



Headquarters,  
Johnstown Castle Estate,  
County Wexford, Ireland

## GREENHOUSE GAS EMISSIONS PERMIT

<b>Permit Register Number:</b>	IE-GHG019-10349-3
<b>Operator:</b>	Guerbet Ireland Unlimited Company Damastown Industrial Estate Mulhuddart Dublin D15 YE36
<b>Installation Name:</b>	Guerbet Ireland Unlimited Company
<b>Site Name:</b>	Guerbet Ireland Unlimited Company
<b>Location:</b>	Damastown Industrial Estate Mulhuddart Dublin 15 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 N<sup>o</sup> IE-GHG019-10349.

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](http://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):

<b>IPC/IE Licence Register Number</b>
P0050-02

## Status Log

### Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG019-10349-3	30 December 2016	05 January 2017	Change of Company name, installation name and site name to Guerbet Ireland Unlimited Company.

### Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG019-10349-1	GHG Permit Application	30 July 2013	27 August 2013	
IE-GHG019-10349-2	GHG Variation	10 March 2014	07 August 2014	Inclusion of the fuel stream Acetylene. Update of procedure descriptions.

### 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.

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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)	Guerbet Ireland Unlimited Company
“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.

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## Activities Permitted

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

### The Operator:

Guerbet Ireland Unlimited Company  
Damastown Industrial Estate  
Mulhuddart  
Dublin  
D15 YE36

Company Registration Number: 177470

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):

Guerbet Ireland Unlimited Company **Installation number: 17**

located at

Damastown Industrial Estate  
Mulhuddart  
Dublin 15  
Ireland

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





# Conditions

## Condition 1. The Permitted Installation

- 1.1 This permit is being granted in substitution for the previous GHG permit granted to the Operator as listed in the Status Log of this GHG permit.
- 1.2 The Operator is authorised to undertake the activities and/or the directly associated activities specified in Table 1 below resulting in the emission of carbon dioxide:

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

Installation No.: 17

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
(S1) Wastewater Treatment and Ethylene Oxide Abatement

- 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
AB-04	Main Boiler	12.01	MW
AB-05	Standby Boiler	11.4	MW
AP-11	Fire Pump	0.56	MW
AP-15	Standby Generator	0.12	MW
S2	Acetylene Welding	0	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.

- 3.13 A record of independent confirmation of capacities listed in this permit shall be available on-site for inspection by authorised persons of the Agency at all reasonable times.
- 3.14 The Operator shall keep records of all modifications of the monitoring plan. The records shall include the information specified in Article 16.3 of the M&R Regulation.
- 3.15 The Operator shall ensure that members of the public can view a copy of this permit and any reports submitted to the Agency in accordance with this permit at all reasonable times. This requirement shall be integrated with the requirements of any public information programme approved by the Agency in relation to any other permit or licence held by the Operator for the site.

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

## Condition 4. Allowances

- 4.1 Surrender of Allowances
- 4.1.1 The Operator shall, by 30 April in each year, surrender to the Agency, or other appropriate body specified by the Agency, allowances equal to the annual reportable emissions in the preceding calendar year.
- 4.1.2 The number of allowances to be surrendered shall be the annual reportable emissions for the preceding calendar year plus such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due. This includes allowances to cover the amount of any annual reportable emissions in respect of which allowances were not surrendered in accordance with Condition 4.1.1 in the previous year, and the amount of any reportable emissions which were discovered during the previous year to have been unreported in reports submitted under Condition 3 in that or in earlier years.
- 4.1.3 In relation to activities or parts of activities which have ceased to take place and have been notified to the Agency in accordance with Condition 2.2 above, the Operator shall surrender to the Agency allowances equal to the annual reportable emissions from such activities in the preceding calendar year or part thereof, together with such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due as described in Condition 4.1.2 above.
- 4.1.4 The Operator may, from 2008 onwards, subject to the provisions of the Regulations and the relevant National Allocation Plan for that compliance year, surrender emission reduction units (ERUs) and certified emission reduction units (CERs) in place of allowances.
- 4.2 The holding, transfer, surrender and cancellation of allowances shall be in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC, any amendment or revision to the same and any guidance issued by the Agency or the National Administrator.
- 4.3 The Operator shall provide the National Administrator with all the necessary information for the opening of an Operator holding account for the installation described in Condition 1 of this permit within twenty working days of the issue of this permit, unless such an account is already open.

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

## Condition 5. Penalties

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

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

Sealed by the seal of the Agency on this the 05 January 2017:

PRESENT when the seal of the Agency was affixed hereto:

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Ms. Annette Prendergast  
Inspector/ Authorised Person

# Appendix 1 to Greenhouse Gas Emissions Permit Number IE-GHG019-10349

## 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](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](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](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](mailto: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.

<b>Installation name</b>	Guerbet Ireland Unlimited Company
<b>Site name</b>	Guerbet Ireland Unlimited Company
<b>Address</b>	Damastown Industrial Estate Mulhuddart Dublin 15 Ireland

<b>Grid reference of site main entrance</b>	304712E, 241390.6N
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<b>Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.</b>	Yes
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IPC/IE Licence Register Number	Licence holder	Competent body
P0050-02	Guerbet Ireland Unlimited Company	Environmental Protection Agency

Has the regulated activity commenced at the Installation? Yes

<b>Date of Regulated Activity commencement</b>	01 January 2008
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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** Guerbet Ireland Unlimited Company

**Company Registration Number** 177470

#### 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

Details of the individual authorised to submit this application on behalf of the company / corporate body.

Title	█
Forename	█
Surname	█
Position	Plant Manager

**Registered office address**

Address Line 1	Damastown Industrial Estate
Address Line 2	N/A
City/Town	Mulhuddart
County	Dublin
Postcode	D15 YE36

**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? Yes

Holding company name Liebel-Flarsheim Ireland Limited

**Holding company address**

Address Line 1	Damastown Industrial Estate
Address Line 2	N/A
City/Town	Mulhuddart
County	Dublin
Postcode	D15 YE36
Company registration number	525084

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**

Name	
Address / Email Address	Damastown Industrial Estate Mulhuddart Dublin 15 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.

Guerbet Ireland ULC is a continuous manufacturing pharmaceutical facility based in Damastown, Mulhuddart, D15 YE36. The plant is a continuous manufacturing facility which produces loversol, a bulk API for Optiray, an X-ray Contrast imaging Agent. Production began at the site in 1993 after a 16 month construction project. The plant was built on a green-field site. There are circa 100 employees across management, production, engineering, quality, finance and administration with production operating on a four shift rota 24 hours/day for approximately 355 days per year.

In relation to the GHG permit, there are combustion installations, namely two gas fired boilers and two back up generators, with a rated thermal input exceeding 20 MW "directly associated activities" and there are emission sources with Waste Water Treatment and Ethylene Oxide Abatement.

**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)	24.094	MW	Carbon Dioxide

**h. Site Diagram**

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

Attachment	Description
Site Layout Including Emission Points.pdf	Site Layout including Emission Points

**i. Estimated Annual Emissions**

Detail of the estimated annual emission of CO<sub>2</sub> 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<sub>2</sub> excluding CO<sub>2</sub> from biomass.

Estimated Annual Emissions (tonnes CO<sub>2(e)</sub>) 8200

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
AB-04	Main Boiler
AB-05	Standby Boiler
AP-11	Fire Pump
AP-15	Standby Generator
S1	Wastewater Treatment and Ethylene Oxide Abatement
S2	Acetylene Welding

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

Emission Source Reference	Emission Source Description
AB-04	Main Boiler
AB-05	Standby Boiler
AP-11	Fire Pump
AP-15	Standby Generator
S2	Acetylene Welding

**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
AB-04	Boiler Stack (Main Boiler)
AB-05	Boiler Stack (standby boiler)
AP-11	Fire Pump
AP-15	Standby Generator
EP1	Wastewater Treatment and Ethylene Oxide Abatement
EP2	Acetylene Welding

**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-1	Combustion: Other gaseous & liquid fuels	Natural Gas
DSL-1	Combustion: Commercial standard fuels	Gas/Diesel Oil
F1	Other	NA
ACET-1	Combustion: Other gaseous & liquid fuels	Acetylene

**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-1	AB-04,AB-05	AB-04,AB-05	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-1	AP-11,AP-15	AP-11,AP-15	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the

Source streams ( Fuel / Material )	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
			incineration of hazardous or municipal waste)
ACET-1	S2	EP2	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
F1	S1	EP1

**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<sub>2(e)</sub> 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<sub>2(e)</sub> per year.

Note: the above data shall include transferred CO<sub>2</sub> but exclude CO<sub>2</sub> 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 <sub>2</sub> O	No
Monitoring of PFC	No
Monitoring of transferred / inherent CO <sub>2</sub>	No

## 9. Calculation

### r. Approach Description

The calculation approach including formulae used to determine annual CO<sub>2</sub> emissions:

The natural gas usage is recorded monthly from the gas bill and inputted onto a spreadsheet. The diesel amount used is also inputted onto the spreadsheet. Country Specific emission factors are applied for natural gas and diesel and a country specific NCV applied for diesel.

For natural gas the gross calorific value is taken from the gas bill and converted to NCV using a standard conversion factor contained in the current EPA document "Country Specific net calorific values and CO<sub>2</sub> emission factors for the use in the annual installations emissions report" contained on the EPA website. The emission factor for NG is also taken from this document and an oxidation factor of 1 applied to calculate the annual CO<sub>2</sub> emissions.

For diesel usage, invoices; the country specific NCV and emission factors for Diesel (GO) are taken from the current EPA document "Country specific net calorific values and CO<sub>2</sub> emission factors for the use in the annual installations emissions report" contained on the EPA website and an oxidation factor of 1 applied in the calculation of annual CO<sub>2</sub> emissions from diesel.

For Acetylene usage this will be determined by the number of cylinders purchased, invoices will be retained. The Country Specific tier 1 NCV and emission factor will be taken from the current EPA document "Country specific net calorific values and CO<sub>2</sub> emission factors for the use in the annual installations emissions report".

For each source stream, the activity data is first summed up, then the calculation formula according to Article 24(1) of the MRR is used.

**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-1	AB-04,AB-05	MGM-001	Turbine meter	50-1000	m3/hr	1.4	Natural gas incomer to site
DSL-1	AP-11,AP-15	Vendor Invoives	Vendor Invoives	N/A	kgs	N/A	N/A
ACET-1	S2	Vendor Invoices	Vendor Invoices	N/A	kg	N/A	N/A

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Control Of	Under	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
NG-1	MGM-001	Continual	Trade partner		Yes	Yes	Yes
DSL-1	Vendor Invoives	Batch	Trade partner		Yes	Yes	Yes
ACET-1	Vendor Invoices	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 <sub>2(e)</sub>	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
NG-1	AB-04,AB-05	MGM-001	<2.5%	Standard	2	2b	2a	N/A	1	N/A	N/A	9048	99.99	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 <sub>2(e)</sub>	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
DSL-1	AP-11,AP-15	Vendor Invoices	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	1	0.01	De-minimis	N/A	n/a	n/a
ACET-1	S2	Vendor Invoices	N/A	Standard	No tier	1	1	N/A	1	N/A	N/A	0	0	De-minimis	Yes	n/a	n/a

Total Estimated Emissions for Calculation (tonnes CO<sub>2(e)</sub>)

9049

**u. Applied tiers**

Applied tiers for each source stream

<b>Source Stream Ref.</b>	<b>Emission Source Refs.</b>	<b>Activity Data Tier Applied</b>	<b>Net Calorific Value Tier Applied</b>	<b>Emission Factor Tier Applied</b>	<b>Carbon Content Tier Applied</b>	<b>Oxidation Factor Tier Applied</b>	<b>Conversion Factor Tier Applied</b>	<b>Biomass Fraction Tier Applied</b>
NG-1	AB-04,AB-05	2	2b	2a	N/A	1	N/A	N/A
DSL-1	AP-11,AP-15	No tier	2a	2a	N/A	1	N/A	N/A
ACET-1	S2	No tier	1	1	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.

<b>Source Stream Ref.</b>	<b>Emission Source Refs.</b>	<b>Justification for the applied tier</b>	<b>Improvement Plan Reference (where applicable)</b>
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-1	AB-04,AB-05	EF	EPA Website Country Specific Values	n/a
DSL-1	AP-11,AP-15	NCV, EF	EPA Website Country Specific Values	n/a
ACET-1,DSL-1,NG-1	AB-04,AB-05,AP-11,AP-15,S2	OxF	Monitoring and Reporting Regulation	1
ACET-1	S2	NCV and EF	EPA Website Current Country Specific Tier 1 values	n/a

### Sampling and Analysis

Do you undertake sampling and analysis of any of the parameters used in the calculation of your CO<sub>2</sub> emissions?  No



## 11. Management

### x. Monitoring and Reporting Responsibilities

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

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

<b>Job Title / Post</b>	<b>Responsibilities</b>
Utilities Supervisor	Inputting monitoring data.
Engineering/ EHS Manager	Management of specific elements of the greenhouse gas programme.
Engineering/EHS Manager	Overseeing the Greenhouse gas programme
EHS Engineer	Administering the Greenhouse gas programme & Liaison with regulators

<b>Attachment</b>	<b>Description</b>
N/A	N/A

**y. Assignment of Responsibilities**

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

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This procedure ensures compliance with the facilities Greenhouse Gas (GHG) Emissions Permit (IE-GHG019) and any requirements from the Competent Body. The procedure identifies how monitoring and reporting responsibilities are assigned for all personnel involved in the monitoring and reporting of emissions, how conflicting duties are segregated and how training and reviews are undertaken.
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically
Name of IT system used	MetricStream
List of EN or other standards applied	N/A

**z. Monitoring Plan Appropriateness**

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The Monitoring Plan's Appropriateness is evaluated annually or when there is a change in activity. The evaluation operations performed are as follows:  Checking the list of emissions sources and source streams, ensuring completeness of the emissions and source streams and that all relevant changes in the nature and functioning of the installation will be included in the monitoring plan; Assessing compliance with the uncertainty thresholds for activity data and other parameters (where applicable) for the applied tiers for each source stream and

emission source; and assessment of potential measures for improvement of the monitoring methodology applied. The procedure is implemented by the Engineering/ EHS Manager and all representatives are present during the evaluation. All outcomes are documented and a new Monitoring Plan is submitted when applicable.

Post or department responsible for the procedure and for any data generated EHS Department  
 Location where records are kept Electronically  
 Name of IT system used MetricStream  
 List of EN or other standards applied N/A

**aa. Data Flow Activities**

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

Title of procedure Greenhouse Gas Verification  
 Reference for procedure 10000186  
 Diagram reference N/A  
 Brief description of procedure. The description should cover the essential parameters and operations performed The procedure describes in detail how CO2 emissions are determined from the combustion of Natural Gas, Gas Oil and Acetylene in regulated emission sources on-site.  
 Post or department responsible for the procedure and for any data generated EHS Department  
 Location where records are kept Electronically and Paper Copies with the EHS Department  
 Name of IT system used MetricStream  
 List of EN or other standards applied N/A  
 List of primary data sources Collection of gas invoices  
 Collection of diesel invoices  
 Collection of Acetylene  
 Description of the relevant processing steps for each specific data flow activity. Collection of NCV and EF values from the EPA website  
 Natural gas, diesel and Acetylene are consumed on site; natural gas is consumed by steam boilers, diesel is consumed by an electric standby generator and an engine powered fire pump and Acetylene consumed by welding equipment.  
 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 Source Stream NG-1 is monitored by a Turbine meter maintained by Bord Gais Networks. Gas invoices are issued to Guerbet Ireland Unlimited Company by the supplier on a monthly basis; hard and soft copies of the invoices are taken monthly by the EHS Engineer and stored in the EUETS file. Gas bills are compared to manual meter readings taken routinely by the Utilities Supervisor to ensure accuracy in

estimation of the total gas consumption. The consumption data (m<sup>3</sup> and kWh) from each monthly invoice are inputted to the Emissions Monitoring and Reporting spread sheet by the EHS Engineer.

Source Stream DSL is monitored by vendor invoices. The Utility Supervisor approves the delivery of diesel to the site; on each delivery the Utility Supervisor files a copy of the Vendors invoices which details the quantity of diesel delivered. The delivery invoices are then collected by the EHS Engineer twice annually and quantities are inputted to the Emissions Monitoring and Reporting spread sheet. The EHS Engineer then updates the hard and soft EUETS file with copies of the diesel invoices. Diesel accounts for just 0.01% of total annual emissions and hence is De-Minimis.

Source Stream ACET is monitored by vendor invoices. A copy of the delivery invoices are maintained by the EHS Engineer and quantities are inputted to the Emissions Monitoring and Reporting spread sheet.

An internal review of the data flow activities is completed twice a year. This involves the Engineering/EHS Manager reviewing all copies of invoices stored in the EUETS file, ensuring all invoices are up to date and that all data from the invoices has been correctly inputted into the Emissions Monitoring and Reporting spread sheet. The accuracy of the gas invoices is checked against manual meter readings. Any anomalies are identified and corrective action taken. The Engineering/EHS Manager then utilises the standard calculation approach to ascertain the annual emissions which is then verified and reported to the EPA in accordance with the regulations.

The following formula is utilised to calculate the emissions associated with Natural Gas:

Gas bills show kWh based on Gross Calorific Value. Convert to Net Calorific Value by multiplying by the current EPA conversion factor for gross to net CV and then convert to TJ by multiplying by  $3.6 \times 10^{-6}$ . Gas Bills show volume in m<sup>3</sup> corrected to 288.15 Kelvin. Sum the monthly gas bill to total annual volume consumed. Convert the annual actual gas volume to the standardised gas volume (Nm<sup>3</sup>) as follows:  $V_s \text{ (Nm}^3\text{)} = (V_a * 273.15) / 288.15$ . Where  $V_s$  is the standardised gas volume and  $V_a$  is the actual gas volume determined from the gas bills. (Bills report at standardised pressure of 101,325 Pa, therefore no pressure correction required). Calculate the net calorific value of the fuel (TJ/Nm<sup>3</sup>) as follows:  $\text{TJ/Nm}^3 = \text{Annual TJ (as calculated above)} / \text{Annual standardised gas volume (as calculated$

above)

Standardised volume of fuel consumed (Nm<sup>3</sup>) x Weighted Net Calorific Value (TJ/Nm<sup>3</sup>) x Emission Factor (tCO<sub>2</sub>/TJ) x Oxidation Factor = Total CO<sub>2</sub> (Tonnes)

The following formula is utilised to calculate the emissions associated with Diesel and Acetylene:

Volume of fuel consumed (Tonnes) x Net Calorific Value (TJ/ktonne) x Emission Factor (tCO<sub>2</sub>/TJ) x Oxidation Factor = Total CO<sub>2</sub> (Tonnes)

Submit relevant documents to record data flow activities

Attachment	Description
Monitoring Diesel Emissions.pdf	Diesel Emissions Dataflow
Monitoring Natural Gas Emissions.pdf	Gas Emissions Dataflow

**bb. Assessing and Controlling Risks**

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	A risk assessment has been carried out and is documented in the EUETS file. This is reviewed annually and updated if required.
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically
Name of IT system used	MetricStream
List of EN or other standards applied	N/A

**cc. Quality Assurance of Metering / Measuring Equipment**

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure ensures that all relevant measurement equipment including third party meters is maintained, calibrated and checked at regular intervals. Where non-compliance with required performance is identified appropriate corrective and preventative actions are taken up with the meter supplier. Copies of calibration and maintenance records are reviewed when received and appropriate action taken if required. A Calibration Certificate is provided annually to the Engineering/ EHS Manager from Bord Gais Networks post conducting an annual calibration test. Diesel accounts for just 0.01% of emissions and is De-Minimis hence calibration certificates of the delivery tank meters are not requested.
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically
Name of IT system used	MetricStream
List of EN or other standards applied	N/A

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

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186 (EHS048)
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The IT department ensures that the Information Technology system used is designed, documented, tested, implemented, controlled and maintained in a way to process reliable, accurate and timely data. The control of the information technology system includes access control, control of back up, recovery, continuity planning and security. There are IT backups in place for network and lines and disaster recovery plan. Backups are performed daily and stored indefinitely.
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically
Name of IT system used	MetricStream
List of EN or other standards applied	N/A

**ee. Review and Validation of Data**

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

<p>Title of procedure</p> <p>Reference for procedure</p> <p>Diagram reference</p> <p>Brief description of procedure. The description should cover the essential parameters and operations performed</p>	<p>Greenhouse Gas Verification 10000186 (EHS048) N/A An internal review is organised every six months by the Engineering/ EHS Manager and is attended by the Engineering/EHS Manager, EHS Engineer, Utilities Supervisor and Finance Manager. The review includes the following:</p> <ul style="list-style-type: none"> <li>• All data collated by the EHS Engineer and Utilities Supervisor is reviewed by the Engineering/EHS Manager</li> <li>• The accuracy of gas bills is checked by comparing the totals from the gas bill to the gas meter readings</li> <li>• Gas consumption data in the Emissions Monitoring and Reporting spread sheet is compared to gas bills for completeness</li> <li>• Gas consumption data over the measurement period of the report year and the same measurement period in previous years are compared</li> <li>• Gas consumption per kg of product produced over the measurement period of the report year is compared to the same metric in previous years</li> <li>• Oil consumption data over the measurement period of the report year and the same measurement period in previous years are compared</li> <li>• A comparison of the gross calorific value obtained from the supplier of the gas is compared with SEAI reference factor</li> <li>• Total calculated CO2 emissions over the measurement period of the report year and the same measurement period in previous years are compared</li> <li>• Anomalies are identified and explanations sought and corrective actions taken where necessary.</li> </ul>
<p>Post or department responsible for the procedure and for any data generated</p> <p>Location where records are kept</p>	<p>EHS Department</p> <p>Electronically</p>

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

**ff. Corrections and Corrective Actions**

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	<p>Corrections and corrective actions are conducted by the Engineering/ EHS Manager where any part of the data flow activities or control activities is found not to function effectively, or to function outside boundaries that are set in documentation of procedures for those data flow activities and control activities. The Engineering/ EHS Manager proceeds to all of the following:</p> <p>Completes an assessment of the validity of the outputs of the applicable steps in the data flow activities or control activities. Determination of the cause of the malfunctioning or error concerned. Implementation of the appropriate corrective action, including correcting any affected data in the emission report. The Engineering/EHS Manager shall carry out the corrections and corrective actions such that they are responsive to the risks identified in the risk assessment.</p>
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically
Name of IT system used	MetricStream
List of EN or other standards applied	N/A

**gg. Control of Outsourced Activities**

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

Title of procedure	Greenhouse Gas Verification
Reference for procedure	10000186
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	See Quality Assurance of metering equipment procedure description for further detail.
Post or department responsible for the procedure and for any data generated	EHS Department
Location where records are kept	Electronically



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

**hh. Record Keeping and Documentation**

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

Title of procedure Greenhouse Gas Verification  
 Reference for procedure 10000186  
 Diagram reference N/A  
 Brief description of procedure. The description should cover the essential parameters and operations performed All records and documentation associated with the ETS are kept in both softcopy and hardcopy and all files are maintained for a ten year period. The softcopy is kept on a central server. The hardcopy is kept in the EHS Department. The EHS Engineer routinely updates the records and documentation as required. An internal review is organised by the Engineering/EHS manager twice yearly and both the soft and hard copy of the file is checked for completeness.  
 Post or department responsible for the procedure and for any data generated EHS Department  
 Location where records are kept Electronically  
 Name of IT system used MetricStream  
 List of EN or other standards applied N/A

**ii. Risk Assessment**

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

Attachment	Description
N/A	N/A

**jj. Environmental Management System**

Does your organisation have a documented Environmental Management System? Yes

Is the Environmental Management System certified by an accredited organisation? Yes

The standard to which the Environmental Management System is certified: ISO14001

## 12. Changes in Operation

### kk. Changes in Operation

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

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

The procedure specified below cover the following:

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

Title of procedure	Control of Plant Change
Reference for procedure	10001290
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The objective of this procedure is to describe the system to control changes to Facilities, Plant and Equipment. Included in the Change Control Form is consideration for changes in GHG Permit Activities. 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 under Commission Decision 2011/278/EC. Where such changes are identified the application form amending amounts allocated free of charge is completed and submitted to the EPA by 31 December.
Post or department responsible for the procedure and for any data generated	Quality Department
Location where records are kept	Electronically
Name of IT system used	Metricstream

## 13. Abbreviations

**II. Abbreviations Acronyms or definitions**

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

Abbreviation	Definition
N/A	N/A

**14. Additional Information**

Any other information:

Attachment	Description
Natural Gas Meter Calibration.pdf	Calibration certificate for natural gas meter
200152 EPA Malinckrodt Calibration Sheet 2016.pdf	Calibration Sheet
200152 EPA Malinckrodt Metering Summary 2016.pdf	Metering Summary

**15. Confidentiality**

**mm. Confidentiality Statement**

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

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

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

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

**END of Appendix I.**