Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Headquarters,
Johnstown Castle Estate,
County Wexford, Ireland

GREENHOUSE GAS EMISSIONS PERMIT

Permit Register Number:	IE-GHG025-10354-4
Operator:	Pfizer Ireland Pharmaceuticals Operations Support Group Ringaskiddy Cork
Installation Name:	Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant)
Site Name:	Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant)
Location:	Ballintaggart Ringaskiddy Cork 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-GHG025-10354.

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)**:**

IPC/IE Licence Register Number
P0013-05

Status Log

Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG025-10354-4	09 March 2021	25 June 2021	1. Addition of the following six emission sources (generators) and their emission points; PA 780 (GG-14), PAA 2781 (GG-15), PA 1501 (GG-16), ADM Temp1 (GG-17), ADM Temp 2 (GG-18) and RCMF Temp 3 (GG-19). 2. Removal of the following two emission sources (generators) and their emission points; PA 026 (GG-08) and PA 779 (GG-04) 3. The emission source (generator) at emission point GG-03 is changed from PAA 553 to PAA 548. 4. There was a change to the Thermal Input capacity of PA 1009 at emission point GG-09.

Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG025-10354-1	GHG Permit Application	20 June 2013	24 June 2013	

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG025-10354-2	GHG Variation	14 November 2013	16 July 2014	1.Inclusion of acetylene as a de minimis source stream. 2.Update of details relating to measurement device for Emission Source Reference GG-200 3.Correction of sections to include LPG-001 as a source stream for emission source PA552 and gas oil (DSL-001) as source stream for GG104.
IE-GHG025-10354-3	GHG Variation	05 February 2016	09 March 2016	Inclusion of the source stream VOC-001 (Solvent vapours to the thermal oxidiser PAA-2214)

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)	Pfizer Ireland Pharmaceuticals
"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 transfers this Greenhouse Gas Emissions Permit, subject to any subsequent revisions, corrections or modifications it deems appropriate, to:

The Operator:

Pfizer Ireland Pharmaceuticals
Operations Support Group
Ringaskiddy
Cork

Company Registration Number: 490938

from

The Former Operator:

Pfizer Ireland Pharmaceuticals, a partnership of Pfizer Ireland Pharmaceuticals and C.P. Pharmaceuticals International C.V. (a limited partnership represented by and acting through Pfizer Manufacturing LLC) trading as Pfizer Ireland Pharmaceuticals
Pottery Road
Dun Laoghaire
Dublin

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):

Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant) **Installation number:** 23

located at

Ballintaggart
Ringaskiddy
Cork
Ireland

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

In accordance with Joint Declaration made to the Agency on 04 January 2011, *Pfizer Ireland Pharmaceuticals* is deemed to have assumed and accepted all liabilities, requirements and obligations provided for in or arising under the permit, regardless of how and in respect of what period, including the period 2005-2010, prior to the transfer of the permit, that may arise.

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.: 23

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
(GG-301) OSP4 Production Fugitive emissions,(GG-302) OSP3 Production Fugitive emissions,(GG-303) OSP1 Production Fugitive emissions
(GG-300) Wastewater Treatment Plant

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
PAA-2214	PAA-2214 Flameless Fume Thermal Oxidizer	5	MW
PA-953	PA-953 Diesel Engine Generator (Stand-by)	1.95	MW
GBB-1400	GBB-1400 Natural Gas LPHW Boiler	0.12	MW
GG102	GG-102 Temporary Stand-by Diesel Boiler	11.25	MW
PA-542	PA-542 Natural Gas Fired Steam Boiler	11.25	MW
PA-543	PA-543 Steam Boiler - Natural Gas Fired	11.25	MW
E-2300	E-2300 Diesel Engine Generator (Stand-by)	2.84	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
GG-103	GG-103 Diesel Air Compressor Skid (Stand-by)	0.94	MW
ADM-140	ADM-140 Natural Gas LPHW Boiler	0.37	MW
FAB-1403	FAB-1403 Gas fired hot water calorifier	0.05	MW
PA-1009	PA-1009 Diesel Engine Generator (Stand-by)	0.25	MW
FAA-1403	FAA-1403 Gas Fired Hot Water Calorifier	0.05	MW
GAD-541	GAD-541 Diesel Engine Driven Pump (Stand-by)	0.57	MW
GBA-1400	GBA-1400 Natural Gas LPHW Boiler	0.12	MW
GA 583	GA 583 Diesel Engine Driven Pump (Stand-by)	0.4	MW
PA-552	PA-552 Steam Boiler - Natural Gas Fired	11.25	MW
GG-104	GG-104 Diesel Engine Driven Pump	0.51	MW
GG-201	Contractors canteen cooking ovens	0	MW
GG-202	Building 161 Laboratory equipment	0	MW
GG-203	Building 177 Laboratory equipment (LPG)	0	MW
GG-204	Building 191 Laboratory equipment	0	MW
GG-205	Building 196 Laboratory equipment	0	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
GG-206	Building 175 Laboratory equipment	0	MW
GG-200	Main canteen cooking ovens	0	MW
GG-207	Building 177 Laboratory Equipment (acetylene)	0	MW
PA 780	PA 780 Diesel Engine Generator [Standby]	0.72	MW
PAA-548	PAA-548 Diesel Engine Generator (Stand-by)	2.01	MW
PA-1501	PA-1501 Diesel Engine Generator [Standby]	2.01	MW
ADM Temp No. 1	Temporary generator 1 at contractors marquee (HSE COVID guidelines)	0.3	MW
ADM Temp No. 2	Temporary generator 2 contractors marquee (HSE COVID guidelines)	0.3	MW
PAA-2781	PAA-2781 Diesel Generator (Standby)	2.01	MW
RCMF Temp No. 3	Temporary Generator No. 3 RCMF	0.16	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.

2.8 The Operator shall submit to the Agency by 31 December of each year all relevant information about any planned or effective changes to the capacity, activity level and operation of an installation. The information submitted shall be in the format required by the Agency.

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. This shall include all annual emissions reports submitted by the Former Operator(s) in respect of the installation.

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.

3.16 Any discrepancies with regard to reports submitted by the Former Operator(s) in respect of this installation become the liability of the Operator.

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, including any liabilities arising from the period before the permit was transferred. 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.

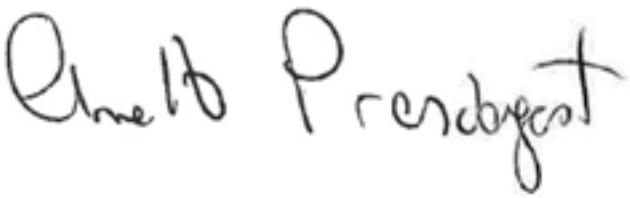
Reason: To provide for the surrendering, holding, transfer and cancellation of allowances in respect of reported emissions.

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-GHG025-10354

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	Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant)
Site name	Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant)
Address	Ballintaggart Ringaskiddy Cork Ireland
Grid reference of site main entrance	176538 E, 64581.2 N
Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.	Yes

IPC/IE Licence Register Number	Licence holder	Competent body
P0013-05	Pfizer Ireland Pharmaceuticals	Environmental Protection Agency

Has the regulated activity commenced at the Installation?	Yes
Date of Regulated Activity commencement	01 January 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	Pfizer Ireland Pharmaceuticals
Company Registration Number	490938

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	Operations Support Group
Address Line 2	N/A
City/Town	Ringaskiddy
County	Cork
Postcode	N/A

Principal office address

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

Address Line 1	Ringaskiddy Active Pharmaceutical Ingredient Plant
Address Line 2	P.O.Box 140
City/Town	Ringaskiddy
County	Cork
Postcode	N/A
Company registration number	N/A

Holding company

Does the company belong to a holding company?	Yes

Holding company name	Pfizer Inc

Holding company address

Address Line 1	235 East 42nd Street
Address Line 2	New York
City/Town	NY 10017, United States
County	N/A
Postcode	N/A
Company registration number	N/A
Is the holding company principal address different to the	No

holding company address?

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

4. Service Contact

e. Service Contact

Address	Pfizer Ireland Pharmaceuticals (Ringaskiddy API Plant) Ballintaggart Ringaskiddy Cork 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.

Pfizer Ireland Pharmaceuticals, Ringaskiddy Active Pharmaceutical Ingredient Plant located at Ballintaggart, Ringaskiddy, County Cork, is a large scale multipurpose manufacturer of new and existing active pharmaceutical

ingredients and their intermediates using chemical processes. The site is also classified as a waste management facility with the capability to recover or treat hazardous and non hazardous materials. The site encompasses the Operations Support Group which carries out corporate and central functions such as procurement, human resources, etc. The site is located within an industrial zone. The facility operates on a twenty-four hour day, seven days per week shift basis and employs 620 personnel approximately.

Products are manufactured onsite exclusively by organic synthesis in campaigns of variable length using batch processing operations. Products are then exported in bulk form to designated Pfizer distribution points and facilities throughout the world for formulation and subsequent supply to the marketplace. Approximately 200 to 700 tonnes of active pharmaceutical intermediates and products may be typically manufactured on the site annually, although this quantity is highly dependent on market demand, product type and global capacity utilisation, and may therefore vary significantly from year to year. The site operates under IE licence register number P0013-05 granted by the Environmental Protection Agency. The site has developed and implemented an environmental management system which is formally certified to ISO 14001 by the National Standards Authority of Ireland. The site was certified to ISO 50001 in 2018. The main combustion plant on site includes 3 gas fired steam boilers and a gas fired fume thermal oxidiser complete with waste heat recovery boiler.

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)	65.685	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
100-C4724 Rev 10.pdf	Site Layout Drawing showing GHG emission points, fuel meters and distribution
20020-SK-001.pdf	Site Layout showing temporary generators and future generators
20020-SK-001-D 28-Apr-21.pdf	Site map showing location of RCMF temporary generator.

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 $CO_{2(e)}$)	12500
Justification for the use of a conservative estimate of CO_2 emissions.	The above estimate is conservative based on Phase 3 CO2 emissions. CO2 emissions for Phase 3 are as follows: 2018: 11,752 Tonnes 2019: 11,421 Tonnes 2020: 12,048 Tonnes

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
PAA-2214	PAA-2214 Flameless Fume Thermal Oxidizer
PA-953	PA-953 Diesel Engine Generator (Stand-by)
GBB-1400	GBB-1400 Natural Gas LPHW Boiler
GG102	GG-102 Temporary Stand-by Diesel Boiler
PA-542	PA-542 Natural Gas Fired Steam Boiler

Emission Source Reference	Emission Source Description
PA-543	PA-543 Steam Boiler - Natural Gas Fired
E-2300	E-2300 Diesel Engine Generator (Stand-by)
PAA-548	PAA-548 Diesel Engine Generator (Stand-by)
GG-103	GG-103 Diesel Air Compressor Skid (Stand-by)
ADM-140	ADM-140 Natural Gas LPHW Boiler
FAB-1403	FAB-1403 Gas fired hot water calorifier
PA-1009	PA-1009 Diesel Engine Generator (Stand-by)
FAA-1403	FAA-1403 Gas Fired Hot Water Calorifier
GAD-541	GAD-541 Diesel Engine Driven Pump (Stand-by)
GBA-1400	GBA-1400 Natural Gas LPHW Boiler
GA 583	GA 583 Diesel Engine Driven Pump (Stand-by)
PA-552	PA-552 Steam Boiler - Natural Gas Fired
GG-104	GG-104 Diesel Engine Driven Pump
GG-201	Contractors canteen cooking ovens
GG-202	Building 161 Laboratory equipment
GG-203	Building 177 Laboratory equipment (LPG)
GG-204	Building 191 Laboratory equipment
GG-205	Building 196 Laboratory equipment
GG-206	Building 175 Laboratory equipment
GG-200	Main canteen cooking ovens
GG-300	Wastewater Treatment Plant
GG-301	OSP4 Production Fugitive emissions
GG-302	OSP3 Production Fugitive emissions
GG-303	OSP1 Production Fugitive emissions
GG-207	Building 177 Laboratory Equipment (acetylene)
PA 780	PA 780 Diesel Engine Generator [Standby]
PA-1501	PA-1501 Diesel Engine Generator [Standby]
ADM Temp No. 1	Temporary generator 1 at contractors marquee (HSE COVID guidelines)
ADM Temp No. 2	Temporary generator 2 contractors marquee (HSE COVID guidelines)
PAA-2781	PAA-2781 Diesel Generator (Standby)
RCMF Temp No. 3	Temporary Generator No. 3 RCMF

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

Emission Source Reference	Emission Source Description

Emission Source Reference	**Emission Source Description**
PAA-2214	PAA-2214 Flameless Fume Thermal Oxidizer
PA-953	PA-953 Diesel Engine Generator (Stand-by)
GBB-1400	GBB-1400 Natural Gas LPHW Boiler
GG102	GG-102 Temporary Stand-by Diesel Boiler
PA-542	PA-542 Natural Gas Fired Steam Boiler
PA-543	PA-543 Steam Boiler - Natural Gas Fired
E-2300	E-2300 Diesel Engine Generator (Stand-by)
GG-103	GG-103 Diesel Air Compressor Skid (Stand-by)
ADM-140	ADM-140 Natural Gas LPHW Boiler
FAB-1403	FAB-1403 Gas fired hot water calorifier
PA-1009	PA-1009 Diesel Engine Generator (Stand-by)
FAA-1403	FAA-1403 Gas Fired Hot Water Calorifier
GAD-541	GAD-541 Diesel Engine Driven Pump (Stand-by)
GBA-1400	GBA-1400 Natural Gas LPHW Boiler
GA 583	GA 583 Diesel Engine Driven Pump (Stand-by)
PA-552	PA-552 Steam Boiler - Natural Gas Fired
GG-104	GG-104 Diesel Engine Driven Pump
GG-201	Contractors canteen cooking ovens
GG-202	Building 161 Laboratory equipment
GG-203	Building 177 Laboratory equipment (LPG)
GG-204	Building 191 Laboratory equipment
GG-205	Building 196 Laboratory equipment
GG-206	Building 175 Laboratory equipment
GG-200	Main canteen cooking ovens
GG-207	Building 177 Laboratory Equipment (acetylene)
PA 780	PA 780 Diesel Engine Generator [Standby]
PAA-548	PAA-548 Diesel Engine Generator (Stand-by)
PA-1501	PA-1501 Diesel Engine Generator [Standby]
ADM Temp No. 1	Temporary generator 1 at contractors marquee (HSE COVID guidelines)
ADM Temp No. 2	Temporary generator 2 contractors marquee (HSE COVID guidelines)
PAA-2781	PAA-2781 Diesel Generator (Standby)
RCMF Temp No. 3	Temporary Generator No. 3 RCMF

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
V13	PAA-2214 Flameless Fume Thermal Oxidizer
GG-02	PA-953 Diesel Engine Generator (Stand-by)
GG-06	GBB-1400 Natural Gas LPHW Boiler
GG-102	GG-102 Temporary Stand-by Diesel Boiler
GG-100	PA-542 Natural Gas Fired Steam Boiler
V21	PA-543 Steam Boiler - Natural Gas Fired
GG-01	E-2300 Diesel Engine Generator (Stand-by)
GG-03	PAA-548 Diesel Engine Generator (Stand-by)
GG-103	GG-103 Diesel Air Compressor Skid (Stand-by)
GG-07	ADM-140 Natural Gas LPHW Boiler
GG-13	FAB-1403 Gas fired hot water calorifier
GG-09	PA-1009 Diesel Engine Generator (Stand-by)
GG-12	FAA-1403 Gas Fired Hot Water Calorifier
GG-10	GAD-541 Diesel Engine Driven Pump (Stand-by)
GG-05	GBA-1400 Natural Gas LPHW Boiler
GG-11	GA 583 Diesel Engine Driven Pump (Stand-by)
V1	PA-552 Steam Boiler - Natural Gas Fired
GG-104	GG-104 Diesel Engine Driven Pump
GG-201	Contractors canteen cooking ovens
GG-202	Building 161 Laboratory equipment
GG-203	Building 177 Laboratory equipment (LPG)
GG-204	Building 191 Laboratory equipment
GG-205	Building 196 Laboratory equipment
GG-206	Building 175 Laboratory equipment
GG-200	Main canteen cooking ovens
N/A	N/A
GG-207	Building 177 laboratory equipment (acetylene)
GG-14	PA-780 Diesel Engine Generator (Standby)
GG-16	PA-1501 Diesel Engine Generator (Standby)
GG-15	PAA-2781 Diesel Engine Generator (Standby)
GG-17	ADM Temporary Generator No.1
GG-18	ADM Temporary Generator No.2
GG-19	RCMF Temporary 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
NG-001	Combustion: Other gaseous & liquid fuels	Natural Gas
DSL-001	Combustion: Commercial standard fuels	Gas/Diesel Oil
LPG-001	Combustion: Other gaseous & liquid fuels	Liquefied Petroleum Gases
N/A	Other	N/A
NG-002	Combustion: Other gaseous & liquid fuels	Natural Gas
ACYL-001	Combustion: Other gaseous & liquid fuels	Acetylene
VOC-001	Combustion: Other gaseous & liquid fuels	Volatile Organic Compounds

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
NG-001	ADM-140,FAA-1403,FAB-1403,GBA-1400,GBB-1400,PA-542,PA-543,PA-552,PAA-2214	GG-05,GG-06,GG-07,GG-100,GG-12,GG-13,V1,V13,V21	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)
DSL-001	ADM Temp No. 1,ADM Temp No. 2,E-2300,GA 583,GAD-541,GG102,GG-103,GG-104,PA 780,PA-1009,PA-1501,PA-552,PA-953,PAA-2781,PAA-548,RCMF Temp No. 3	GG-01,GG-02,GG-03,GG-09,GG-10,GG-102,GG-103,GG-104,GG-11,GG-14,GG-15,GG-16,GG-17,GG-18,GG-19,V1	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)
LPG-001	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,PA-552	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,V1	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
NG-002	GG-200	GG-200	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)
ACYL-001	GG-207	GG-207	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)
VOC-001	PAA-2214	V13	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? Yes

Detail of these activities:

Source Stream Refs	Emission Source Ref	Emission Point Ref
N/A	GG-301,GG-302,GG-303	N/A
N/A	GG-300	N/A

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 primary calculation for CO2 emissions is as follows: CO2 emissions = Activity data (related to amount of fuel combusted expressed as terajoules based on net calorific value (NCV)) *Emission Factor*Oxidation Factor as given in the The Monitoring and Reporting Regulation (Commission Regulation (EU) No. 601/2012 of 21 June 2012) (hereinafter the "MRR"). The installation can avail of the provisions set out in Article 47 of the MRR as its emissions are less than 25,000 tonnes per annum.The data collection and calculation of installation CO2 emissions is governed by site EMS procedures, EMS-J15 - "Management of greenhouse gas emissions, refrigerants, water metering and electricity" and EMS-L9 - "Preparation of greenhouse gas emissions annual report". For natural gas data collection, supplier bills are collected and the gas consumption in gross kWh is used as the initial basis for activity data. For net calorific value

conversion of natural gas, the gross to net gas calorific value conversion method specified by the Agency is used. Emission factors and oxidation factors are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report"document issued by the Agency.

Natural gas is divided into 2 source streams. All of the gas except for the gas used by the cooking ovens in the main canteen is measured by a G400 turbine meter. Gas used by the cooking ovens in the main canteen is measured by a G25 rotary meter. Bord Gais provide a Gas Metering System Summary for the G400 turbine meter annually.

Diesel (gas oil) is classified as a de minimis source. Diesel is accounted for by systematically capturing and checking all diesel delivery dockets and using these as the basis for quantifying diesel fuel coming onto the site. Density for diesel is taken from supplier data sheet. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report"document issued by the Agency.

For LPG, the total annual CO2 emission for LPG is generally expected to be in the order of 1 tonne out of a typical site emission of 12,900 tonnes of CO2 and is thus a de-minimis source. Approved purchase orders are used for the tracking of deliveries of LPG cylinders as this is the only place the quanitities of LPG appears on Pfizer's data collection system. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report"document issued by the Agency.

For acetylene, the total annual CO2 emission for acetylene is generally expected to be in the order of less than 1 tonne, out of a typical site emission of 12,900 tonnes of CO2 and is thus a de-minimis source. Approved purchase orders are used for the tracking of deliveries of aceylene cylinders as this is the only place the quanitities of acetylene appears on Pfizer's data collection system. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report"document issued by the Agency.

For Volatile Organic Compounds [VOC], the total annual CO2 emission for VOC is generally expected to be in the order of less than 250 tonnes, out of a typical site emission of 12,900 tonnes of CO2 and is thus a de-minimis source stream. A sampling and monitoring programme was implemented to directly determine inlet VOC on the inlet header and consequent CO2 emission. The sampling programme is conducted by an independent ISO 17025 accredited air monitoring contract company on a typical manufacturing day, representative of normal operations. A series of 10 consecutive half hour samples are taken to ensure that all typical activities are represented in the sampling programme. Concomitant volumetric flow measurements are recorded for the half hour periods measured. The ISO 17025 accredited contractor provides a report which records the volumetric flowrate [kg hr-1] of each VOC component in the fume stream entering the TO. The Calculation Methodology involves calculating the average daily mass flow for each VOC in terms of kg hr-1. Knowing the annual operating hours of the TO, the annual mass flow of each VOC [kg year-1] is calculated. The carbon content of each VOC is known from standard molecular weights and standard carbon atomic weights. It is assumed that all the carbon content is oxidised to CO2 in the TO. The sum of CO2 emissions derived from each VOC yields the total VOC-derived CO2 emission from the thermal oxidiser for the year in question. Annual CO2 emissions from VOC = (Annual mass flow of each VOC*fractional weight of carbon content)*3.664 (to convert C to CO2). The NCV of the source stream will be determined based on literature values of the components of the waste gas stream and a weighted NCV reported for the source stream.

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
NG-001	ADM-140,FAA-1403,FAB-1403,GBA-1400,GBB-1400,PA-542,PA-543,PA-552,PAA-2214	2637107001-G400	Turbine meter	As for G400 fiscal meter	As for G400 fiscal meter	1.41	Main site Bord Gais AGI
DSL-001	PA-953,GG102,E-2300,PAA-548,GG-103,PA-1009,GAD-541,GA 583,PA-552,GG-104,PA 780,PA-1501,ADM Temp No. 1,ADM Temp No. 2,PAA-2781,RCMF Temp No. 3	NA	Supplier dockets	N/A	N/A	N/A	Engineering Department
LPG-001	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,PA-552	N/A	Purchasing records	N/A	N/A	N/A	Purchasing system
NG-002	GG-200	25000462	Rotary meter	As for G25 Fiscal meter	As for G25 Fiscal meter	7.5	Adjacent to main canteen
ACYL-001	GG-207	Not applicable	Purchasing Records	N/A	N/A	N/A	Purchasing System

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
VOC-001	PAA-2214	MD1	Meters measuring flow of gases for destruction in TO	Not applicable	Not appliable	N/A	Fume inlet to the Thermal Oxidiser

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
NG-001	2637107001-G400	Continual	Trade partner	Yes	Yes	Yes
DSL-001	NA	Batch	Trade partner	Yes	Yes	Yes
LPG-001	N/A	Batch	Trade partner	Yes	Yes	Yes
NG-002	25000462	Continual	Trade partner	Yes	Yes	Yes
ACYL-001	Not applicable	Batch	Trade partner	Yes	Yes	Yes
VOC-001	MD1	Continual	Operator	N/A	N/A	N/A

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)**
NG-001	ADM-140,FAA-1403,FAB-1403,GBA-1400,G	26371 07001-G400	<1.5%	Standard	4	2b	2a	n/a	1	n/a	n/a	12600	97.07	Major	Yes	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)
	BB-1400,PA-542,PA-543,PA-552,PAA-2214																
DSL-001	ADM Temp No. 1,ADM Temp No. 2,E-2300,GA 583,GAD-541,GG102, GG-103,GG-104,PA 780,PA	NA	N/A	Standard	No tier	2a	2a	n/a	1	n/a	n/a	100	0.77	De-minimis	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)
	-1009,PA-1501,PA-552,PA-953,PAA-2781,PAA-548,RCMF Temp No. 3																
LPG-001	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,PA	N/A	N/A	Standard	No tier	2a	2a	n/a	1	n/a	n/a	0.02	0	De-minimis	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)**
	-552																
NG-002	GG-200	25000462	<7.5%	Standard	1	2b	2a	n/a	1	n/a	n/a	30	0.23	De-minimis	Yes	n/a	n/a
ACYL-001	GG-207	Not applicable	N/A	Standard	No tier	1	1	n/a	1	n/a	n/a	0.02	0	De-minimis	N/A	n/a	n/a
VOC-001	PAA-2214	MD1	N/A	Standard	No tier	No tier	No tier	n/a	1	n/a	n/a	250	1.93	De-minimis	N/A	n/a	n/a

Total Estimated Emissions for Calculation (tonnes $CO_{2(e)}$) 12980.04

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
NG-001	ADM-140,FAA-1403,FAB-1403,GBA-1400,GBB-1400,PA-542,PA-543,PA-552,PAA-2214	4	2b	2a	n/a	1	n/a	n/a
DSL-001	ADM Temp No. 1,ADM Temp No. 2,E-2300,GA 583,GAD-541,GG102,GG-103,GG-104,PA 780,PA-1009,PA-1501,PA-552,PA-953,PAA-2781,PAA-548,RCMF Temp No. 3	No tier	2a	2a	n/a	1	n/a	n/a
LPG-001	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,PA-552	No tier	2a	2a	n/a	1	n/a	n/a
NG-002	GG-200	1	2b	2a	n/a	1	n/a	n/a
ACYL-001	GG-207	No tier	1	1	n/a	1	n/a	n/a
VOC-001	PAA-2214	No tier	No tier	No tier	n/a	1	n/a	n/a

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)
NG-001,NG-002	ADM-140,FAA-1403,FAB-1403,GBA-1400,GBB-1400,GG-200,PA-542,PA-543,PAA-2214	EF	Ireland's National Greenhouse Gas Inventory	n/a
DSL-001	ADM Temp No. 1,ADM Temp No. 2,E-2300,GA 583,GAD-541,GG102,GG-103,GG-104,PA 780,PA-1009,PA-1501,PA-552,PA-953,PAA-2781,PAA-548,RCMF Temp No. 3	NCV and Emission Factor	Ireland's National Greenhouse Gas Inventory	n/a
LPG-001	GG-201,GG-202,GG-203,GG-204,GG-205,GG-206,PA-552	NCV and Emission Factor	Ireland's National Greenhouse Gas Inventory	n/a
ACYL-001	GG-207	NCV and Emission Factor	As published on the EPA website	n/a
VOC-001	PAA-2214	Emission Factor	Calculation methodology recorded in the spreadsheet titled VOC CO2 Emissions and 3.664 tCO2/tC factor in MRR	n/a

Sampling and Analysis

Do you undertake sampling and analysis of any of the parameters used in the calculation of your CO_2 emissions? Yes

x. Analysis

The table below lists, for each source stream, where calculation factors are to be determined by analysis.

Source Stream Refs.	Emission Source Refs.	Parameter	Method of Analysis	Frequency	Laboratory Name	Laboratory ISO17025 Accredited	Evidence Reference
VOC-001	PAA-2214	Speciated VOC composition	Measurement of TA Luft Organics in accordance with EN13649:2014: Stationary source emissions. Determination of the mass concentration of individual gaseous organic compounds. Sorptive sampling method followed by solvent extraction or thermal desorption. CO2 emissions are calculated assuming all carbon is oxidised to CO2. Spreadsheet titled "VOC CO2 Emissions TO FINAL for EPA submission describes the calculation	Biannual	Air Scientific - INAB Registration 319T. Report attached to this permit variation	Yes	n/a

Source Stream Refs.	Emission Source Refs.	Parameter	Method of Analysis	Frequency	Laboratory Name	Laboratory ISO17025 Accredited	Evidence Reference
			methodology used				

Detail about the written procedures for the above analysis.

Where a number of procedures are used details of an overarching procedure which covers the quality assurance of analyses methods and links together individual analytical methods is listed.

Title of procedure	Licenced Monitoring of V3, V5, V13 and OSP4 Vent Header
Reference for procedure	PS-EMU-A19
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	PS-EMU-A19 describes the IE Licence monitoring of VOC from the licensed emission points. The procedure describes sample method, responsibilities, sample location and describes sample frequency.All monitoring must be conducted by an ISO 17025 accredited contractor. Refer to attached SOP.
Post or department responsible for the procedure and for any data generated	Environmental Monitoring Unit Laboratory
Location where records are kept	Environmental Monitoring Unit Laboratory
Name of IT system used	N/A
List of EN or other standards applied	N/A

y. Sampling Plan

Details about the procedure covering the sampling plan for the analysis table above.

The procedure below covers the elements of a sampling plan as required by Article 33 of the MRR. Where a number of procedures are used, details of an overarching procedure which covers the sampling methods and links together individual sampling methods are listed.

Attachment	**Description**
PS-EMU-A-19 IE Licence monitoring of V3 V5 by Axis Environmental rev 3.doc	Licenced Monitoring of V3, V5, V13 and OSP4 Vent Header

Title of procedure	Licenced Monitoring of V3, V5, V13 and OSP4 Vent Header
Reference for procedure	PS-EMU-A19
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	PS-EMU-A19 describes the IE Licence monitoring of VOC from the licensed emission points. The procedure describes scheduling of sampling, frequency of sampling and sample methodology, responsibilities and sample location.All monitoring must be conducted by an ISO 17025 accredited contractor.
Post or department responsible for the procedure and for any data generated	Environmental Monitoring Unit Laboratory
Location where records are kept	Environmental Monitoring Unit Laboratory
Name of IT system used	N/A
List of EN or other standards applied	N/A

z. Sampling Plan Appropriateness

The procedure to be used to revise the appropriateness of the sampling plan.

Title of procedure	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The sampling plan will be reviewed periodically and elements will be amended where analytical results indicates that the heterogeneity of the VOC source stream differs from the information on heterogeneity on which the original sampling plan was based. Any updates to the sampling plan will be submitted to the EPA for agreement.
Post or department responsible for the procedure and for any data generated	Environmental Monitoring Unit Laboratory
Location where records are kept	Environmental Monitoring Unit Laboratory
Name of IT system used	N/A
List of EN or other standards applied	N/A

Are stock estimates carried out as part of the emission calculations?	No

aa. Tracking Instruments

The procedure used to keep track of instruments installed in the installation used for determining activity data.

Title of procedure	Maintenance & calibration
Reference for procedure	EMS-L3
Diagram reference	N/A
Brief description of procedure.	Procedure describes the maintenance and calibration of instrumentation on site.
Post or department responsible for the procedure and for any data generated	Engineering
Location where records are kept	Maintenance Library
Name of IT system used	N/A
List of EN or other standards applied	N/A

11. Management

bb. 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**
Team Leader Environment	Responsible for compliance with the requirements of the GHG permit. Responsible for calculation of site CO2 emissions for submission to verifier / Agency.
Head of EHS	Overall responsibility for Environmental, Health and Safety Issues
Site Leader	Overall responsibility for Environmental, Health and Safety issues

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

cc. 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	(1) Management of greenhouse gas emissions, refrigerants, water metering and electricity. (2) Environmental Training
Reference for procedure	(1) EMS-J15 (2) EMS-G1
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure EMS-J15 covers all activities associated with compliance with the requirements of the Greenhouse gas emissions permit. The procedure outlines the responsibilities for monitoring and reporting within the installation.The procedure EMS-G1 describes how training needs are identified for each role. The training needs are identified and recorded on a Job Function Curriculum [JFC]. A JFC is a list of approved learning needs detailing the systems, technical, quality, safety and environmental learning requirements for each job function.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All SOP's are located on PDocs. Training records are located on PLS. All electronic files including energy data are held on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

dd. 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	(1) Internal environmental audits, (2)Management Systems Review, (3)Preparation of greenhouse gas emissions annual report and (4)Management of greenhouse gas emissions, refrigerants, water metering and electricity.
Reference for procedure	(1) EMS-O1, (2) EMS-O2, (3)EMS-L9, (4)EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	EMS-O1 describes the internal environmental auditing system which references the internal environmental audit schedule. An audit of the GHG permit is included on the

	internal audit schedule annually. EMS-O2 is the mechanism by which the site reviews each element of the environmental management system including the requirements of the greenhouse gas emissions permit and Monitoring Plan. EMS-L9 describes the preparation and submission of the annual emissions report .EMS-J15 covers all activities associated with compliance with the requirements of the Greenhouse gas emissions permit and includes assessment of potential measures for improvement of the monitoring methodology applied.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All electronic files are stored on the Pfizer IT Network. .
Name of IT system used	N/A
List of EN or other standards applied	N/A

ee. Data Flow Activities

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

Title of procedure	(1) Management of greenhouse gas emissions, refrigerants, water metering and electricity and (2)Preparation of greenhouse gas emissions annual report.
Reference for procedure	EMS-J15 and EMS-L9
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	It clearly describes the data flow activities and how data is used for the GHG permit calculations in the determination of the annual tonnes of CO2.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	The gas invoices and LPG purchases are available on SAP. The diesel delivery dockets are available in the maintenance department. Records for the analysis of the Volatile Organic Carbon on the inlet to the Thermal Oxidiser are maintained by the Environmental Monitoring Unit.
Name of IT system used	N/A
List of EN or other standards applied	N/A
List of primary data sources	The list of primary data sources are the following: Gas invoices from natural gas supplier;Diesel fuel delivery dockets;LPG purchasing records for acetylene and other combustible gases. Reports from the ISO 17025 accredited contractor for the determination of Volatile Organic Carbon on the inlet to the Thermal Oxidiser.
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	The Monitoring and Reporting Regulation (Commission Regulation (EU) No. 601/2012 of 21 June 2012) (hereinafter the "MRR"), defines further requirements for monitoring and reporting. This installation can avail of the provisions set out in Article 47 of the above guideline as its emissions

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 activities are recorded	are less than 25,000 tonnes per annum. The data collection and calculation of installation CO2 emissions is governed by site EHS procedures EMS-J15 - "Management of greenhouse gas emissions, refrigerants, water metering and electricity" and EMS- For natural gas data collection, supplier bills are collected and the gas consumption in gross kWh is used as the initial basis for activity data. For net calorific value conversion of natural gas, we propose to use the gross to net gas calorific value conversion method specified by the Agency. Emission factors and oxidation factors are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report" document issued by the Agency. For diesel it is proposed to use the following method: projected CO2 emissions from diesel are typically in the order of 300 tonnes and approx. 2-3% of total site emissions. This qualifies as a de minimis source. It is proposed to account for diesel by systematically capturing and checking all diesel delivery dockets, and using these as the basis for quantifying diesel fuel coming on to site. Density for diesel is taken from supplier data sheet. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report" document issued by the Agency. For LPG the total annual CO2 emission for LPG is generally expected to be in the order of 1 tonne out of a typical site emission of approximately 15,000 tonnes of CO2 and is thus a de-minimis source. It is proposed to use approved purchase orders for tracking the deliveries of LPG cylinders, as this is the only place the quantities of LPG appears on Pfizer's data collection system. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report" document issued by the Agency. For acetylene, the total annual CO2 emission for acetylene is generally expected to be in the order of less than1 tonne, out of a typical site emission of 13,000 tonnes of CO2 and is thus a de-minimis source. Approved purchase orders are used for the tracking of deliveries of aceylene cylinders as this is the only place the quanitities of acetylene appears on Pfizer's data collection system. Net calorific value, emission factor and oxidation factor are taken from the annual "Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions

Report"document issued by the Agency.

For Volatile Organic Compounds [VOC], the total annual CO2 emission for VOC is generally expected to be in the order of less than 250 tonnes, out of a typical site emission of 12,900 tonnes of CO2 and is thus a de-minimis source.

A sampling and monitoring programme was implemented to directly determine inlet VOC on the inlet header and consequent CO2 emission. The sampling programme is conducted by an independent ISO 17025 accredited air monitoring contract company on a typical manufacturing day, representative of normal operations. A series of 10 consecutive half hour samples are taken to ensure that all typical activities are represented in the sampling programme. Concomitant volumetric flow measurements are recorded for the half hour periods measured. The ISO 17025 accredited contractor provides a report which records the volumetric flowrate [kg hr-1] of each VOC component in the fume stream entering the TO. The Calculation Methodology involves calculating the average daily mass flow for each VOC in terms of kg hr-1. Knowing the annual operating hours of the TO, the annual mass flow of each VOC [kg year-1] is calculated. The carbon content of each VOC is known from standard molecular weights and standard carbon atomic weights. It is assumed that all the carbon content is oxidised to CO2 in the TO. The sum of CO2 emissions derived from each VOC yields the total VOC-derived CO2 emission from the thermal oxidiser for the year in question.Annual CO2 emissions from VOC = (Annual mass flow of each VOC*fractional weight of carbon content)*3.664 (to convert C to CO2). The NCV of the source stream will be determined based on literature values of the components of the waste gas stream and a weighted NCV reported for the source stream.

Submit relevant documents to record data flow activities

Attachment	**Description**
EMS-L9.pdf	Preparation and submission of annual emissions monitoring report
EMS-J15.pdf	Management of Greenhouse gas emissions, refrigerants,

Attachment	Description
	water metering and electricity

ff. 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	(1) Management of greenhouse gas emissions, refrigerants, water metering and electricity, (2) Internal environmental audits and (3) Managment Systems Review
Reference for procedure	EMS-J15, EMS-O1, EMS-02
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The management and operation of the Emissions Trading Scheme is fully integrated in the Environmental Management System. Internal reviews of the control system are in accordance with the procedures outlined in EMS-O1 [Internal Environmental Audits] and EMS-O2 [Management System Review]. Inherent risks, ie quality checking of data are controlled by EMS-J15.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All records are located on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

gg. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure outlines in Section 3.1.6. that the system in place to control maintenance and calibration of instruments involved in environmental control is described in EMS-L3 (Maintenance and Calibration). Where the measurement equipment used to provide the relevant GHG data is provided from an external party, the procedures outlined in EMS-L3 do not apply. Calibration Information for the main AGI Bord Gais Meter is obtained from Bord Gais Networks annually.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer

Location where records are kept	All records are stored on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

hh. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	EMS-J15 refers to the corporate policy, WTSO-0958 titled BT [Business Technology] Disaster Recovery Management which describes Disaster Recovery Management at Pfizer. This procedure refers out to a number of procedures which describe mechanisms in place for information protection and risk management, Business Continuity Management, back-up of electronic data and Business Technology records management and personnel qualification.In addition to the above corporate policy, the BT compliance playbook addresses all aspects of compliance of Business Technology.
Post or department responsible for the procedure and for any data generated	Business Technology
Location where records are kept	Business Technology
Name of IT system used	N/A
List of EN or other standards applied	N/A

ii. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity and Preparation of Greenhouse gas emissions Annual Report
Reference for procedure	EMS-J15 and EMS-L9
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	Review and validation of data are described in EMS-J15 and EMS-L9.The procedure includes a check on whether data is complete, comparisons with data over previous years, comparison of fuel consumption reported with purchase records and criteria for rejecting data. In relation to data from the measurement of VOC on the inlet to the TO, the

	data is supplied by an ISO 17025 contractor and their systems and data are subject to the INAB auditing and verification scheme.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All records are stored on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

jj. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	Corrections and Corrective actions are described in Section 3.1.9 in EMS-J15. The brief description outlines the actions undertaken if data flow activities and control activities are found not to function effectively.
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All records are stored on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

kk. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The annual verification of the data by a third party verifier as described in Section 3.1.8 of EMS-J15 is one outsourced activity. The biannual testing of the OSP4 [V13] vent header, inlet to the Thermal Oxidiser is outsourced to an ISO 17025 accredited contractor.
Post or department responsible for the procedure and for any data generated	Environment Team
Location where records are kept	All records are stored on the Pfizer IT Network

Name of IT system used	N/A
List of EN or other standards applied	N/A

II. Record Keeping and Documentation

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

Title of procedure	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	Record keeping and documentation is described in Section 3.1.10 of EMS-J15 as follows. Copies of all correspondence, communications, calculations, back-up-data, notifications, any documentation associated with preparation of the annual report and any other data required to comply with directive 2003/87/EC, 2011/278/EU and 601/2012/EU shall be held on site for a period of at least 10 years after filing in acciordance with Article 66 of the MRR. In particular the following data shall be retained: (1) The monitoring plan approved by the competent authority; (2) Documents justifying the selection of the monitoring methodology and the documents justifying temporal or non-temporal changes of monitoring methodologies and tiers approved by the competent authority; (3) All relevant updates of monitoring plans notified to the competent authority in accordance with Article 15, and the competent authority's replies; (4) All written procedures referred to in the monitoring plan, the procedures for data flow activities and the procedures for control activities; (5) A list of all versions used of the monitoring plan and all related procedures; (6) Documentation of the responsibilities in connection to the monitoring and reporting; (7) The risk assessment where applicable; (8) The improvement reports in accordance with Article 69; (9) The verified annual emission report;

	(10) The verification report; (11) Any other information that is identified as required for the verification of the annual emissions report. (12) The greenhouse gas emissions permit, and any updates thereof; (13) Any uncertainty assessments, where applicable; (14) For calculation-based methodologies applied in installations: (a) the activity data used for any calculation of the emissions for each source stream, categorised according to process and fuel or material type; (b) a list of all default values used as calculation factors, where applicable; (c) the full set of sampling and analysis results for the determination of calculation factors; (d) documentation about all ineffective procedures corrected and correction action taken in accordance with Article 63; (e) any results of calibration and maintenance of measuring instruments;
Post or department responsible for the procedure and for any data generated	Environmental Team and Plant Engineer
Location where records are kept	All records are stored on the Pfizer IT Network
Name of IT system used	N/A
List of EN or other standards applied	N/A

mm. 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

nn. Environmental Management System

Does your organisation have a documented Environmental Management System?	Yes
Is the Environmental Management System certified by an accredited organisation?	Yes
The standard to which the Environmental Management System is certified:	ISO 14001

12. Changes in Operation

oo. 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	Management of greenhouse gas emissions, refrigerants, water metering and electricity
Reference for procedure	EMS-J15
Diagram reference	N/A
Brief description of procedure. The description should	The evaluation and communication of changes in operation

cover the essential parameters and operations performed	are detailed in EMS-J15 in section 3.1.1 (b) as follows: Changes to the operation of an installation: An assessment shall be conducted to determine any changes to the operation of an installation. The procedure describes the provisions in place at the installation to ensure that all relevant information about any planned or effective changes to the capacity, activity level and operation of an installation is regularly reviewed to identify any changes that have an impact on the installation's allocation under COMMISSION IMPLEMENTING REGULATION (EU) 2019/1842 of 31 October 2019 laying down rules for the application of Directive 2003/87/EC of the European Parliament and of the Council as regards further arrangements for the adjustments to free allocation of emission allowances due to activity level changes. An annual report on the activity level of each sub-installation in the preceding calendar year shall be submitted to the EPA in accordance with the requirements of the Regulation.
Post or department responsible for the procedure and for any data generated	Environment Team and Plant Engineer
Location where records are kept	All records are stored on the Pfizer IT network
Name of IT system used	N/A

13. Abbreviations

pp. Abbreviations Acronyms or definitions

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

Abbreviation	**Definition**
EMS	Environmental Management System
PLS	Pfizer Learning System
OSP	Organic Synthesis Plant
VOC	Volatile Organic Compounds
TO	Thermal Oxidiser

14. Additional Information

Any other information:

Attachment	Description
N/A	N/A

15. Confidentiality

qq. 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: false

END of Appendix I.