Headquarters,
Johnstown Castle Estate,
County Wexford, Ireland

GREENHOUSE GAS EMISSIONS PERMIT

Permit Register Number:	IE-GHG014-10344-6
Operator:	Wyeth Nutritionals Ireland Limited Tomdeely North Askeaton Limerick
Installation Name:	Wyeth Nutritionals Ireland Limited
Site Name:	Wyeth Nutritionals Ireland Limited
Location:	Wyeth Nutritionals Ireland Limited Askeaton Limerick 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-GHG014-10344.

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
P0395-03

Status Log

Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG014-10344-6	23 November 2018	17 January 2019	Inclusion of the fuel F7 (BioLPG).

Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG014-10344-1	GHG Permit Application	15 January 2013	20 February 2013	
IE-GHG014-10344-2	GHG Variation	11 September 2014	29 January 2015	Change of Operator name and address and Installation name change. Addition of emission sources: bunsen burners S14 , air heater in project workshop S16 and drier deluge water pump S17. Inclusion of the source stream acetylene for welding S15.
IE-GHG014-10344-3	GHG Variation	11 February 2016	21 March 2016	Metering details and methodology updated for the determination of fuel combustion for F3 (LPG).
IE-GHG014-10344-4	GHG Variation	25 April 2017	21 August 2017	Inclusion of the emission sources S18, S19, S20 and S21 and associated emission points. Removal of the emission source S6, emission point A3-25. Removal of the emission source S7, emission point A3-26 from 30 September 2017.
IE-GHG014-10344-5	GHG Variation	29 November 2017	17 May 2018	Removal of the emission source S2, emission point A1-3. Inclusion of the emission source S22 and associated emission point A3-38.

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)	Wyeth Nutritionals Ireland Limited
"operator"	Any person who operates or controls an installation or to whom decisive economic power over the functioning of the installation has been delegated.
Person	Any natural or legal person.
Reportable emissions	The total releases to the atmosphere of carbon dioxide (expressed in tonnes of carbon dioxide equivalent) from the emission sources specified in Table 2 and arising from the Schedule 1 activities which are specified in Table 1.
The Regulations	European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 (S.I. No 490 of 2012) and any amendments or revisions thereto.
The Verifier	A legal person or another legal entity carrying out verification activities pursuant to Regulation (EU) No 600/2012 and accredited by a national accreditation body pursuant to Regulation (EC) No 765/2008 and Regulation (EU) No 600/2012 or a natural person otherwise authorised, without prejudice to Article 5(2) of Regulation (EC) No 765/2008, at the time a verification report is issued.
The Registry	The Registry as provided for under Article 19 of Directive 2003/87/EC.

Schedule 1	Schedule 1 to the Regulations.

Reasons for the Decision

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

Activities Permitted

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

The Operator:

Wyeth Nutritionals Ireland Limited
Tomdeely North
Askeaton
Limerick

Company Registration Number: 393631

from

The Former Operator:

Pfizer Ireland Pharmaceuticals
Operations Support Group
Ringaskiddy
Co. Cork

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):

Wyeth Nutritionals Ireland Limited **Installation number:** 12

located at

Wyeth Nutritionals Ireland Limited
Askeaton
Limerick
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 09 September 2011, *Wyeth Nutritionals Ireland Limited* 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 2005-2011, 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.: 12

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
Wastewater Treatment Plant, Cryogenic Carbon Dioxide Storage Tank

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
S1	Boiler 1	27.07	MW
S3	Boiler 3	17.57	MW
S4	Duct Burner	13.98	MW
S5	CHP Turbine	18.39	MW
S8	CMP 502 Oven	0.15	MW
S9	CMP 401 Oven	0.1	MW
S10	Kitchen	0.49	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S12	Project Office Heating Boiler	0.03	MW
S13	Contractor Toilets/Locker Rooms Heating	0.03	MW
S14	Bunsen Burners	0	MW
S15	Gas Welding	0	MW
S16	Project Workshop Air Heater	0.03	MW
S17	Drier Deluge Pump	0.24	MW
S18	Sprinkler Pump Duty	0.43	MW
S19	Sprinkler Pump Standby	0.43	MW
S20	Hydrant Pump Duty	0.33	MW
S21	Hydrant Pump Standby	0.33	MW
S22	LPG Calorifiers	0.22	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.

Sealed by the seal of the Agency on this the 17 January 2019:

PRESENT when the seal of the Agency was affixed hereto:

_____

Ms. Annette Prendergast
Inspector/ Authorised Person

Appendix 1 to Greenhouse Gas Emissions Permit Number IE-GHG014-10344

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	Wyeth Nutritionals Ireland Limited
Site name	Wyeth Nutritionals Ireland Limited
Address	Wyeth Nutritionals Ireland Limited Askeaton Limerick Ireland
Grid reference of site main entrance	E133568, N150948
Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.	Yes

IPC/IE Licence Register Number	Licence holder	Competent body
P0395-03	Wyeth Nutritionals Ireland Limited	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	Wyeth Nutritionals Ireland Limited
Company Registration Number	393631

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	Tomdeely North
Address Line 2	N/A
City/Town	Askeaton
County	Limerick
Postcode	N/A

Principal office address

Is the principal office address different to the registered office address?	No

Holding company

Does the company belong to a holding company?	No

(d) Operator Authority

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

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

4. Service Contact

e. Service Contact

Address	Wyeth Nutritionals Ireland Limited Askeaton Limerick 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.

The installation produces a range of infant nutritional products including canned formula and liquid ready-to-feed formula in glass bottles. The plant is located in a rural area outside the town of Askeaton and operates 24-hours per day, seven days per week. Combustion plant operating on the site includes a CHP Plant comprising of an 18.394 MW gas turbine and heat recovery boiler that is supplementary heated with a 13.978 MW duct burner. Additional combustion plant includes two boilers rated at 27.077 MW and 17.572 MW. The fuels used by the combustion plant listed above are natural gas with gas oil used as a backup fuel. There are a number of other small combustion plant on site that have minor emission points. These use gas oil, LPG, kerosene and BioLPG as fuel. Acetylene is also used for welding activities.

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)	79.82	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
7558-40793-REVG REL.pdf	Site Layout
7558-40793-REVH REL.pdf	Revised Site Layout April 2017
7558-40793-REVK REL.pdf	Revised Site Layout January 2018

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 $CO_{2(e)}$) 38000

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
S1	Boiler 1
S3	Boiler 3
S4	Duct Burner

Emission Source Reference	**Emission Source Description**
S5	CHP Turbine
S8	CMP 502 Oven
S9	CMP 401 Oven
S10	Kitchen
S11	Wastewater Treatment Plant, Cryogenic Carbon Dioxide Storage Tank
S12	Project Office Heating Boiler
S13	Contractor Toilets/Locker Rooms Heating
S14	Bunsen Burners
S15	Gas Welding
S16	Project Workshop Air Heater
S17	Drier Deluge Pump
S18	Sprinkler Pump Duty
S19	Sprinkler Pump Standby
S20	Hydrant Pump Duty
S21	Hydrant Pump Standby
S22	LPG Calorifiers

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

Emission Source Reference	**Emission Source Description**
S1	Boiler 1
S3	Boiler 3
S4	Duct Burner
S5	CHP Turbine
S8	CMP 502 Oven
S9	CMP 401 Oven
S10	Kitchen
S12	Project Office Heating Boiler
S13	Contractor Toilets/Locker Rooms Heating
S14	Bunsen Burners
S15	Gas Welding
S16	Project Workshop Air Heater
S17	Drier Deluge Pump
S18	Sprinkler Pump Duty
S19	Sprinkler Pump Standby

Emission Source Reference	Emission Source Description
S20	Hydrant Pump Duty
S21	Hydrant Pump Standby
S22	LPG Calorifiers

l. 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
A1-2	Boiler 1 Stack
A1-4	Boiler 3 Stack
A1-1	CHP Stack
A2-7	CHP Bypass Stack
A3-1	CMP 502 Oven
A3-2	CMP 502 Oven
A3-3	CMP 502 Oven
A3-4	CMP 401 Oven
A3-5	CMP 401 Oven
A3-27	Canteen Kitchen
DAA 1	WWTP, Cryogenic Storage
A3-28	Project Office Heating Boiler Exhaust
A3-29	Contractor Toilets/Locker Rooms Heating Boiler
A3-30	Bunsen Burners
A3-31	Gas Welding
A3-32	Project Workshop Air Heater
A3-33	Drier Water Deluge Pump
A3-34	Sprinkler Pump Duty
A3-35	Sprinkler Pump Standby
A3-36	Hydrant Pump Duty
A3-37	Hydrant Pump Standby
A3-38	LPG Calorifiers

m. Source Streams (fuels and/or materials)

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

Source Stream Reference	Source Stream Type	Source Stream Description
F1 (Natural Gas)	Combustion: Other gaseous & liquid fuels	Natural Gas
F2 (Gas Oil)	Combustion: Commercial standard fuels	Gas/Diesel Oil
F3 (LPG)	Combustion: Commercial standard fuels	Liquefied Petroleum Gases
F4	Other	Non combustion CO2
F5 (Kerosene)	Combustion: Commercial standard fuels	Kerosene (other than jet kerosene)
F6 (Acetylene)	Combustion: Other gaseous & liquid fuels	Acetylene
F7 (BioLPG)	Combustion: Other gaseous & liquid fuels	Other Biogas

n. Emissions Summary

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

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
F1 (Natural Gas)	S1,S3,S4,S5	A1-1,A1-2,A1-4,A2-7	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)
F2 (Gas Oil)	S1,S3,S4,S5,S17,S18,S19,S20,S21	A1-2,A1-4,A1-1,A2-7,A3-33,A3-34,A3-35,A3-36,A3-37	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)
F3 (LPG)	S8,S9,S10,S14,S22	A3-1,A3-2,A3-27,A3-3,A3-30,A3-38,A3-4,A3-5	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)
F5 (Kerosene)	S12,S13	A3-28,A3-29	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
			or municipal waste)
F6 (Acetylene)	S15	A3-31	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)
F3 (LPG)	S16	A3-32	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)
F7 (BioLPG)	S8,S9,S10,S14,S16,S22	A3-1,A3-2,A3-3,A3-4,A3-5,A3-27,A3-30,A3-32,A3-38	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
F4	S11	DAA 1

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)?	No

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:

Natural gas is supplied to the site from Gas Networks Ireland (GNI) via their on-site above ground installation (AGI) where it is metered before supplying the different scheduled activities. Natural gas consumption will be calculated by reference to invoiced quantities. The accurate metering used by GNI means that Tier 4 will be used for activity data of the fuel consumed. Data for the Net Calorific Value (NCV), Emission Factor (EF) and Oxidation Factor (OF) will be taken from the National Inventory Data as submitted to the UNFCCC so Tier 2b, Tier 2a and Tier 1 respectively will be used.

The Net Calorific Value of the natural gas will be calculated by converting the actual gas volume provided by the gas network operator to standard gas volume using the formula in step 2 of the methodology for the reporting of natural gas in the Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report for that year issued by the EPA and the NCV will be calculated using step 3 of the methology.

Gas oil which is used as a back-up to natural gas for specified scheduled activities plus as a fuel for two sprinkler pumps and drier water deluge pump also scheduled activities, is delivered to the installation by road tanker. The gas oil used as a back-up fuel is delivered to a central storage tank on the site for distribution through a pipe network while the sprinkler pumps each have their own exclusive storage tanks. Gas oil is metered at the time of delivery by meters on the road tankers which are certified by Legal Metrology. Gas oil consumption will be calculated by reference to invoiced quantities delivered and stock changes in the storage tank. However, based on past emission records emissions for the sources using gas oil this source is de-minimis and no tier will be used for the activity data. Data for the NCV, EF and OF will be taken from the National Inventory Data as submitted to the UNFCCC so Tier 2a, Tier 2a and Tier 1 respectively will be used.

LPG is delivered by road tanker to two locations on site. At one of these locations the gas is used for heating a Project Workshop and the quantity of LPG recorded on the delivery statement from the supplier is used to record the volume of LPG used annually which is then converted to tonnes using the average density of LPG provided in the Country Specific Net Calorific Values and CO2 Emission Factors for use in the Annual Installation Emissions Report. At the second location the fuel is used on site for cooking, for the curing ovens in the can manufacturing process, for bunsen burners in the laboratories and for calorifiers to heat water. It is also used as a fuel for forklifts which is a non-scheduled activity. A meter is used to measure the gas from this LPG storage tank in cubic meters of gas used by the scheduled activities. Temperature and pressure of the gas is not monitored. The quantity of gas used is converted to give the equivalent volume of LPG and added to the LPG volume of LPG used at the Project Workshop, however, based on past emission records for the sources using LPG this source is de-minimis and no tier will be used for the activity data. Data for the NCV, EF and OF will be taken from the National Inventory Data as submitted to the UNFCCC so Tier 2a, Tier 2a and Tier 1 respectively will be used.

Kerosene used on site for heating of the Project Offices and Contractor Toilet/Locker Rooms a scheduled activity, is delivered to the installation by road tanker. The kerosene is delivered to two separate storage tanks exclusively for storage of fuel to supply each of the heating boilers for the Project Offices and the Contractor Toilet/Locker Rooms. Kerosene is metered at the time of delivery by meters on the road tankers which are certified by Legal Metrology. Kerosene consumption will be calculated by reference to invoiced quantities delivered and stock changes in the storage tank. However, based estimated emissions for this sources it is de-minimis and no tier will be used for the activity data. Data for the NCV, EF and OF will be taken from the National Inventory Data as submitted to the UNFCCC so Tier 2a, Tier 2a and Tier 1 respectively will be used.

Acetylene is used on site for oxyacetylene welding a scheduled activity. It is delivered to the installation in cylinders in set volumes. Acetylene consumption will be calculated by reference to invoiced quantities delivered. However, based estimated emissions for this sources it is de-minimis and no tier will be used for the activity data. Data for the NCV, EF and OF will be taken from the National Inventory Data as submitted to the UNFCCC so Tier 1, Tier 1 and Tier 1 respectively will be used.

BioLPG is delivered by road tanker to two locations on site. At one of these locations the gas is used for heating a Project Workshop and the quantity of BioLPG recorded on the delivery statement from the supplier is used to record the volume of BioLPG used annually which is then converted to tonnes using the density value provided by the fuel supplier. At the second location the fuel is used on site for cooking, for the curing ovens in the can manufacturing process, for bunsen burners in the laboratories and for calorifiers to heat water. It is also used as a fuel for forklifts which is a non-scheduled activity. A meter is used to measure the gas from the BioLPG storage tank in cubic meters of gas used by the scheduled activities. Temperature and pressure of the gas is not monitored. The quantity of gas used is converted to give the equivalent volume of BioLPG and added to the BioLPG volume of BioLPG used at the Project Workshop, however, based on past emission records for the sources using LPG this source is de-minimis and no tier will be used for the activity data. Data for the NCV and OF will be taken from the National Inventory Data as submitted to the UNFCCC for LPG so Tier 2a and Tier 1 respectively will be used. BioLPG is a sustainable biogas with an emission factor of zero as per Article 38.2. of the MRR so a Tier 1 emission factor of zero is applied. Current sustainability certs for BioLPG will be maintained on-site.

The CO2 emissions will be calculated annually as the product of the Activity Data x NCV x EF x OF for each of the fuels referred to above. The calculated CO2 from each source will be added together to give the total emissions for the installation.

s. Measurement Devices

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

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

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Natural Gas)	S1,S3,S4,S5	MD1	Turbine meter	13 - 250	Cubic Meters per Hour	1.41	Bord Gais AGI
F1 (Natural Gas)	S1,S3,S4,S5	MD2	Turbine meter	13 - 250	Cubic Meters per Hour	1.41	Bord Gais AGI
F1 (Natural Gas)	S1,S3,S4,S5	MD3	Turbine meter	32 - 650	Cubic Meters per Hour	1.41	Bord Gais AGI
F1 (Natural Gas)	S1,S3,S4,S5	MD4	Turbine meter	32 - 650	Cubic Meters per Hour	1.41	Bord Gais AGI
F2 (Gas Oil)	S1,S3,S4,S5,S17,S18 ,S19,S20,S21	MD5	Truck meter	N/A	N/A	N/A	N/A
F3 (LPG)	S8,S9,S10,S14,S22	MD6	Turbine meter	N/A	N/A	N/A	N/A
F5 (Kerosene)	S12,S13	MD7	Truck Meter	N/A	N/A	N/A	N/A
F6 (Acetylene)	S15	MD8	Standard Cylinder	N/A	N/A	N/A	N/A
F3 (LPG)	S16	MD9	Truck Meter	N/A	N/A	N/A	N/A
F7 (BioLPG)	S8,S9,S10,S14,S22	MD10	Turbine meter	N/A	N/A	N/A	N/A
F7 (BioLPG)	S16	MD11	Truck Meter	N/A	N/A	N/A	N/A

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Natural Gas)	MD1	Continual	Trade partner	Yes	Yes	Yes
F1 (Natural Gas)	MD2	Continual	Trade partner	Yes	Yes	Yes
F1 (Natural Gas)	MD3	Continual	Trade partner	Yes	Yes	Yes
F1 (Natural Gas)	MD4	Continual	Trade partner	Yes	Yes	Yes
F2 (Gas Oil)	MD5	Batch	Trade partner	Yes	Yes	Yes
F3 (LPG)	MD6	Batch	Operator	N/A	N/A	N/A
F5 (Kerosene)	MD7	Batch	Trade partner	Yes	Yes	Yes
F6 (Acetylene)	MD8	Batch	Trade partner	Yes	Yes	Yes
F3 (LPG)	MD9	Batch	Trade partner	Yes	Yes	Yes
F7 (BioLPG)	MD10	Continual	Operator	N/A	N/A	N/A
F7 (BioLPG)	MD11	Batch	Trade partner	Yes	Yes	Yes

t. Applied Tiers

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

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

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

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

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

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

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

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

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

Source Stream Refs.	**Emission Source Refs.**	**Measurement Device Refs.**	**Overall Metering Uncertainty (less than +/- %)**	**Applied Monitoring Approach**	**Activity Data Tier Applied**	**Net Calorific Value Tier Applied**	**Emission Factor Tier Applied**	**Carbon Content Tier Applied**	**Oxidation Factor Tier Applied**	**Conversion Factor Tier Applied**	**Biomass Fraction Tier Applied**	**Estimated Emissions $tCO_{2(e)}$**	**% of Total Estimated Emissions**	**Source Category**	**Highest Tiers Applied**	**Justification for not applying the highest tiers**	**Improvement Plan Reference (where applicable)**
F1 (Natural Gas)	S1,S3,S4,S5	MD1, MD2, MD3, MD4	<1.5%	Standard	4	2b	2a	N/A	1	N/A	N/A	38000	99.42	Major	Yes	n/a	n/a
F2 (Gas Oil)	S1,S3,S4,S5,S17,S18,S19,S20,S21	MD5	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	110	0.29	De-minimis	Yes	n/a	n/a
F3 (LPG)	S8,S9,S10,S14,S16,S2	MD6, MD9	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	105	0.27	De-minimis	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)**
	2																
F5 (Kerosene)	S12,S13	MD7	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	8	0.02	De-minimis	Yes	n/a	n/a
F6 (Acetylene)	S15	MD8	N/A	Standard	No tier	1	1	N/A	1	N/A	N/A	0.001	0	De-minimis	Yes	n/a	n/a
F7 (BioLPG)	S8,S9,S10,S14,S16,S22	MD10, MD11	N/A	Standard	No tier	2a	1	N/A	1	N/A	N/A	0	0	De-minimis	Yes	n/a	n/a

Total Estimated Emissions for Calculation (tonnes $CO_{2(e)}$) 38223.001

u. Uncertainty Calculations

The table below lists evidence attached to the application that demonstrates compliance with the applied tiers in accordance with Article 12 of the MRR.

Attachment	**Description**
Wyeth Askeaton Coolrahnee Metering Summary, 11-Jan-2012.pdf	Natural Gas Metering Summary
Metering Uncertainty Calculations Dec 2012.docx	Metering Uncertainty Calculations
200046 Wyeth Coolrahnee Metering Summary 2017.pdf	Metering Uncertainty January 2017

v. Applied tiers

Applied tiers for each source stream

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
F1 (Natural Gas)	S1,S3,S4,S5	4	2b	2a	N/A	1	N/A	N/A
F2 (Gas Oil)	S1,S3,S4,S5,S17,S18,S19,S20,S21	No tier	2a	2a	N/A	1	N/A	N/A
F3 (LPG)	S8,S9,S10,S14,S16,S22	No tier	2a	2a	N/A	1	N/A	N/A
F5 (Kerosene)	S12,S13	No tier	2a	2a	N/A	1	N/A	N/A
F6 (Acetylene)	S15	No tier	1	1	N/A	1	N/A	N/A
F7 (BioLPG)	S8,S9,S10,S14,S16,S22	No tier	2a	1	N/A	1	N/A	N/A

w. 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

x. Default Values

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

Source Stream Refs.	Emission Source Refs.	Parameter	Reference Source	Default Value applied (where appropriate)
F1 (Natural Gas)	S1,S3,S4,S5	EF	Irelands National Greenhouse Gas Inventory	N/A
F2 (Gas Oil)	S1,S3,S4,S5,S17,S18,S19,S20,S21	NCV and EF	Irelands National Greenhouse Gas Inventory	N/A
F3 (LPG)	S8,S9,S10,S14,S16,S22	NCV and EF	Irelands National Greenhouse Gas Inventory	N/A
F5 (Kerosene)	S12,S13	NCV and EF	Irelands National Greenhouse Gas Inventory	N/A
F6 (Acetylene)	S15	NCV and EF	Irelands National Greenhouse Gas Inventory	N/A
F1 (Natural Gas),F2 (Gas Oil),F3 (LPG),F5 (Kerosene),F6 (Acetylene),F7 (BioLPG)	S1,S3,S4,S5,S8,S9,S10,S12,S13,S14,S15,S16,S17,S18,S19,S20,S21,S22	OxF	MRR Annex II	N/A
F7 (BioLPG)	S8,S9,S10,S14,S16,S22	NCV	Ireland's National Greenhouse Gas Inventory	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? No

11. Management

y. 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**
Safety, Health & Environment Manager	Monitor and report data.
Energy Engineer	Review and check data prior to reporting. Maintenance and calibration of installation owned meters.

Attachment	**Description**
SOP-ES-ENV-021 Rev 1.docx	Monitoring and Reporting of Greenhouse Gas Emissions Procedure
SOP-ES-ENV-021 v2.pdf	Monitoring and Reporting GHG Procedure Version 2 submitted by Operator 31012013
SOP-ES-ENV-021 v3.pdf	Monitoring and Reporting of Greenhouse Gas Emissions Procedure, version 3
SOP-ES-ENV-021 v4.pdf	Monitoring and Reporting of Greenhouse Gas Emissions SOP Rev. 4
SOP-ES-ENV-021 v6.pdf	Monitoring and Reporting of Greenhouse Gas Emissions SOP Rev. 6
SOP-ES-ENV-021 v7.pdf	Monitoring and Reporting of Greenhouse Gas Emissions SOP Rev. 7

z. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.a
Brief description of procedure. The description should cover the essential parameters and operations performed	C. ROLES AND RESPONSIBILITIES The Energy Engineer collects data on quantities of fuels used. Procurement provides data, relevant invoices and POs. The SHE Lead collects the data and calculates the emissions for reporting. The Engineering Lead reviews the data and calculations. The Finance Lead enters the verified annual reporting emission figure into the emissions trading system. The nominated verifier verifies the data.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

aa. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.c
Brief description of procedure. The description should cover the essential parameters and operations performed	This procedure outlines the requirement to regularly evaluate the monitoring plan's appropriateness in particular, any potential measures for the improvement of the monitoring methodology.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A

List of EN or other standards applied	N/A

bb. Data Flow Activities

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

Title of procedure	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.d and Appendix 1
Brief description of procedure. The description should cover the essential parameters and operations performed	Data flow activities are shown for each source stream in data flow diagrams which show how the data management procedures link together.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A
List of primary data sources	Natural gas - Gas meters at gas network AGI on site read monthly Gas Oil - Gas oil meter on delivery vehicle. Delivery docket printed from meter at each delivery. LPG - Meter on site read monthly and delivery dockets for LPG delivered to the Project Workshop. Kerosene - Kerosene meter on delivery vehicle. Delivery docket printed from meter at each delivery. Acetylene - Number of cylinders delivered to site. BioLPG - meter on site read monthly and delivery dockets for BioLPG delivered to the Project Workshop.
Description of the relevant processing steps for each specific data flow activity. Identify each step in the data flow and include the formulas and data used to determine emissions from the primary data. Include details of any relevant electronic data processing and storage systems and other inputs (including manual inputs) and confirm how outputs of data flow activities are recorded	Meter reading by gas network operator sent to gas supplier An invoice for gas supplied sent from the gas supplier to the installation The data from the invoices is used by the installation used to calculate and record emissions from this source stream using formulas in an Excel spreadsheet. Monthly meter readings are sent to the installation by the gas network operator The NCV for natural gas is calculated and recorded using formulas in an Excel spreadsheet. The volume of gas oil offloaded from the delivery vehicle is recorded on a delivery docket by the supplier. The supplier sends an invoice for the quantity of gas oil supplied to the installation. The data from the invoices and stock adjustment calculations is used to calculate the total quantity of gas oil used by the installation. The total quantity of gas oil used by the installation is used to

calculate and record emissions from this source stream using formulas in an Excel spreadsheet.

The volume of LPG as a gas is measured at the installation by an in-line meter. Volumes are recorded and reported monthly. The data is converted using formulas in an Excel spreadsheet from a gas quantity to equivalent liquid quantity by: convert gas volume used at line pressure to atmospheric pressure and convert from gas quantity at atmospheric pressure to equivalent liquid quantity. The output from this conversion is then used to calculate and record emissions from this source stream using formulas in an Excel spreadsheet. The volume of LPG delivered to the Project Workshop is recorded on the delivery docket or invoice from the supplier. The supplier sends an invoice for the quantity of LPG supplied to the installation. The data from the invoices is used to calculate the total quantity of LPG used at the Project Workshop. The total quantity of LPG used by the installation is used to calculate and record emissions from these source streams using formulas in an Excel spreadsheet.

The volume of kerosene offloaded from the delivery vehicle is recorded on a delivery docket by the supplier. The supplier sends an invoice for the quantity of kerosene supplied to the installation. The data from the invoices and stock adjustment calculations is used to calculate the total quantity of kerosene used by the installation. The total quantity of kerosene used by the installation is used to calculate and record emissions from this source stream using formulas in an Excel spreadsheet.

The quantity and type of acetylene cylinders delivered to site is recorded on a delivery docket by the supplier. The supplier sends an invoice for the quantity of acetylene suppliedto the installation. The data from the invoice is used to calculate the total quantity of acetylene used by the installation. The total quantity of acetylene used by the installation is used to calculate and record emissions from this source using formulas in an Excel spreadsheet.

The volume of BioLPG as a gas is measured at the installation by an in-line meter. Volumes are recorded and reported monthly. The data is converted using formulas in an Excel spreadsheet from a gas quantity to equivalent liquid quantity by: convert gas volume used at line pressure to atmospheric pressure and convert from gas quantity at atmospheric pressure to equivalent liquid quantity. The output from this conversion is then used to calculate and record emissions from this source stream using formulas in an Excel spreadsheet. The volume of BioLPG delivered to the Project Workshop is recorded on the delivery docket or

	invoice from the supplier. The supplier sends an invoice for the quantity of BioLPG supplied to the installation. The data from the invoices is used to calculate the total quantity of BioLPG used at the Project Workshop. The total quantity of BioLPG used by the installation is used to calculate and record emissions from these source streams using formulas in an Excel spreadsheet.

Submit relevant documents to record data flow activities

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

cc. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.e and Appendix 2
Brief description of procedure. The description should cover the essential parameters and operations performed	Describes how assessments of inherent risks and control risks are undertaken when establishing the control system.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

dd. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.f
Brief description of procedure. The description should cover the essential parameters and operations performed	Identifies how all measurement equipment under the operators control is calibrated and checked at regular intervals.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment

Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

ee. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.g
Brief description of procedure. The description should cover the essential parameters and operations performed	Identifies how information technology is controlled, including access control, back-up, recovery and security.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

ff. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.h
Brief description of procedure. The description should cover the essential parameters and operations performed	Identifies what the review and validation process includes. A check on whether data is complete, comparisons with data over previous years, comparison of fuel consumption reported, carbon emissions normalised per product output and factors obtained from fuel suppliers.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

gg. 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	Monitoring and Reporting of Greenhouse Gas Emissions

Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.i
Brief description of procedure. The description should cover the essential parameters and operations performed	Outlines what appropriate actions are undertaken if data flow activities and control activities are found not to function effectively. How the validity of the outputs are assessed, the process of determining and addressing the cause of the error.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

hh. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.3.j
Brief description of procedure. The description should cover the essential parameters and operations performed	The metering of natural gas is carried out by Bord Gais Networks (BGN) at the Above Ground Installation (AGI) on site. BGN maintain and operate the AGI including the calibration of all metering equipment elements of which are calibrated annually and a report sent to site. BGN's Code of Operations, Part G (Version 3.0) documents information on their measurement equipment including how it is verified and maintained. Gas Oil and Kerosene is metered during delivery by meters on the delivery trucks. These meters are examined and tested by Legal Metrology Service who certifies that the instruments conform to the requirements of the Metrology Acts 1980 – 1998 and that the standards used to perform the tests are traceable to National Standards.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section f.3.k
Brief description of procedure. The description should cover the essential parameters and operations performed	Identifies the process of document retention, specifically in relation to the data and information stipulated in Annex IX of the MRR and to how the data is stored such that the data is made readily available upon request.
Post or department responsible for the procedure and for any data generated	Safety, Health & Environment
Location where records are kept	SHE Office
Name of IT system used	N/A
List of EN or other standards applied	N/A

jj. Risk Assessment

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

Attachment	Description
Risk Assessment.docx	Risk Assessment
Risk Assessment Rev 1.docx	Risk Assessment Rev 1
Risk Assessment Rev 2 Nov2018.docx	Risk Assessment Rev. 2 Nov. 2018

kk. 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 14001:2015

12. Changes in Operation

ll. 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	Monitoring and Reporting of Greenhouse Gas Emissions
Reference for procedure	SOP-ES-ENV-021
Diagram reference	Section F.4
Brief description of procedure. The description should cover the essential parameters and operations performed	Outlines how a changes in operation can be detected and what action needs to be taken when a change is indicative of: a significant capacity extension, a significant capacity reduction, cessation of operation or partial cessation of operation.
Post or department responsible for the procedure and for any data generated	Safety, Health and Environment
Location where records are kept	SHE Office
Name of IT system used	N/A

13. Abbreviations

mm. Abbreviations Acronyms or definitions

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

Abbreviation	Definition
AGI	Above Ground Installation

14. Additional Information

Any other information:

Attachment	Description
20101216123045_PART G _Technical_ _A041_ mark.pdf	BGN Code of Operations, Part G, version 3.0
img-114165050-0001.pdf	Typical Certificate of Conformity for truck metering
GHG014 name change_20150108164901.pdf	Update of operator Details Form
GHG014 Diesel Pump capacity.pdf	Capacity Details Diesel Pump
I&O_JU6H-LP54_C131251_Sprinkler Pump.pdf	Sprinkler Pump Duty and Standby Model JU6H-2600
I&O_JU4H-NL34_C131255_Hydrant Pump.pdf	Hydrant Pump Duty and Standby Model JU4H-3000
Thermal Input Capacity Calculations for Pumps.pdf	Thermal Input Capacity Calculations for Pumps S18, S19, S20 and S21
SRINNAI UK 18011912360.pdf	Thermal input capacity dats for an LPG calorifier
200046 Wyeth Coolrahnee Metering Summary 2018.pdf	2018 metering summary
5636911 01 2018.pdf	Calor BioLPG Statements 01Apr2018 to 30Sep2018
ISCC EU Teo PFAD 5.76.pdf	ISCC PoS for BioLPG 30Apr2018

15. Confidentiality

nn. 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.