Generator 03
S8-7	Stack 8-7 Colo3 Emergency Back up Generator 01
S8-8	Stack 8-8 Colo3 Emergency Backup Generator 02
S8-9	Stack 8-9 Colo3 Emergency Backup Generator 03
S8-10	Stack 8-10 Colo4 Emergency Backup Generator 01
S8-11	Stack 8-11 Emergency Backup Generator 02
S8-12	Stack 8-12 Emergency Backup Generator 03
S8-13	Stack 8-13 Reserve Backup Generator 01
S8-14	Stack 8-14 MDF1 Emergency Backup Generator 01
S8-15	Stack 8-15 MDF2 Emergency Backup Generator 01
S9-1	Stack 9-1 Colo1 Emergency Backup Generator 01
S9-2	Stack 9-2 Colo1 Emergency Backup Generator 02
S9-3	Stack 9-3 Colo1 Emergency Backup Generator 03
S9-4	Stack 9-4 Colo1 Emergency Backup Generator 04
S10-1	Stack 10-1 Colo1 Emergency Backup Generator 01
S10-2	Stack 10-2 Colo1 Emergency Backup Generator 02
S10-3	Stack 10-3 Colo1 Emergency Backup Generator 03

Emission Source Reference	Emission Source Description
S10-4	Stack 10-4 Colo1 Emergency Backup Generator 04
S12-1	Stack 12-1 Colo1 Emergency Backup Generator 01
S12-2	Stack 12-2 Colo1 Emergency Backup Generator 02
S12-3	Stack 12-3 Colo1 Emergency Backup Generator 03
S12-4	Stack 12-4 Colo1 Emergency Backup Generator 04
AD-01	ADMIN09-GEN01 Emergency Backup Generator 01
AD-02	ADMIN10-GEN01 Emergency Backup Generator 01
AD-03	ADMIN12-GEN01 Emergency Backup Generator 01
S9-5	Stack 9-5 Colo2 Emergency Backup Generator 01
S9-6	Stack 9-6 Colo2 Emergency Backup Generator 02
S9-7	Stack 9-7 Colo2 Emergency Backup Generator 03
S9-8	Stack 9-8 Colo2 Emergency Backup Generator 04
S9-9	Stack 9-9 Colo3 Emergency Backup Generator 01
S9-10	Stack 9-10 Colo3 Emergency Backup Generator 02
S9-11	Stack 9-11 Colo3 Emergency Backup Generator 03
S9-12	Stack 9-12 Colo3 Emergency Backup Generator 04
S10-5	Stack 10-5 Colo2 Emergency Backup Generator 01
S10-6	Stack 10-6 Colo2 Emergency Backup Generator 02
S10-7	Stack 10-7 Colo2 Emergency Backup Generator 03
S10-8	Stack 10-8 Colo2 Emergency Backup Generator 04
S10-9	Stack 10-9 Colo3 Emergency Backup Generator 01
S10-10	Stack 10-10 Colo3 Emergency Backup Generator 02
S10-11	Stack 10-11 Colo3 Emergency Backup Generator 03
S10-12	Stack 10-12 Colo3 Emergency Backup Generator 04
S12-5	Stack 12-5 Colo2 Emergency Backup Generator 01
S12-6	Stack 12-6 Colo2 Emergency Backup Generator 02
S12-7	Stack 12-7 Colo2 Emergency Backup Generator 03
S12-8	Stack 12-8 Colo2 Emergency Backup Generator 04
S12-9	Stack 12-9 Colo3 Emergency Backup Generator 01
S12-10	Stack 12-10 Colo3 Emergency Backup Generator 02
S12-11	Stack 12-11 Colo3 Emergency Backup Generator 03
S12-12	Stack 12-12 Colo3 Emergency Backup Generator 04
S13-1	Stack 13-1 Colo1 Emergency Backup Generator 01
S13-2	Stack 13-2 Colo1 Emergency Backup Generator 02
S13-3	Stack 13-3 Colo1 Emergency Backup Generator 03
S13-4	Stack 13-4 Colo1 Emergency Backup Generator 04
S13-5	Stack 13-5 Colo2 Emergency Backup Generator 01

Emission Source Reference	Emission Source Description
S13-6	Stack 13-6 Colo2 Emergency Backup Generator 02
S13-7	Stack 13-7 Colo2 Emergency Backup Generator 03
S13-8	Stack 13-8 Colo2 Emergency Backup Generator 04
AD-04	ADMIN13- GEN01 Emergency Backup Generator 01
S11-1	Stack 11-1 Colo1 Emergency Backup Generator 01
S11-2	Stack 11-2 Colo1 Emergency Backup Generator 02
S11-3	Stack 11-3 Colo1 Emergency Backup Generator 03
S11-4	Stack 11-4 Colo1 Emergency Backup Generator 04

I. Emission Points

The table below lists all the emission points at the installation, which may include directly associated activities/excluded activities.

Emission Point Reference	Emission Point Description
EP3-1	Stack 3-1 - Emergency Backup Generator
EP3-2	Stack 3-2 - Emergency Backup Generator
EP3-3	Stack 3-3 - Emergency Backup Generator
EP3-4	Stack 3-4 - Emergency Backup Generator
EP3-5	Stack 3-5 - Emergency Backup Generator
EP3-6	Stack 3-6 - Emergency Backup Generator
EP3-7	Stack 3-7 - Emergency Backup Generator
EP3-8	Stack 3-8 - Emergency Backup Generator
EP3-9	Stack 3-9 - Emergency Backup Generator
EP3-10	Stack 3-10 - Emergency Backup Generator
EP3-11	Stack 3-11 - Emergency Backup Generator
EP3-12	Stack 3-12 - Emergency Backup Generator
EP3-13	Stack 3-13 - Emergency Backup Generator
EP3-14	Stack 3-14 - Emergency Backup Generator
EP3-15	Stack 3-15 - Emergency Backup Generator
EP4-1	Stack 4-1 Emergency Backup Generator
EP4-2	Stack 4-2 Emergency Backup Generator
EP4-3	Stack 4-3 Emergency Backup Generator
EP4-4	Stack 4-3 Emergency Backup Generator
EP4-5	Stack 4-5 Emergency Backup Generator
EP4-6	Stack 4-6 Emergency Backup Generator
EP4-7	Stack 4-7 Emergency Backup Generator

Emission Point Reference	**Emission Point Description**
EP4-8	Stack 4-8 Emergency Backup Generator
EP4-9	Stack 4-9 Emergency Backup Generator
EP4-10	Stack 4-10 Emergency Backup Generator
EP4-11	Stack 4-11 Emergency Backup Generator
EP5-1	Stack 5-1 Emergency Backup Generator
EP5-2	Stack 5-2 Emergency Backup Generator
EP5-3	Stack 5-3 Emergency Backup Generator
EP5-4	Stack 5-4 Emergency Backup Generator
EP5-5	Stack 5-5 Emergency Backup Generator
EP5-6	Stack 5-6 Emergency Backup Generator
EP5-7	Stack 5-7 Emergency Backup Generator
EP5-8	Stack 5-8 Emergency Backup Generator
EP5-9	Stack 5-9 Emergency Backup Generator
EP5-10	Stack 5-10 Emergency Backup Generator
EP5-11	Stack 5-11 Emergency Backup Generator
EP5-12	Stack 5-12 Emergency Backup Generator
EP5-13	Stack 5-13 Emergency Backup Generator
EP5-14	Stack 5-14 Emergency Backup Generator
EP5-15	Stack 5-15 Emergency Backup Generator
EP-FP1	Fire Pump
EP6-1	Stack 6-1- Emergency Backup Generator
EP6-2	Stack 6-2- Emergency Backup Generator
EP6-3	Stack 6-3- Emergency Backup Generator
EP6-4	Stack 6-4- Emergency Backup Generator
EP6-5	Stack 6-5- Emergency Backup Generator
EP6-6	Stack 6-6- Emergency Backup Generator
EP6-7	Stack 6-7- Emergency Backup Generator
EP6-8	Stack 6-8- Emergency Backup Generator
EP6-9	Stack 6-9- Emergency Backup Generator
EP6-10	Stack 6-10- Emergency Backup Generator
EP6-11	Stack 6-11- Emergency Backup Generator
EP6-12	Stack 6-12- Emergency Backup Generator
EP6-13	Stack 6-13- Emergency Backup Generator
EP6-14	Stack 6-14- Emergency Backup Generator
EP6-15	Stack 6-15- Emergency Backup Generator
EP-FP2	DUB06 Fire pump
EP7-1	Stack 7-1 Emergency Backup Generator

Emission Point Reference	**Emission Point Description**
EP7-2	Stack 7-2 Emergency Backup Generator
EP7-3	Stack 7-3 Emergency Backup Generator
EP7-4	Stack 7-4 Emergency Backup Generator
EP7-5	Stack 7-5 Emergency Backup Generator
EP7-6	Stack 7-6 Emergency Backup Generator
EP7-7	Stack 7-7 Emergency Backup Generator
EP7-8	Stack 7-8 Emergency Backup Generator
EP7-9	Stack 7-9 Emergency Backup Generator
EP7-10	Stack 7-10 Emergency Backup Generator
EP7-11	Stack 7-11 Emergency Backup Generator
EP7-12	Stack 7-12 Emergency Backup Generator
EP7-13	Stack 7-13 Emergency Backup Generator
EP7-14	Stack 7-14 Emergency Backup Generator
EP7-15	Stack 7-15 Emergency Back up Generator
EP7-16	Stack 7-16 Emergency Backup Generator
EP-FP3	DUB07/08 Fire Pump
EP8-1	Stack 8-1 Emergency Backup Generator
EP8-2	Stack 8-2 Emergency Backup Generator
EP8-3	Stack 8-3 Emergency Backup Generator
EP8-4	Stack 8-4 Emergency Backup Generator
EP8-5	Stack 8-5 Emergency Backup Generator
EP8-6	Stack 8-6 Emergency Backup Generator
EP8-7	Stack 8-7 Emergency Backup Generator
EP8-8	Stack 8-8 Emergency Backup Generator
EP8-9	Stack 8-9 Emergency Backup Generator
EP8-10	Stack 8-10 Emergency Backup Generator
EP8-11	Stack 8-11 Emergency Backup Generator
EP8-12	Stack 8-12 Emergency Backup Generator
EP8-13	Stack 8-13 Emergency Backup Generator
EP8-14	Stack 8-14 Emergency Backup Generator
EP8-15	Stack 8-15 Emergency Backup Generator
EP9-1	Stack 9-1 Emergency Backup Generator
EP9-2	Stack 9-2 Emergency Backup Generator
EP9-3	Stack 9-3 Emergency Backup Generator
EP9-4	Stack 9-4 Emergency Backup Generator
EP10-1	Stack 10-1 Emergency Backup Generator
EP10-2	Stack 10-2 Emergency Backup Generator

Emission Point Reference	**Emission Point Description**
EP10-3	Stack 10-3 Emergency Backup Generator
EP10-4	Stack 10-4 Emergency Backup Generator
EP12-1	Stack 12-1 Emergency Backup Generator
EP12-2	Stack 12-2 Emergency Backup Generator
EP12-3	Stack 12-3 Emergency Backup Generator
EP12-4	Stack 12-4 Emergency Backup Generator
EP-AD1	ADMIN09-GEN01 Emergency Backup Generator
EP-AD2	ADMIN10-GEN01 Emergency Backup Generator
EP-AD3	ADMIN12-GEN01 Emergency Backup Generator
EP9-5	Stack 9-5 Emergency Backup Generator
EP9-6	Stack 9-6 Emergency Backup Generator
EP9-7	Stack 9-7 Emergency Backup Generator
EP9-8	Stack 9-8 Emergency Backup Generator
EP9-9	Stack 9-9 Emergency Backup Generator
EP9-10	Stack 9-10 Emergency Backup Generator
EP9-11	Stack 9-11 Emergency Backup Generator
EP9-12	Stack 9-12 Emergency Backup Generator
EP10-5	Stack 10-5 Emergency Backup Generator
EP10-6	Stack 10-6 Emergency Backup Generator
EP10-7	Stack 10-7 Emergency Backup Generator
EP10-8	Stack 10-8 Emergency Backup Generator
EP10-9	Stack 10-9 Emergency Backup Generator
EP10-10	Stack 10-10 Emergency Backup Generator
EP10-11	Stack 10-11 Emergency Backup Generator
EP10-12	Stack 10-12 Emergency Backup Generator
EP12-5	Stack 12-5 Emergency Backup Generator
EP12-6	Stack 12-6 Emergency Backup Generator
EP12-7	Stack 12-7 Emergency Backup Generator
EP12-8	Stack 12-8 Emergency Backup Generator
EP12-9	Stack 12-9 Emergency Backup Generator
EP12-10	Stack 12-10 Emergency Backup Generator
EP12-11	Stack 12-11 Emergency Backup Generator
EP12-12	Stack 12-12 Emergency Backup Generator
EP13-1	Stack 13-1 Emergency Backup Generator
EP13-2	Stack 13-2 Emergency Backup Generator
EP13-3	Stack 13-3 Emergency Backup Generator
EP13-4	Stack 13-4 Emergency Backup Generator

Emission Point Reference	Emission Point Description
EP13-5	Stack 13-5 Emergency Backup Generator
EP13-6	Stack 13-6 Emergency Backup Generator
EP13-7	Stack 13-7 Emergency Backup Generator
EP13-8	Stack 13-8 Emergency Backup Generator
EP11-1	Stack 11-1 Emergency Backup Generator
EP11-2	Stack 11-1 Emergency Backup Generator
EP11-3	Stack 11-3 Emergency Backup Generator
EP11-4	Stack 11-4 Emergency Backup Generator
EP-AD4	ADMIN13-GEN01 Emergency Backup Generator

m. Source Streams (fuels and/or materials)

The table below lists the source streams which are used in Schedule 1 Activities at the installation.

Source Stream Reference	Source Stream Type	Source Stream Description
F1 (Gas Oil)	Combustion: Commercial standard fuels	Gas/Diesel Oil

n. Emissions Summary

The table below provides a summary of the emission source and source stream details in the installation.

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
F1 (Gas Oil)	S3-1,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S4-1,S4-2,S4-3,S4-4,S4-5,S4-6,S4-7,S4-8,S4-9,S4-10,S4-11,S5-1,S5-2,S5-3,S5-4,S5-5,S5-6,S5-7,S5-8,S5-9,S5-10,S5-11,S5-12,S5-13,S5-14,S5-15,FP-1,S6-1,S6-2,S6-3,S6-4,S6-5,S6-6,S6-7,S6-8,S6-9,S6-10,S6-11,S6-12,S6-13,S6-14,S6-15,FP-2,S7-1,S7-2,S7-3,S7-4,S7-5,S7-6,S7-7,S7-8,S7-9,S7-10,S7-11,S7-12,S7-13,S7-14,S7-15,S7-16,FP-3,S8-1,S8-2,S8-3,S8-4,S8-5,S8-6,S8-7,S8-8,S8-9,S8-10,S8-	EP3-1,EP3-2,EP3-3,EP3-4,EP3-5,EP3-6,EP3-7,EP3-8,EP3-9,EP3-10,EP3-11,EP3-12,EP3-13,EP3-14,EP3-15,EP4-1,EP4-2,EP4-3,EP4-4,EP4-5,EP4-6,EP4-7,EP4-8,EP4-9,EP4-10,EP4-11,EP5-1,EP5-2,EP5-3,EP5-4,EP5-5,EP5-6,EP5-7,EP5-8,EP5-9,EP5-10,EP5-11,EP5-12,EP5-13,EP5-14,EP5-15,EP-FP1,EP6-1,EP6-2,EP6-3,EP6-4,EP6-5,EP6-6,EP6-7,EP6-8,EP6-9,EP6-10,EP6-11,EP6-12,EP6-13,EP6-14,EP6-15,EP-FP2,EP7-1,EP7-2,EP7-3,EP7-4,EP7-5,EP7-6,EP7-7,EP7-8,EP7-	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
	11,S8-12,S8-13,S8-14,S8-15,S9-1,S9-2,S9-3,S9-4,S10-1,S10-2,S10-3,S10-4,S12-1,S12-2,S12-3,S12-4,AD-01,AD-02,AD-03,S9-5,S9-6,S9-7,S9-8,S9-9,S9-10,S9-11,S9-12,S10-5,S10-6,S10-7,S10-8,S10-9,S10-10,S10-11,S10-12,S12-5,S12-6,S12-7,S12-8,S12-9,S12-10,S12-11,S12-12	9,EP7-10,EP7-11,EP7-12,EP7-13,EP7-14,EP7-15,EP7-16,EP-FP3,EP8-1,EP8-2,EP8-3,EP8-4,EP8-5,EP8-6,EP8-7,EP8-8,EP8-9,EP8-10,EP8-11,EP8-12,EP8-13,EP8-14,EP8-15,EP9-1,EP9-2,EP9-3,EP9-4,EP10-1,EP10-2,EP10-3,EP10-4,EP12-1,EP12-2,EP12-3,EP12-4,EP-AD1,EP-AD2,EP-AD3,EP9-5,EP9-6,EP9-7,EP9-8,EP9-9,EP9-10,EP9-11,EP9-12,EP10-5,EP10-6,EP10-7,EP10-8,EP10-9,EP10-10,EP10-11,EP10-12,EP12-5,EP12-6,EP12-7,EP12-8,EP12-9,EP12-10,EP12-11,EP12-12	
F1 (Gas Oil)	S13-1,S13-2,S13-3,S13-4,S13-5,S13-6,S13-7,S13-8,AD-04,S11-1,S11-2,S11-3,S11-4	EP13-1,EP13-2,EP13-3,EP13-4,EP13-5,EP13-6,EP13-7,EP13-8,EP11-1,EP11-2,EP11-3,EP11-4,EP-AD4	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

o. Excluded Activities

Certain activities that result in greenhouse gas emissions may be excluded under the EU ETS Directive for example truly mobile sources such as vehicle emissions.

Do you have any excluded activities which need to be identified in your monitoring plan?	No

7. Low Emissions Eligibility

p. Low Emissions Eligibility

The operator may submit a simplified monitoring plan for an installation where no nitrous oxide activities are carried out and it can be demonstrated that:

(a) the average verified annual emissions of the installation during the previous trading period was less than 25 000 tonnes $CO_{2(e)}$ per year or;

(b) where this data is not available or inappropriate a conservative estimate shows that emissions for the next 5 years will be less than 25 000 tonnes $CO_{2(e)}$ per year.

Note: the above data shall include transferred CO_2 but exclude CO_2 stemming from biomass.

Does the installation satisfy the criteria for installations with low emissions (as defined by Article 47 of the MRR)?	Yes

If the installation is an installation with low emissions as defined above there are a number of special provisions which may be applied to provide a simplified monitoring plan. These provisions are set out in Article 47 of the MRR.

8. Monitoring Approaches

q. Monitoring Approaches

Emissions may be determined using either a calculation based methodology ("calculation") or measurement based methodology ("measurement") except where the use of a specific methodology is mandatory according to the provisions of the MRR. [MRR Article 21].

Note: the operator may subject to competent authority approval combine measurement and calculation for different sources. The operator is required to ensure and demonstrate that neither gaps nor double counting of reportable emissions occurs.

Please specify whether or not you propose to apply the following monitoring approaches. Select all monitoring approaches that are applicable to you. The consecutive sections will become mandatory based on the selected approaches.

Calculation	Yes
Measurement	No
Fall-back approach	No
Monitoring of N_2O	No
Monitoring of PFC	No
Monitoring of transferred / inherent CO_2	No

9. Calculation

r. Approach Description

The calculation approach including formulae used to determine annual CO_2 emissions:

The fuel consumed is calculated based on fuel on hand at the start and end of the year at each location (using level meter readings on the tanks or tank dips as an alternative/secondary methodology for determination of the activity data in the event of tank's level metering failure.), while taking deliveries via fiscally metered road tankers into account. The totalised consumed volume of fuel is converted from Litres to Tonnes using Vendor supplied specific gravity data, typically using a factor of 0.845 as per SEAI.

The CO2 emissions shall be calculated by multiplying the total quantity of fuel consumed (tonnes) by the country-specific Net Calorific Value (NCV) for the fuel (TJ/ktonne), by the country-specific Emission Factor (tCO2/TJ), and an Oxidation Factor (1.0). This shall be carried out on an annual basis, according to the formula below.

CO2 emissions (tonnes) = Totalised Fuel Consumed (tonnes) x Emission Factor (tCO2/TJ) x NCV (TJ/kt) x Oxidation Factor

In accordance with Monitoring and Reporting Regulations, the Oxidation factor to be applied is 1.0 (unity).

s. Measurement Devices

Below is a description of the specification and location of the measurement systems used for each source stream where emissions are determined by calculation

Also a description of all measurement devices including sub-meters and meters used to deduct non-Annex I activities to be used for each source and source stream.

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Gas Oil)	S3-1,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9	M-BT-1/2	Calculated stock changes (level meter)/purchase and invoice records	0-150000	ltrs	7.5	DB3 Yard
F1 (Gas Oil)	FP-1	M-FP-1	Calculated stock changes/purchase and invoice records	0-1250	ltrs	5	FP-1
F1 (Gas Oil)	S4-1	M-G4-1	Calculated stock changes (level meter)/purchase and invoice records	0-30,000	ltrs	5	G4-1
F1 (Gas Oil)	S4-2	M-G4-2	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-2
F1 (Gas Oil)	S4-3	M-G4-3	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-3
F1 (Gas Oil)	S4-4	M-G4-4	Calculated stock changes (level meter)/purchase	0-30000	ltrs	5	G4-4

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			and invoice records				
F1 (Gas Oil)	S4-5	M-G4-5	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-5
F1 (Gas Oil)	S4-6	M-G4-6	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-6
F1 (Gas Oil)	S4-7	M-G4-7	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-7
F1 (Gas Oil)	S4-8	M-G4-8	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-8
F1 (Gas Oil)	S4-9	M-G4-9	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-9
F1 (Gas Oil)	S4-10	M-G4-10	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-10
F1 (Gas Oil)	S4-11	M-G4-11	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G4-11

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Gas Oil)	S5-1	M-G5-1	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-1
F1 (Gas Oil)	S5-2	M-G5-2	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-2
F1 (Gas Oil)	S5-3	M-G5-3	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-3
F1 (Gas Oil)	S5-4	M-G5-4	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-4
F1 (Gas Oil)	S5-5	M-G5-5	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-4
F1 (Gas Oil)	S5-6	M-G5-6	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-6
F1 (Gas Oil)	S5-7	M-G5-7	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-7
F1 (Gas Oil)	S5-8	M-G5-8	Calculated stock	0-30000	ltrs	5	G5-8

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			changes (level meter)/purchase and invoice records				
F1 (Gas Oil)	S5-9	M-G5-9	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-9
F1 (Gas Oil)	S5-10	M-G5-10	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-10
F1 (Gas Oil)	S5-11	M-G5-11	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-11
F1 (Gas Oil)	S5-12	M-G5-12	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-12
F1 (Gas Oil)	S5-13	M-G5-13	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-13
F1 (Gas Oil)	S5-14	M-G5-14	Calculated stock changes (level meter)/purchase and invoice records	0-30000	ltrs	5	G5-14
F1 (Gas Oil)	S5-15	M-G5-15	Calculated stock changes (level	0-30000	ltrs	5	G5-15

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			meter)/purchase and invoice records				
F1 (Gas Oil)	S6-1	M-G6-1	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo1 Gen01
F1 (Gas Oil)	S6-2	M-G6-2	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo1 Gen02
F1 (Gas Oil)	S6-3	M-G6-3	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo1 Gen03
F1 (Gas Oil)	S6-4	M-G6-4	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo2 Gen01
F1 (Gas Oil)	S6-5	M-G6-5	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo2 Gen02
F1 (Gas Oil)	S6-6	M-G6-6	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo2 Gen03
F1 (Gas Oil)	S6-7	M-G6-7	Calculated stock changes (level meter)/purchase	0-30,216	ltrs	5	DUB06 Colo3 Gen01

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			and invoice records				
F1 (Gas Oil)	S6-8	M-G6-8	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo3 Gen02
F1 (Gas Oil)	S6-9	M-G6-9	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo3 Gen03
F1 (Gas Oil)	S6-10	M-G6-10	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo4 Gen01
F1 (Gas Oil)	S6-11	M-G6-11	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo4 Gen02
F1 (Gas Oil)	S6-12	M-G6-12	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Colo4 Gen03
F1 (Gas Oil)	S6-13	M-G6-13	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 Reserve Gen01
F1 (Gas Oil)	S6-14	M-G6-14	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 MDF1 Gen01

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Gas Oil)	S6-15	M-G6-15	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB06 MDF2 Gen01
F1 (Gas Oil)	FP-2	M-FP-2	Calculated stock changes (level meter)/purchase and invoice records	800	ltrs	5	DUB06 Sprinkler House
F1 (Gas Oil)	S7-1	M-G7-1	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo1 Gen01
F1 (Gas Oil)	S7-2	M-G7-2	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo1 Gen02
F1 (Gas Oil)	S7-3	M-G7-3	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo1 Gen03
F1 (Gas Oil)	S7-4	M-G7-4	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo2 Gen01
F1 (Gas Oil)	S7-5	M-G7-5	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo2 Gen02
F1 (Gas Oil)	S7-6	M-G7-6	Calculated Stock	0-34,393	ltrs	5	DUB07 Colo2

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			Changes{Level Meter} / purchase and Invoive records				Gen03
F1 (Gas Oil)	S7-8	M-G7-8	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo3 Gen02
F1 (Gas Oil)	S7-9	M-G7-9	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo3 Gen03
F1 (Gas Oil)	S7-10	M-G7-10	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo4 Gen01
F1 (Gas Oil)	S7-11	M-G7-11	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo4 Gen02
F1 (Gas Oil)	S7-12	M-G7-12	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo4 Gen03
F1 (Gas Oil)	S7-13	M-G7-13	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Reserve Gen01
F1 (Gas Oil)	S7-14	M-G7-14	Calculated Stock Changes{Level	0-34,393	ltrs	5	DUB07 MDF1 Gen01

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			Meter} / purchase and Invoive records				
F1 (Gas Oil)	S7-15	M-G7-15	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 MDF2 Gen01
F1 (Gas Oil)	S7-16	M-G7-16	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-12,508	ltrs	5	DUB07 Office Gen01
F1 (Gas Oil)	S7-7	M-G7-7	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB07 Colo03 Gen01
F1 (Gas Oil)	FP-3	M-FP-3	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-800	ltrs	5	DUB07 Sprinkler House
F1 (Gas Oil)	S8-1	M-G8-1	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo1 Gen01
F1 (Gas Oil)	S8-2	M-G8-2	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo1 Gen02
F1 (Gas Oil)	S8-3	M-G8-3	Calculated Stock Changes{Level Meter} / purchase	0-34,393	ltrs	5	DUB07 Colo1 Gen03

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			and Invoive records				
F1 (Gas Oil)	S8-4	M-G8-4	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo2 Gen01
F1 (Gas Oil)	S8-5	M-G8-5	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo2 Gen02
F1 (Gas Oil)	S8-6	M-G8-6	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo2 Gen03
F1 (Gas Oil)	S8-7	M-G8-7	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo3 Gen01
F1 (Gas Oil)	S8-8	M-G8-8	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo3 Gen02
F1 (Gas Oil)	S8-9	M-G8-9	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo3 Gen03
F1 (Gas Oil)	S8-10	M-G8-10	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo4 Gen01

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Gas Oil)	S8-11	M-G8-11	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo4 Gen02
F1 (Gas Oil)	S8-12	M-G8-12	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Colo4 Gen03
F1 (Gas Oil)	S8-13	M-G8-13	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 Reserve Gen01
F1 (Gas Oil)	S8-14	M-G8-14	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUBO8 MDF1 Gen01
F1 (Gas Oil)	S8-15	M-G8-15	Calculated Stock Changes{Level Meter} / purchase and Invoive records	0-34,393	ltrs	5	DUB08 MDF2 Gen01
F1 (Gas Oil)	S9-1	M-G9-1	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo1 Gen01
F1 (Gas Oil)	S9-2	M-G9-2	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo2 Gen02
F1 (Gas Oil)	S9-3	M-G9-3	Calculated stock	0-41387	ltrs	5	DUB09 Colo3

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			changes (level meter)/purchase and invoice records				Gen03
F1 (Gas Oil)	S9-4	M-G9-4	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo4 Gen04
F1 (Gas Oil)	S10-1	M-G10-1	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo1 Gen01
F1 (Gas Oil)	S10-2	M-G10-2	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo2 Gen02
F1 (Gas Oil)	S10-3	M-G10-3	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo3 Gen03
F1 (Gas Oil)	S10-4	M-G10-4	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo4 Gen04
F1 (Gas Oil)	S12-1	M-G12-1	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo1 Gen01
F1 (Gas Oil)	S12-2	M-G12-2	Calculated stock changes (level	0-41387	ltrs	5	DUB12 Colo2 Gen02

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			meter)/purchase and invoice records				
F1 (Gas Oil)	S12-3	M-G12-3	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo3 Gen03
F1 (Gas Oil)	S12-4	M-G12-4	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo4 Gen04
F1 (Gas Oil)	AD-01	M-AD-1	Calculated stock changes (level meter)/purchase and invoice records	0-22902	ltrs	5	Admin Gen01
F1 (Gas Oil)	AD-02	M-AD-2	Calculated stock changes (level meter)/purchase and invoice records	0-22902	ltrs	5	Admin Gen02
F1 (Gas Oil)	AD-03	M-AD-3	Calculated stock changes (level meter)/purchase and invoice records	0-22902	ltrs	5	Admin Gen03
F1 (Gas Oil)	S9-6	M-G9-6	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo2 Gen02
F1 (Gas Oil)	S9-7	M-G9-7	Calculated stock changes (level meter)/purchase	0-41387	ltrs	5	DUB09 Colo2 Gen03

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			and invoice records				
F1 (Gas Oil)	S9-5	M-G9-5	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo2 Gen01
F1 (Gas Oil)	S9-8	M-G9-8	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo2 Gen04
F1 (Gas Oil)	S9-9	M-G9-9	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo3 Gen01
F1 (Gas Oil)	S9-10	M-G9-10	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo3 Gen02
F1 (Gas Oil)	S9-11	M-G9-11	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo3 Gen03
F1 (Gas Oil)	S9-12	M-G9-12	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB09 Colo3 Gen04
F1 (Gas Oil)	S10-5	M-G10-5	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo2 Gen01

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Gas Oil)	S10-6	M-G10-6	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo2 Gen02
F1 (Gas Oil)	S10-7	M-G10-7	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo2 Gen03
F1 (Gas Oil)	S10-8	M-G10-8	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo2 Gen04
F1 (Gas Oil)	S10-9	M-G10-9	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo3 Gen01
F1 (Gas Oil)	S10-10	M-G10-10	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo3 Gen02
F1 (Gas Oil)	S10-11	M-G10-11	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo3 Gen03
F1 (Gas Oil)	S10-12	M-G10-12	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB10 Colo3 Gen04
F1 (Gas Oil)	S12-5	M-G12-5	Calculated stock	0-41387	ltrs	5	DUB12 Colo2

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			changes (level meter)/purchase and invoice records				Gen01
F1 (Gas Oil)	S12-6	M-G12-6	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo2 Gen02
F1 (Gas Oil)	S12-7	M-G12-7	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo2 Gen03
F1 (Gas Oil)	S12-8	M-G12-8	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo2 Gen04
F1 (Gas Oil)	S12-9	M-G12-9	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo3 Gen01
F1 (Gas Oil)	S12-10	M-G12-10	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo3 Gen02
F1 (Gas Oil)	S12-11	M-G12-11	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB12 Colo3 Gen03
F1 (Gas Oil)	S12-12	M-G12-12	Calculated stock changes (level	0-41387	ltrs	5	DUB12 Colo3 Gen04

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			meter)/purchase and invoice records				
F1 (Gas Oil)	S13-1	M-G13-1	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo1 Gen01
F1 (Gas Oil)	S13-2	M-G13-2	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo1 Gen02
F1 (Gas Oil)	S13-3	M-G13-3	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo1 Gen03
F1 (Gas Oil)	S13-4	M-G13-4	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo1 Gen04
F1 (Gas Oil)	S13-5	M-G13-5	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo2 Gen01
F1 (Gas Oil)	S13-6	M-G13-6	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo2 Gen02
F1 (Gas Oil)	S13-7	M-G13-7	Calculated stock changes (level meter)/purchase	0-41387	ltrs	5	DUB13 Colo2 Gen03

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
			and invoice records				
F1 (Gas Oil)	S13-8	M-G13-8	Calculated stock changes (level meter)/purchase and invoice records	0-41387	ltrs	5	DUB13 Colo2 Gen04
F1 (Gas Oil)	AD-04	M-AD-4	Calculated stock changes (level meter)/purchase and invoice records	0-22902	ltrs	5	Admin Gen04
F1 (Gas Oil)	S11-1	M-G11-1	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB11 Colo1 Gen01
F1 (Gas Oil)	S11-2	M-G11-2	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB13 Colo1 Gen02
F1 (Gas Oil)	S11-3	M-G11-3	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB11 Colo1 Gen03
F1 (Gas Oil)	S11-4	M-G11-4	Calculated stock changes (level meter)/purchase and invoice records	0-30,216	ltrs	5	DUB11 Colo1 Gen04

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Gas Oil)	M-BT-1/2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-FP-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G4-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-13	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-14	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G5-15	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-4	Batch	Trade partner	Yes	Yes	Yes

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Gas Oil)	M-G6-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-13	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-14	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G6-15	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-FP-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-13	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-14	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-15	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-16	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G7-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-FP-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-3	Batch	Trade partner	Yes	Yes	Yes

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Gas Oil)	M-G8-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-13	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-14	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G8-15	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-AD-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-AD-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-AD-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-9	Batch	Trade partner	Yes	Yes	Yes

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Gas Oil)	M-G9-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G9-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G10-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-9	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-10	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-11	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G12-12	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-5	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-6	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-7	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G13-8	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-AD-4	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G11-1	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G11-2	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G11-3	Batch	Trade partner	Yes	Yes	Yes
F1 (Gas Oil)	M-G11-4	Batch	Trade partner	Yes	Yes	Yes

t. Applied Tiers

The table below identifies the tiers applied against the relevant input data for each source stream and confirms whether a standard (MRR Article 24) or mass balance (MRR Article 25) approach is applied.

(i) The highest tiers as defined in Annex II of the MRR should be used by Category B and C installations to determine the activity data and each calculation factor (except the oxidation factor and conversion factor) for each major source stream. Category A installations should apply as a minimum the tiers listed in Annex V.

(ii) Operators may apply a tier one level lower than those referred to in sub paragraph (i) above for Category C installations and up to two levels lower for Category A and B installations with a minimum of tier 1 if the operator can demonstrate to the satisfaction of the competent authority that this is not technically feasible or would lead to unreasonable cost to apply the higher tier. The justification for not applying the higher tier should be recorded when completing the tier table.

(iii) The competent authority may allow an operator to apply even lower tiers than those referred to in the sub paragraph (ii) with a minimum of tier 1 for a transition period of up to three years if the operator can demonstrate to the satisfaction of the competent authority that this is not technically feasible or would lead to unreasonable cost to apply the higher tier and provides an improvement plan detailing how and by when at least the tier referred to in sub paragraph (ii) will be achieved. The improvement plan should be referenced in subsequent table and provided to the competent authority at the time of submission of this plan.

(iv) For minor source streams operators shall apply the highest tier which is technically feasible and will not lead to unreasonable costs with a minimum of tier 1 for activity data and each calculation factor. For de-minimis source streams operators may use conservative estimations rather than tiers unless a defined tier can be achieved without additional effort (MRR Article 26(2)).

(v) Installations with low emissions as identified in section 6(d) may apply as a minimum tier 1 for determining activity data and calculation factors for all source streams unless higher accuracy is achievable without additional effort.

* Note 1: For commercial standard fuels the minimum tiers listed in Annex V of the MRR may be applied for all activities in all installations.

* Note 2: If you are intending to apply a fall-back approach please complete the table below and select "n/a" for the tiers to be applied for each source stream where a fall-back approach is used. Section 10 "Fall-back" must also be completed for these source streams.

* Note 3: For biomass or mixed fuels the emission factor is the preliminary emission factor as defined in Definition 35 Article 3 of the MRR.

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
F1 (Gas Oil)	S3-1,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S4-1,S4-2,S4-3,S4-4,S4-5,S4-6,S4-7,S4-8,S4-9,S4-10,S4-11,S5-	M-BT-1/2,M-FP-1,M-G4-1,M-G4-2,M-G4-3,M-G4-4,M-G4-5,M-G4-6,M-G4-7,M-G4-8,M-G4-9,M-G4-10,M-G4-11,M-G5-	<7.5%	Standard	1	2a	2a	N/A	1	N/A	N/A	225	20.45	Major	N/A	n/a	n/a

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
	1,S5-2,S5-3,S5-4,S5-5,S5-6,S5-7,S5-8,S5-9,S5-10,S5-11,S5-12,S5-13,S5-14,S5-15,FP-1	1,M-G5-2,M-G5-3,M-G5-4,M-G5-5,M-G5-6,M-G5-7,M-G5-8,M-G5-9,M-G5-10,M-G5-11,M-G5-12,M-G5-13,M-G5-14,M-G5-15															

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
F1 (Gas Oil)	S6-1,S6-2,S6-3,S6-4,S6-5,S6-6,S6-7,S6-8,S6-9,S6-10,S6-11,S6-12,S6-13,S6-14,S6-15,FP-2	M-G6-1,M-G6-2,M-G6-3,M-G6-4,M-G6-5,M-G6-6,M-G6-7,M-G6-8,M-G6-9,M-G6-10,M-G6-11,M-G6-12,M-G6-13,M-G6-14,M-	<7.5%	Standard	1	2a	2a	N/A	1	N/A	N/A	100	9.09	Major	N/A	n/a	n/a

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
F1 (Gas Oil)	S7-1,S7-2,S7-3,S7-4,S7-5,S7-6,S7-7,S7-8,S7-9,S7-10,S7-11,S7-12,S7-13,S7-14,S7-15,S7-16,FP-3,S8-1,S8-2,S8-3,S8-4,S8-5,S8-6,S8-7,S8-8,S8-9,S8-10,S8-	M-G7-1,M-G7-2,M-G7-3,M-G7-4,M-G7-5,M-G7-6,M-G7-8,M-G7-9,M-G7-10,M-G7-11,M-G7-12,M-G7-13,M-G7-14,M-G7-15,M-	<7.5%	Standard	1	2a	2a	N/A	1	N/A	N/A	225	20.45	Major	N/A	n/a	n/a

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
		G8-2,M-G8-3,M-G8-4,M-G8-5,M-G8-6,M-G8-7,M-G8-8,M-G8-9,M-G8-10,M-G8-11,M-G8-12,M-G8-13,M-G8-14,M-G8-15															

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
F1 (Gas Oil)	S9-1,S9-2,S9-3,S9-4,S10-1,S10-2,S10-3,S10-4,S12-1,S12-2,S12-3,S12-4,AD-01,AD-02,AD-03,S9-5,S9-6,S9-7,S9-8,S9-9,S9-10,S9-11,S9-12,S10-5,S10-6,S10-7,S10-8,S10-	M-G9-1,M-G9-2,M-G9-3,M-G9-4,M-G10-1,M-G10-2,M-G10-3,M-G10-4,M-G12-1,M-G12-2,M-G12-3,M-G12-4,M-AD-1,M-AD-2,M-	<7.5%	Standard	1	2a	2a	N/A	1	N/A	N/A	550	50	Major	N/A	n/a	n/a

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
	7,S12-8,S12-9,S12-10,S12-11,S12-12,S13-1,S13-2,S13-3,S13-4,S13-5,S13-6,S13-7,S13-8,AD-04,S11-1,S11-2,S11-3,S11-4	G9-8,M-G9-9,M-G9-10,M-G9-11,M-G9-12,M-G10-5,M-G10-6,M-G10-7,M-G10-8,M-G10-9,M-G10-10,M-G10-11,M-G10-12,M-G12-5,M-															

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions $tCO_{2(e)}$	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
		G12-10,M-G12-11,M-G12-12,M-G13-1,M-G13-2,M-G13-3,M-G13-4,M-G13-5,M-G13-6,M-G13-7,M-G13-8,M-AD-4,M-G11-1,M-G11-2,M-															

Total Estimated Emissions for Calculation (tonnes $CO_{2(e)}$)	1100

u. Applied tiers

Applied tiers for each source stream

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
F1 (Gas Oil)	S3-1,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S4-1,S4-2,S4-3,S4-4,S4-5,S4-6,S4-7,S4-8,S4-9,S4-10,S4-11,S5-1,S5-2,S5-3,S5-4,S5-5,S5-6,S5-7,S5-8,S5-9,S5-10,S5-11,S5-12,S5-13,S5-14,S5-15,FP-1	1	2a	2a	N/A	1	N/A	N/A
F1 (Gas Oil)	S6-1,S6-2,S6-3,S6-4,S6-5,S6-6,S6-7,S6-8,S6-9,S6-10,S6-11,S6-12,S6-13,S6-14,S6-15,FP-2	1	2a	2a	N/A	1	N/A	N/A
F1 (Gas Oil)	S7-1,S7-2,S7-3,S7-4,S7-5,S7-6,S7-7,S7-8,S7-	1	2a	2a	N/A	1	N/A	N/A

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
	9,S7-10,S7-11,S7-12,S7-13,S7-14,S7-15,S7-16,FP-3,S8-1,S8-2,S8-3,S8-4,S8-5,S8-6,S8-7,S8-8,S8-9,S8-10,S8-11,S8-12,S8-13,S8-14,S8-15							
F1 (Gas Oil)	S9-1,S9-2,S9-3,S9-4,S10-1,S10-2,S10-3,S10-4,S12-1,S12-2,S12-3,S12-4,AD-01,AD-02,AD-03,S9-5,S9-6,S9-7,S9-8,S9-9,S9-10,S9-11,S9-12,S10-5,S10-6,S10-7,S10-8,S10-9,S10-10,S10-11,S10-12,S12-5,S12-6,S12-7,S12-8,S12-9,S12-10,S12-11,S12-12,S13-1,S13-2,S13-3,S13-4,S13-5,S13-6,S13-7,S13-	1	2a	2a	N/A	1	N/A	N/A

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
	8,AD-04,S11-1,S11-2,S11-3,S11-4							

v. Justification for Applied tiers

Justifications for the applied tiers for each major source stream where highest tiers are not currently achieved.

Source Stream Ref.	**Emission Source Refs.**	**Justification for the applied tier**	**Improvement Plan Reference (where applicable)**
N/A	N/A	N/A	N/A

10. Calculation Factors

w. Default Values

The table below lists, for each parameter, where default values are to be used for calculation factors.

Source Stream Refs.	Emission Source Refs.	Parameter	Reference Source	Default Value applied (where appropriate)
F1 (Gas Oil)	S3-1,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S4-1,S4-2,S4-3,S4-4,S4-5,S4-6,S4-7,S4-8,S4-9,S4-10,S4-11,S5-1,S5-2,S5-3,S5-4,S5-5,S5-6,S5-7,S5-8,S5-9,S5-10,S5-11,S5-12,S5-13,S5-14,S5-15,FP-1,S6-1,S6-2,S6-3,S6-4,S6-5,S6-6,S6-7,S6-8,S6-9,S6-10,S6-11,S6-12,S6-13,S6-14,S6-15,FP-2,S7-1,S7-2,S7-3,S7-4,S7-5,S7-6,S7-7,S7-8,S7-9,S7-10,S7-11,S7-12,S7-13,S7-14,S7-15,S7-16,FP-3,S8-1,S8-2,S8-3,S8-4,S8-5,S8-6,S8-7,S8-8,S8-9,S8-10,S8-11,S8-12,S8-13,S8-14,S8-15,S9-1,S9-2,S9-3,S9-4,S10-1,S10-2,S10-3,S10-4,S12-1,S12-2,S12-3,S12-4,AD-01,AD-02,AD-03,S9-5,S9-6,S9-7,S9-8,S9-9,S9-10,S9-11,S9-12,S10-5,S10-6,S10-7,S10-8,S10-9,S10-10,S10-11,S10-12,S12-5,S12-6,S12-7,S12-8,S12-9,S12-10,S12-11,S12-12,S13-1,S13-2,S13-3,S13-4,S13-5,S13-6,S13-7,S13-8,AD-04,S11-1,S11-2,S11-3,S11-4	NCV and Emission Factor	Irish National Inventory	n/a

Source Stream Refs.	Emission Source Refs.	Parameter	Reference Source	Default Value applied (where appropriate)
F1 (Gas Oil)	S3-1,S3-2,S3-3,S3-4,S3-5,S3-6,S3-7,S3-8,S3-9,S3-10,S3-11,S3-12,S3-13,S3-14,S3-15,S4-1,S4-2,S4-3,S4-4,S4-5,S4-6,S4-7,S4-8,S4-9,S4-10,S4-11,S5-1,S5-2,S5-3,S5-4,S5-5,S5-6,S5-7,S5-8,S5-9,S5-10,S5-11,S5-12,S5-13,S5-14,S5-15,FP-1,S6-1,S6-2,S6-3,S6-4,S6-5,S6-6,S6-7,S6-8,S6-9,S6-10,S6-11,S6-12,S6-13,S6-14,S6-15,FP-2,S7-1,S7-2,S7-3,S7-4,S7-5,S7-6,S7-7,S7-8,S7-9,S7-10,S7-11,S7-12,S7-13,S7-14,S7-15,S7-16,FP-3,S8-1,S8-2,S8-3,S8-4,S8-5,S8-6,S8-7,S8-8,S8-9,S8-10,S8-11,S8-12,S8-13,S8-14,S8-15,S9-1,S9-2,S9-3,S9-4,S10-1,S10-2,S10-3,S10-4,S12-1,S12-2,S12-3,S12-4,AD-01,AD-02,AD-03,S9-5,S9-6,S9-7,S9-8,S9-9,S9-10,S9-11,S9-12,S10-5,S10-6,S10-7,S10-8,S10-9,S10-10,S10-11,S10-12,S12-5,S12-6,S12-7,S12-8,S12-9,S12-10,S12-11,S12-12,S13-1,S13-2,S13-3,S13-4,S13-5,S13-6,S13-7,S13-8,AD-04,S11-1,S11-2,S11-3,S11-4	OxF	MRR	1.0

Sampling and Analysis

Do you undertake sampling and analysis of any of the parameters used in the calculation of your CO_2 emissions? No

11. Management

x. Monitoring and Reporting Responsibilities

Responsibilities for monitoring and reporting emissions from the installation are listed below:

Relevant job titles/posts and provide a succinct summary of their role relevant to monitoring and reporting are listed below.

Job Title / Post	**Responsibilities**
Electrical Engineer (E/E)	Overall responsibility for Electrical plant including the manner and rate of operation of generators. Review specified fuel usage reports for each generator/fire pump and assess the appropriatness of findings. The Engineer is supported in this role though the Critical Facility manager and Environmental Health and Safety Manger, directly or though their assigned designees.
Critical Operations Manager (COM)	Has overall responsibility through his/her designees, over fuel ordering, delivery scheduling, receipting and recording of deliveries, equipment operation, and adherance to established procedures on behalf of Microsoft.
Environmental Health and Safety Manager (EHSM)	Ensures that permit conditions are effectively complied with. Report specified emissions to the EPA. Coordinate accredited Verifier audits
Data Centre Operations Manager (DCOM)	The DCOM is responsible of the operation of the Data Centre
Critical Environment manager (CEM)	Reports into the COM but has responsibility for the CE function for the buildings under their control.

Attachment	**Description**
CAMPUS ORG CHART.pdf	CAMPUS ORG CHART

y. Assignment of Responsibilities

Details of the procedure used for managing the assignment of responsibilities for monitoring and reporting within the installation and for managing the competencies of responsible personnel in accordance with Article 58(3)(c) of the MRR:

This procedure identifies how the monitoring and reporting responsibilities for the roles identified above are assigned and how training and reviews are undertaken.

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The Procedure states that it is the responsibility of the Critical Operations Manager to ensure that the necessary procedures are followed. The actual execution of the tasks is delegated typically to members of the Critical Environment (CE) Day team who have been provided with relevant training and experience. This Administrative Procedure (AP) calls out via specific Methods of Operations (MOPs) and Standard Operation Procedures (SOPs), how fuel is accounted for once it arrives on-site, how records are kept, how cross-checks are carried out against quantity delivered, how consumption is monitored at each tank location, and how an annual consumed value is arrived at. The responsibility for collecting and reporting the raw data rests with a managed service alliance partner, functioning as Data Centre Critical Environment (CE) team under the direction of their COM/CEM and EHSM, and who is responsible to the Data Centre Management. The COM and DCOM meet regularly to review team performance and reports.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint site
Name of IT system used	N/A
List of EN or other standards applied	N/A

z. Monitoring Plan Appropriateness

Details of the procedure used for regular evaluation of the monitoring plan's appropriateness covering in particular any potential measures for the improvement of the monitoring methodology:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-6_10_5_1
Diagram reference	N/A

Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure ensures regular evaluation of the monitoring plan's appropriateness, covering in particular any potential measures for the improvement of the monitoring methodology. This includes : checking the list of emissions sources and source streams, ensuring completeness of the emissions and source streams and that all relevant changes in the nature and functioning of the installation will be included in the monitoring plan; assessing compliance with the uncertainty thresholds for activity data and other parameters (where applicable) for the applied tiers for each source stream and emission source; and assessment of potential measures for improvement of the monitoring methodology applied. The list of emission sources and source streams are defined as being a number of Standby Diesel Generators and 2 Diesel Fire Pump and gas oil fuel. There are no boiler houses, or other fuel combustion activities on the site.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint Site
Name of IT system used	N/A
List of EN or other standards applied	N/A

aa. Data Flow Activities

Details of the procedures used to manage data flow activities in accordance with Article 57 of the MRR:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	A number of Operating procedures address the filling of fuel (supply) and the running of the Generators and Fire Pump (consumption). An Administrative Procedure calls out strategy whereby the data collected in the Operating procedures is incorporated into an overall annual consumption value for the site.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint Site
Name of IT system used	n/a
List of EN or other standards applied	N/A
List of primary data sources	Vendor delivery dockets and invoices - fuel tank levels
Description of the relevant processing steps for each specific data flow activity. Identify each step in the data flow and include the formulas and data used to determine emissions from the primary data. Include details of any relevant electronic data processing and storage systems and other inputs (including manual inputs) and confirm how outputs of data flow	The fuel consumed is calculated based on fuel on hand at the start and end of the year at each location (using level meter readings on the tanks or tank dips as an alternative/secondary methodology for determination of the activity data in the event of tank's level metering failure.), while taking deliveries via fiscally metered road tankers into account. The totalised consumed volume of fuel is converted from Litres to Tonnes using Vendor

activities are recorded	supplied specific gravity data, typically using a factor of 0.845 as per SEAI. The CO2 emissions shall be calculated by multiplying the total quantity of fuel consumed (tonnes) by the country-specific Net Calorific Value (NCV) for the fuel (TJ/ktonne), by the country-specific Emission Factor (tCO2/TJ), and an Oxidation Factor (1.0). This shall be carried out on an annual basis, according to the formula below. CO2 emissions (tonnes) = Totalised Fuel Consumed (tonnes) x Emission Factor (tCO2/TJ) x NCV (TJ/kt) x Oxidation Factor In accordance with Monitoring and Reporting Regulations, the Oxidation factor to be applied is 1.0 (unity). The procedure describes the activities to be taken to record the fuel delivered to each tank. A “Fill to Full” at year-end strategy will be used, plus any mid-year top-ups, to account for fuel consumed from each tank during the calendar year. This approach will leverage the fiscal grade delivery truck metering, along with the local tank meters that will be used to determine the “full” level. Tank dips as an alternative/secondary methodology for the determination of the activity data in the event of tank's level metering failure may also be used. This value will be cross-checked against POs/Invoicing and local tank gauges. The final reportable value will be the sum of those consumed values as taken from the metered sources. The delivery of gas oil/diesel is subject to on-site supervision and includes a level check of the fuel tank before and after loading to ensure that tank level changes correspond to the metered quantity as displayed on the fuel delivery truck meter. A record of each delivery as well as the oil tank levels are made. To allow for expansion and some turbulence due to fuel circulation during normal operation, tanks are never filled to the brim. A determination is made as to the "Operationally Full" level according to the tank type. This point is recorded for each tank type. When tanks are topped up, a record is made of the metered quantity of fuel supplied at each location. This metered volume is cross-checked against the local tank fuel indication. For end-of-of year baselining and reporting, each tank is topped back up to the "Operationally Full" level, and the consumed quantity calculated based on the end of year Fill-to-Full, plus any mid-year top-ups. The sum of all the deliveries made in this manner is converted to Tonnes, using an agreed specific Gravity value.

Submit relevant documents to record data flow activities

Attachment	Description
N/A	N/A

bb. Assessing and Controlling Risks

Details of the procedures used to assess inherent risks and control risks in accordance with Article 58 of the MRR:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	An assessment of inherent risks and control risks was undertaken . The main risk identified was under/over reporting. To address these risks, it is proposed that an independent method be used to cross-check usage. Existing tank level monitoring can be leveraged to confirm fuel use, and of top ups. By cross referencing fuel deliveries / POs / Invoices with monitored local tank levels, it should be possible to ensure that the quantities reported are accurate.Work Orders are generated on the Computerized Maintenance Management System (CMMS) to track all engine runs, and this can be correlated against the on-board Generator engine management reports for number of starts. Likewise, the generator engine management systems report on kWhrs, and this can be cross checked against empiric data for fuel consumed per kWhr.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint Site
Name of IT system used	N/A
List of EN or other standards applied	N/A

cc. Quality Assurance of Metering / Measuring Equipment

Details of the procedures used to ensure quality assurance of measuring equipment in accordance with Article 58 and 59 of the MRR.

Title of procedure	Reporting of Green House Gas Emissions..
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A

Brief description of procedure. The description should cover the essential parameters and operations performed	To account for the actual fuel arriving on site, we will rely on our approved fuel vendor to present fiscally metered values of fuel delivered, tested to legal Metrology (General) Regulations (SI NO 323 of 2008). This delivery information will be cross checked against Purchase Orders (POs) and invoices. Additionally, we will use local tank meters and gauges to corroborate the values. For a regular shaped tank of known dimensions, the reported accuracy of the level sensors can also be verified simply through Dipping. On a periodic basis (annually) the level of the tanks are verified (single point) through "dipping" and a determination of the volume made through calculation - since the tanks are of regular shape and known dimensions. This calculated value is then compared against the "as read" value of the installed instrumentation for that tank. A verification of this nature would be carried out internally by a technician who is trained on calibration techniques, and would be knowledgeable on both the requirements and implications.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint
Name of IT system used	N/A
List of EN or other standards applied	N/A

dd. Quality Assurance of Information Technology used for Data Flow Activities

Details of the procedures used to ensure quality assurance of information technology used for data flow activities in accordance with Article 58 and 60 of the MRR:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure describes the provisions that are in place at the installation to provide quality assurance of Information Technology (IT) used for Data Flow Activities. All assessment of fuel volumes will be carried out manually, and the application of conversion factors will carried out in Microsoft Excel. Access is controlled and restricted to the installation's IT systems to authorised personnel only who

	each have unique log-in names and passwords etc. Virus protection is installed and enabled on the entire IT infrastructure. Extensive IT back-up provisions are provided at the installation
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team
Location where records are kept	Internal Sharepoint
Name of IT system used	N/A
List of EN or other standards applied	N/A

ee. Review and Validation of Data

Details of the procedures used to ensure regular internal reviews and validation of data in accordance with Articles 58 and 62 of the MRR.

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	We can expect a high degree of accuracy from our fuel oil supplier. Each delivery tanker has passed Verification Tests and are in compliance with the legal Metrology (General) Regulations (SI NO 323 of 2008). The generators (with individual tanks) are equipped with level sensors, with a +/- 1mm level accuracy (+/-35lts or potential 70ltr variance). For a regular shaped tank of known dimensions, the reported accuracy of the level sensors can also be verified simply through Dipping. Because the final reported value is based on a year-end stock take, that uncertainty need only be considered once per year, and not summed for each fill/top up. That potential 70ltr variance on the end of year “fill to full” on a fiscally metered consumed quantity of say 2,000ltrs is approx 3.5%, well within the tolerance allowed for a site of this nature. For each such generator, the engine management system also reports on kilowatt hours, and these shall be recorded at the start/end of each year as part of the baseline fuel top-up activity. From the generator manufacturer’s data sheet, it is possible to estimate the fuel consumed based on engine activity. Because of inherent individual engine variability, these emperic values shall be used simply as corroboration of data derived from more accurate sources. Similarly, the Bulk tanks feeding multiple generators, will be filled to full using fiscal grade pump meters. Likewise, an uncertainty arises as to the determination of “operatioanlly

	Full". Current tank level values are reported to the BMS/BAS system, with a reporting accuracy of 1% (approx 1000ltrs) – It is for this level of uncertanty that the reported tolerance is given as 7.5%. However, the engines supplied from this bulk source report on actual fuel consumed. A standardised report may be generated from the site EPMS system for the running of these collectively and over a defined period - in this case per calendar year. For the Fire Pumps, the tank's volume is comparatively small, approx. 1250ltrs and 800ltrs "full to brim", but is fitted with a simple mechanical analogue fuel gauge. The gauge has an approx. 120mm deflection, such that the accuracy is approx 1%. Consequently, the gauge will be physically marked with the accepted "Full" position for top up purposes. The Tanker delivery values will be used for reporting.
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team, EHSM and Electrical Engineer
Location where records are kept	Internal Sharepoint
Name of IT system used	Siemens EPMS /Eaton EPMS
List of EN or other standards applied	N/A

ff. Corrections and Corrective Actions

Details of the procedures used to handle corrections and corrective actions in accordance with Articles 58 and 63 of the MRR:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure describes the methodology used to ensure that all reporting and measurement non conformances, including errors associated with the monitoring and reporting of green house gas emissions or associated with update of permit when and if emission sources are added, are recorded, the root cause investigated and responsibilities assigned to allow timely action to be taken to correct the issues concerned.Any anomaly between the annualized metered delivered values and the calculated or extrapolated consumption greater than 5% will be investigated, so as to ensure that reported values are with the 7.5% tolerance permitted for a site of this nature. Likely cause of errors: * under/over reporting of delivered fuel. Control: Cross

	check with POs / Invoices * Under/over filling a tank to its benchmark "Full" level. Controls: By defining the "Full" state, and recording the locally metered value, as expressed in the same units, a +/- compensation value can be applied to the reported value. Any such level compensation value also needs to be borne in mind when making subsequent year reports.Where local tank level values are suspected to outside of accepted tolerances, these will be checked and realigned accordingly
Post or department responsible for the procedure and for any data generated	Data Centre Critical Environment (CE) team, EHSM and Electrical Engineer
Location where records are kept	Internal SharePoint
Name of IT system used	Siemens EPMS / Eaton EPMS
List of EN or other standards applied	N/A

gg. Control of Outsourced Activities

Details of the procedures used to control outsourced processes in accordance with Articles 59 and 64 of the MRR.

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The responsibility for collecting and reporting the raw data rests with a managed service alliance partner, functioning as Data Centre Critical Environment (CE) team under the direction of their COM / CEM and EHSM, and who are responsible to the Data Centre Management. The COM and DCOM meet regulary to review team performance and reports.Since the most accurate fuel measure available is the metered tankers, these will form the basis of the final reported value. It is a condition of supply that the nominated fuel supplier maintains their compliance with the legal Metrology (General) Regulations (SI NO 323 of 2008)."
Post or department responsible for the procedure and for any data generated	Data Center Management, CFM, Electrical Engineer, EHSM, and Data Centre Critical Environment (CE) team
Location where records are kept	Internal SharePoint
Name of IT system used	N/A
List of EN or other standards applied	N/A

hh. Record Keeping and Documentation

Details of the procedures used to manage record keeping and documentation:

Title of procedure	Reporting of Green House Gas Emissions.
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	All records, relevant data and information stipulated in Annex IX of the MRR will be retained for at least 10 years in accordance with Article 66 of the Monitoring and Reporting Regulation.All records relating to the delivery of fuel, including copies of delivery dockets and local meter readings shall be archived on the internal company Sharepoint. The end of year baseline readings of engine output values eg: kilowatt hours shall also be recorded and similarly archived.A controlled access spreadsheet (Microsoft Excel) will record the delivery of fuel to each tank along with the locally measured value. The values recorded will be assessed for accuracy, and the subsequent calculations to establish CO2 will be made. The reported values year-on-year will be trended, reviewed and assessed, such that deviations from expectations can be further investigated.Any end-of-year over or under delivery to baseline “Full” will be identified, as described elsewhere, and the necessary compensation made to both the reporting year and the following year's calculations. Where provided that metered and locally calculated fuel volumes are in substantial agreement, to the described tolerance, then the metered value will go forward for inclusion in the calculations to establish CO2.
Post or department responsible for the procedure and for any data generated	CFM and Data Centre Critical Environment (CE) team
Location where records are kept	Internal Sharepoint
Name of IT system used	N/A
List of EN or other standards applied	N/A

ii. Risk Assessment

The results of a risk assessment that demonstrates that the control activities and procedures are commensurate with the risks identified:

Attachment	**Description**
N/A	N/A

jj. Environmental Management System

Does your organisation have a documented Environmental Management System?	Yes
Is the Environmental Management System certified by an accredited organisation?	No

12. Changes in Operation

kk. Changes in Operation

Article 24(1) of Commission Decision 2011/278/EC requires that Member States must ensure that all relevant information about any planned or effective changes to the capacity activity level and operation of an installation is submitted by the operator to the competent authority by 31 December each year. Article 12(3) of the MRR further provides that Member States may require information to be included in the monitoring plan of an installation for the purposes of meeting these requirements.

Details of the procedure used to ensure regular reviews are carried out to identify any planned or effective changes to the capacity activity level and operation of the installation that have an impact on the installation's allocation:

The procedure specified below cover the following:

- planning and carrying out regular checks to determine whether any planned or effective changes to the capacity activity level and operation of an installation are relevant under Commission Decision 2011/278/EC; and
- Procedures to ensure such information is submitted to the competent authority by 31 December of each year.

Title of procedure	Reporting of Green House gas
Reference for procedure	AP-IR-6_10_5_1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The DCOM and/or the E/E will have the responsibility of communicating any changes to the operation of the installation or the capacity to COM/CEM, EHSM and the Critical Environment (CE) team. A review and update (where necessary) of the procedures and reports will be undertaken and the EPA notified.
Post or department responsible for the procedure and for any data generated	Data Centre Operations Manager (DCOM)
Location where records are kept	Internal Sharepoint
Name of IT system used	N/A

13. Abbreviations

II. Abbreviations Acronyms or definitions

Abbreviations acronyms or definitions that have been used in this monitoring plan:

Abbreviation	Definition
DCOM	Data Centre Operations Manager
E/E	Electrical Engineer
COM	Critical Operations Manager
EHSM	Environment, Health and Safety Manager
BMS/BAS	Building Manangement System / Building Automation System
EPMS	Energy Power Monitoring Software
PO	Purchase Order
CEM	Critical Environment Manager

14. Additional Information

Any other information:

Attachment	Description
Generator Thermal Input.pdf	Vendor supplied details indicating Generator Themal Input values
FUEL OIL Cert.pdf	Fuel Oil Cert
Emissions_source points.pdf	Site map showing emsssions / source points and fuel storatege locations.
DUB06 Generator Thermal Input ratings.pdf	DUB06 Generator Thermal Input ratings
DUB06 Emissions source.pdf	DUB06 Emission source points
DUB07_08 Generator Thermal Input documents.pdf	Vendor Supplied Thermal Input Values and Spec Sheets
DUB09 10 12 Generator Thermal Input documents.pdf.pdf	Vendor Supplied Thermal Input Values and Spec Sheets
Thermal input DUB11.docx	Thermal input for DUB11

Attachment	Description
DUB campus with emissions points 6, 7, 8, 9, 10, 11,12, 13.jpg	Full DUB emission locations 06 to 13
Calculations TIC DUB 9,10,12 and 13.xlsx	Calculations TIC DUB 9,10,12 and 13
Type 1 Generator DUB 9,10, 12 and 13.pdf	Type 1 Generator DUB 9,10, 12 and 13
Type 2 generator DUB 11.pdf	DUB 11 generator specification sheet.
Type of admin generator DUB 9,10 and 12.pdf	Admin generator DUB 9,10,12 specification sheet

15. Confidentiality

mm. Confidentiality Statement

It is the Environmental Protection Agency's policy to make information received by it in the course of its work open to inspection by any person on request. This is in accordance with the provisions of the European Communities (Access to Information on the Environment) Regulations 2007 to 2011.

In the event that you considered that some of the information being submitted of a confidential nature, then the nature of this information and the reasons why it should be considered confidential, with reference to the European Communities (Access to Information on the Environment) Regulations 2007 to 2011 and any amendments must be explicitly requested using the facility below. The Board of the Environmental Protection Agency will consider the requests and if the information can be deemed as confidential and necessary.

Notwithstanding any request for confidentiality, the Environmental Protection Agency explicitly reserves the right to release data to the Commission, including emissions and allocations to the public, on the basis that the data will be used for the purposes foreseen in Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

Please tick this box if you consider that any part of your form should be treated as commercially confidential/sensitive:	true

The table below identifies which (if any) sections of the form the operator considers should be treated as commercially confidential and explains why disclosure of this information would cause an adverse effect to commercial interests.

Section	Justification
Emission Details	This section highlights the number and size of the individual generators. This information is not generally known or accessible to the public. Because this information may be useful to competitors, it has commercial value. Therefore, we request that this information is not disclosed when making other

Section	**Justification**
	information presented in this application available to the public.
Installation Activities	Annex 1 attachement "Site Map". Microsoft rate data and physical security at their data centres very highly, and do not display any corporate identification or logos on their premises. To this end, the making public of site maps facilitating identification of key facility equipment and geographical location is to be avoided.
Additional Information	Attachment "Emissions_source points.pdf". Microsoft rate data and physical security at their data centres very highly, and do not display any corporate identification or logos on their premises. To this end, the making public of site maps facilitating identification of key facility equipment and geographical location is to be avoided.

END of Appendix I.