Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Headquarters,
Johnstown Castle Estate,
County Wexford, Ireland

# GREENHOUSE GAS EMISSIONS PERMIT

**Permit Register Number:** IE-GHG151-10420-4

**Operator:** Janssen Sciences Ireland UC
Barnahely
Ringaskiddy
Cork

**Installation Name:** Janssen Sciences Ireland UC

**Site Name:** Janssen Sciences Ireland UC

**Location:** Barnahely
Ringaskiddy
Cork
Ireland

# Introductory Note

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

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

**Contact with Agency:**

If you contact the Agency about this Greenhouse Gas Emissions Permit please quote the following reference: Greenhouse Gas Emissions Permit Nº IE-GHG151-10420.

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** |
|---|
| P0778-02 |

# Status Log

**Current Permit**

| Permit number | Date application received | Date Permit issued | Comment |
|---|---|---|---|
| IE-GHG151-10420-4 | 20 December 2018 | 30 May 2019 | Inclusion of the additional emission source Emergency Generator No. 3, 5.08MW. Replacement of the emission source Diesel Fire Pump (0.65MW) with Diesel Fire Pump no. 1 (0.65MW) and Diesel Fire Pump no. 2 (0.67 MW). Removal of the emission source biomass boiler and source stream biomass. Laboratory emission point reference updated from A3-20 to A3-72, Emergency generators1,2 and firepump 1 emission point reference no.s updated to A4-42, A4-43, A4-54. Update of the Operator Registered Address. |

**Previous Permits**

| Permit number | Change Type | Date application received | Date Permit issued | Comment |
|---|---|---|---|---|
| IE-GHG151-10420-1 | GHG Permit Application | 25 September 2013 | 17 October 2013 | |
| IE-GHG151-10420-2 | GHG Variation | 29 June 2015 | 23 October 2015 | Inclusion of the additional De-mimimis source stream DSL-002 |
| IE-GHG151-10420-3 | GHG Variation | 17 November 2017 | 27 November 2017 | Transfer of the permit to Janssen Sciences Ireland UC from Janssen Biologics Ireland.<br><br>Update of the installation name and site name to Janssen Sciences Ireland UC. |

**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) | Janssen Sciences Ireland UC |
| "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:**

Janssen Sciences Ireland UC
Barnahely
Ringaskiddy
Cork

Company Registration Number: 472372

from

**The Former Operator:**

Janssen Biologics (Ireland)
Barnahely

Ringaskiddy
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):

Janssen Sciences Ireland UC **Installation number:** 114

located at

Barnahely
Ringaskiddy
Cork
Ireland

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

In accordance with Joint Declaration made to the Agency on 24 October 2017, *Janssen Sciences Ireland UC* 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 2005-2017, 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.: 114**

| 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 |
|---|
| (WWTP) WWTP |
| (S1) Fermentation and cell culture |

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 |
|---|---|---|---|
| Emergency Generator no. 1 | Emergency Generator no. 1 | 4.41 | MW |
| Emergency Generator no. 2 | Emergency Generator no. 2 | 4.41 | MW |
| Kitchen Cooker | Kitchen Cooker | 0.1 | MW |
| Laboratory | Laboratory | 0.1 | MW |
| Boiler Flue 1 | Boiler Flue 1 | 8.5 | MW |
| Boiler Flue 2 | Boiler Flue 2 | 8.5 | MW |
| Emergency Generator No. 3 | Emergency Generator No. 3 | 5.08 | MW |

| Emission Source Reference | Emission Source Description | Capacity | Capacity Units |
|---|---|---|---|
| Diesel Fire Pump No. 1 | Diesel Fire Pump No. 1 | 0.65 | MW |
| Diesel Fire Pump No. 2 | Diesel Fire Pump No. 2 | 0.67 | 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 30 May 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-GHG151-10420

# 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** | Janssen Sciences Ireland UC |
| **Site name** | Janssen Sciences Ireland UC |
| **Address** | Barnahely<br>Ringaskiddy<br>Cork<br>Ireland |
| **Grid reference of site main entrance** | E176908 N64129 |
| **Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.** | Yes |

| IPC/IE Licence Register Number | Licence holder | Competent body |
|---|---|---|
| P0778-02 | Janssen Sciences Ireland UC | 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** | Janssen Sciences Ireland UC |
| **Company Registration Number** | 472372 |

**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 | Barnahely |
| Address Line 2 | N/A |
| City/Town | Ringaskiddy |
| County | Cork |
| Postcode | N/A |

**Principal office address**

| | |
|---|---|
| Is the principal office address different to the registered office address? | 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 | Barnahely<br>Ringaskiddy<br>Cork |

# 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.

Janssen Sciences is a biotechnology company involved in the manufacture of antibodies and therapeutic proteins derived from cell cultures of genetically modified microorganisms. Cell cultures in which cells form a specific working cell line are grown under controlled conditions and the protein from these is then harvested using a process called Protein-A affinity chromatography. Purification in which the product is taken through a series of purification steps including viral inactivation, cation/anion exchange chromatography and viral filtration before being filled and frozen as finished product.

The main combustion equipment consists of two natural gas fired steam boilers. Other minor emission sources include emergency generators and fire pumps.

**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) | 32.42 | 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 |
|---|---|
| Main+MinorAirEmissions-IE0311854-22-DR-0004.pdf | Main and Minor Air Emissions |
| PotentialAirEmissions-IE0311854-22-DR-0010.pdf | Potential Air Emissions |

**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 $CO_{2(e)}$) 4267

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 |
|---|---|
| Boiler Flue 1 | Boiler Flue 1 |
| Boiler Flue 2 | Boiler Flue 2 |
| Emergency Generator no. 1 | Emergency Generator no. 1 |
| Emergency Generator no. 2 | Emergency Generator no. 2 |

| **Emission Source Reference** | **Emission Source Description** |
|---|---|
| Diesel Fire Pump No. 1 | Diesel Fire Pump No. 1 |
| Kitchen Cooker | Kitchen Cooker |
| Laboratory | Laboratory |
| WWTP | WWTP |
| S1 | Fermentation and cell culture |
| Diesel Fire Pump No. 2 | Diesel Fire Pump No. 2 |
| Emergency Generator No. 3 | Emergency Generator No. 3 |

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

| **Emission Source Reference** | **Emission Source Description** |
|---|---|
| Emergency Generator no. 1 | Emergency Generator no. 1 |
| Emergency Generator no. 2 | Emergency Generator no. 2 |
| Kitchen Cooker | Kitchen Cooker |
| Laboratory | Laboratory |
| Boiler Flue 1 | Boiler Flue 1 |
| Boiler Flue 2 | Boiler Flue 2 |
| Emergency Generator No. 3 | Emergency Generator No. 3 |
| Diesel Fire Pump No. 1 | Diesel Fire Pump No. 1 |
| Diesel Fire Pump No. 2 | Diesel Fire Pump No. 2 |

### 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** |
|---|---|
| A1-1 | Boiler Stack Flue 1 |
| A1-2 | Boiler Stack Flue 2 |
| A4-42 | Emergency Generator no. 1 |
| A4-43 | Emergency Generator No.2 |
| A4-54 | Diesel Fire Pump No. 1 |
| A3-28 | kitchen Cooker |
| A3-72 | Laboratory |
| WWTP | Wastewater treatment |
| EP2 | Fermentation and cell culture |

| Emission Point Reference | Emission Point Description |
|---|---|
| A4-44 | Emergency Generator No. 3 |
| A4-55 | Diesel Fire Pump No. 2 |

**m. Source Streams (fuels and/or materials)**

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

| Source Stream Reference | Source Stream Type | Source Stream Description |
|---|---|---|
| NG-001 | Combustion: Other gaseous & liquid fuels | Natural Gas |
| DSL-001 | Combustion: Commercial standard fuels | Gas/Diesel Oil |
| Other | Other | excluded activities |
| DSL-002 | Combustion: Commercial standard fuels | Gas/Diesel Oil |

**n. Emissions Summary**

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

| Source streams ( Fuel / Material ) | Emission Source Refs. | Emission Point Refs. | Annex 1 Activity |
|---|---|---|---|
| NG-001 | Boiler Flue 1,Boiler Flue 2,Kitchen Cooker,Laboratory | A1-1,A1-2,A3-28,A3-72 | Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste) |
| DSL-001 | Emergency Generator no. 1,Emergency Generator no. 2,Emergency Generator No. 3 | A4-42,A4-43,A4-44 | 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-002 | Diesel Fire Pump No. 1,Diesel Fire Pump No. 2 | A4-54,A4-55 | 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 |
|---|---|---|
| Other | WWTP | WWTP |
| Other | S1 | EP2 |

## 7. Low Emissions Eligibility

**p. Low Emissions Eligibility**

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

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

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

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

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

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

## 8. Monitoring Approaches

**q. Monitoring Approaches**

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

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

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

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

# 9. Calculation

**r. Approach Description**

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

Natural Gas usage for the boilers (emission points A1-1 & A1-2) is determined from the Bord Gáis meter. For ascertainment of the Net Calorific Value (CV) of the gas it is proposed to use the Volume to Energy Conversion supplied by Bord Gáis on the energy bill. This value will be entered in the gross to net calorific value conversion methology specified by the Agency. In this regard country specific emission factor as specified by the Agency will be utilised in the calculation of CO2 emissions from Natural Gas combustion. Tier 1 oxidation factor will be utilised in the calculation of CO2 emissions from Natural Gas combustion.

For Diesel use in the emergency generators (emission points A4-42, A4-43 and A4-44) it is proposed to utilise a Mobrey MCU Ultrasonic Volume Meter (Tag No. CP-U019250-001) with a 4mA to 20mA output (Range 0 litres to 20000 litres). Monthly readings of the tank diesel balance will be taken to monitor Diesel usage. Delivery volumes (approx once per year) will be added to the tank volume at the time of delivery and the balance of diesel in the tank adjusted accordingly. Agency issued country specific net calorific value and emission factor shall be used for CO2 emission calculation from diesel combustion.

Diesel use in the de minimis source of the Diesel Fire Pump (minor emission A4-54, A4-55) will be determined using a conservative estimate based upon diesel delivery records to the Fire Water Pump Diesel Tank and supplemented by monthly readings from the Fire Water Pump Diesel Tank volume (level gauge on the tank) to give the monthly distribution of usage. A factor of 15% is added to the monthly usage to give a conservative estimate. It is envisaged that the Diesel consumption from the emergency Diesel Fire Pump will be less than 2 tonnes per annum (<0.06% of total emissions).

In the event of a data gap conservative surrogate data, as agreed with the EPA, will be used in accordance with Art 65 of the MRR.

Gas used in the de minimis sources of the Laboratory Dehumidifier and the Canteen Cooker are included in the Bord Gáis meter readings.

For Natural gas and gas oil the activity data is first summed up, then the calculation formula according to Article 24(1) 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 |
|---|---|---|---|---|---|---|---|
| DSL-001 | Emergency Generator no. 1,Emergency Generator no. 2,Emergency Generator No. 3 | Tag No. UO19250-LT-001 | Electronic volume conversion instrument (EVCI) | 0-20000 | litres | 2 | Central Utilities Building |
| NG-001 | Boiler Flue 2,Boiler Flue 1,Kitchen Cooker,Laboratory | Serial No. 9516001001 | Turbine meter | 30-650 | m3/h | 1 | Entrance to site |
| DSL-002 | Diesel Fire Pump No. 1,Diesel Fire Pump No. 2 | Delivery Records | Diesel Delivery Records | n/a | n/a | n/a | SAP System |

| 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 |
|---|---|---|---|---|---|---|
| DSL-001 | Tag No. UO19250-LT-001 | Batch | Operator | N/A | N/A | N/A |
| NG-001 | Serial No. 9516001001 | Continual | Trade partner | Yes | Yes | Yes |
| DSL-002 | Delivery Records | 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NG-001 | Boiler Flue 1,Boiler Flue 2,Kitchen Cooker,Laboratory | Serial No. 9516001001 | <1.5% | Standard | 4 | 2b | 2a | N/A | 1 | N/A | N/A | 4254 | 99.7 | Major | Yes | n/a | n/a |
| DSL-001 | Emergency Generator no. 1,Emergency Generator no. 2,Emergency Generator No. 3 | Tag No. UO19250-LT-001 | <2.5% | Standard | 3 | 2a | 2a | N/A | 1 | N/A | N/A | 11 | 0.26 | De-minimis | Yes | n/a | n/a |
| DSL-002 | Diesel Fire Pump No. | Delivery Records | N/A | Standard | No tier | 2a | 2a | N/A | 1 | N/A | N/A | 2 | 0.05 | De-minimis | N/A | n/a | n/a |

| Source Stream Refs. | Emission Source Refs. | Measurement Device Refs. | Overall Metering Uncertainty (less than +/- %) | Applied Monitoring Approach | Activity Data Tier Applied | Net Calorific Value Tier Applied | Emission Factor Tier Applied | Carbon Content Tier Applied | Oxidation Factor Tier Applied | Conversion Factor Tier Applied | Biomass Fraction Tier Applied | Estimated Emissions $tCO_{2(e)}$ | % of Total Estimated Emissions | Source Category | Highest Tiers Applied | Justification for not applying the highest tiers | Improvement Plan Reference (where applicable) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1,Diesel Fire Pump No. 2 | | | | | | | | | | | | | | | | |

Total Estimated Emissions for Calculation (tonnes $CO_{2(e)}$) 4267

**u. Applied tiers**

Applied tiers for each source stream

| Source Stream Ref. | Emission Source Refs. | Activity Data Tier Applied | Net Calorific Value Tier Applied | Emission Factor Tier Applied | Carbon Content Tier Applied | Oxidation Factor Tier Applied | Conversion Factor Tier Applied | Biomass Fraction Tier Applied |
|---|---|---|---|---|---|---|---|---|
| NG-001 | Boiler Flue 1,Boiler Flue 2,Kitchen Cooker,Laboratory | 4 | 2b | 2a | N/A | 1 | N/A | N/A |
| DSL-001 | Emergency Generator no. 1,Emergency Generator no. 2,Emergency Generator No. 3 | 3 | 2a | 2a | N/A | 1 | N/A | N/A |
| DSL-002 | Diesel Fire Pump No. 1,Diesel Fire Pump No. 2 | No tier | 2a | 2a | N/A | 1 | N/A | N/A |

**v. Justification for Applied tiers**

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

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

## 10. Calculation Factors

### w. Default Values

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

| Source Stream Refs. | Emission Source Refs. | Parameter | Reference Source | Default Value applied (where appropriate) |
|---|---|---|---|---|
| NG-001 | Boiler Flue 1,Boiler Flue 2,Kitchen Cooker,Laboratory | EF,OxF | Ireland's National Greenhouse Gas Inventory | n/a |
| DSL-001 | Emergency Generator no. 1,Emergency Generator no. 2,Emergency Generator No. 3 | NCV,EF,OxF | Ireland's National Greenhouse Gas Inventory | n/a |
| DSL-002 | Diesel Fire Pump No. 1,Diesel Fire Pump No. 2 | NCV,EF,OxF | 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

### x. Monitoring and Reporting Responsibilities

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

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

| **Job Title / Post** | **Responsibilities** |
|---|---|
| Environmental, Health and Safety (EHS) Manager | Ensure that all aspects of the GHG emissions permit and legislation are complied with, and to ensure that quality control mechanisms on data, data storage and retention, management programs and management review requirements are implemented. |
| Facilities Manager | Ensure that all consumption data relating to permitted greenhouse gas emissions is collected and that all monitoring equipment is calibrated and in operation in accordance with the monitoring and reporting plan. |

| **Attachment** | **Description** |
|---|---|
| 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 | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions / DS-SOP-3397- Procedure for the Preparation of the Greenhouse Gas Annual Report |
| Reference for procedure | DS-SOP-5041 and DS-SOP-3397 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions. DS-SOP-3397 - Procedure for the Preparation of the Greenhouse Gas Annual Report. Section 4 of each procedure assigns responsibilities to Facilities and Environmental, Health and Safety (EHS) Departments. Section 5.7 of DS-SOP-5041 outlines how internal reviews are undertaken. In addition the procedure for the Management of Greenhouse Gas Emissions outlines how training and reviews of responsible personnel are undertaken. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Sections 5.7 & 5.9<br><br>EHS will in collaboration with Facilities perform annual internal reviews on the processes outlined in this procedure, along with a review of items contained in Article 62 of the MRR. Any actions will be logged in the |

| | |
|---|---|
| | Enviromanager program for follow up. EHS shall without undue delay propose changes to the monitoring methodology and notify the Agency when;<br><br>Data availability has changed, allowing higher accuracy in the determination of emissions, a change occurred in greenhouse gas emission sources, a change in the M&R, the range of fuels detailed in the approved monitoring and reporting proposal has changed, errors are detected in data resulting from the monitoring methodology, the monitoring plan is not in conformity with the MRR and the Agency has requested a change, in response to suggestions for improvement contained in the verification report. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions - Covers Data Collection, Record keeping and Emissions calculations in Section 5.2, 5.4 and 5.5 respectively. DS-SOP-3397 - Procedure for the Preparation of the Greenhouse Gas Annual Report - Covers data flow activities involved in the preparation of the GHG Annual report. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| List of EN or other standards applied | N/A |
| List of primary data sources | Natural Gas Bills<br><br>Diesel Tank level measurement and Delivery Dockets |
| Description of the relevant processing steps for each specific data flow activity.<br><br>Identify each step in the data flow and include the formulas and data used to determine emissions from the primary | Natural Gas usage for the boilers (emission points A1-1 & A1-2) is determined from the Bord Gáis meter. For ascertainment of the Net Calorific Value (CV) of the gas it is proposed to use the Volume to Energy Conversion supplied by Bord Gáis on the energy bill. This value will be entered in the gross to net calorific value conversion methology |

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

specified by the Agency. In this regard country specific emission factor as specified by the Agency will be utilised in the calculation of CO2 emissions from Natural Gas combustion. Tier 1 oxidation factor will be utilised in the calculation of CO2 emissions from Natural Gas combustion.

For Diesel use in the emergency generators (emission points A4-42, A4-43, A4-44) it is proposed to utilise a Mobrey MCU Ultrasonic Volume Meter (Tag No. CP-U019250-001) with a 4mA to 20mA output (Range 0 litres to 20000 litres). Monthly readings of the tank diesel balance will be taken to monitor Diesel usage. Delivery volumes (approx once per year) will be added to the tank volume at the time of delivery and the balance of diesel in the tank adjusted accordingly. Agency issued country specific net calorific value and emission factor shall be used for CO2 emission calculation from diesel combustion. Diesel use in the de minimis source of the Diesel Fire Pumps (minor emission A4-54, A4-55) will be determined using a conservative estimate based upon diesel delivery records to the Fire Water Pump diesel tank, supplemented by monthly readings from the Fire Water Pump diesel tank volume (level gauge on the tank) to give the monthly distribution of usage. A factor of 15% is added to the monthly usage to give a conservative estimate. It is envisaged that the Diesel consumption from the emergency Diesel Fire Pump will be less than 2 ton per annum (<0.06% of total CO2 emissions).

In the event of a data gap conservative surrogate data, as agreed with the EPA, will be used in accordance with Art. 65 of the MRR.

Gas used in the de minimis sources of the of the Laboratory Dehumidifier and the Canteen Cooker are included in the Bord Gáis meter readings.

For Natural gas and gas oil the activity data is first summed up, then the calculation formula according to Article 24(1) is used.

Submit relevant documents to record data flow activities

| **Attachment** | **Description** |
|---|---|
| DS-SOP-5041.pdf | Procedure for the Management of Greenhouse Gas Emissions |
| DS-SOP-3397.pdf | Procedure for the Preparation of the Greenhouse Gas |

| Attachment | Description |
|---|---|
| | Report |

**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 | Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | This is covered under Sections 5.6 to 5.9 of the above procedure.<br><br>Risk assessment<br><br>The EHS manager will update the GHG Risk assessment for quality control based upon an assessment of any proposed changes to the monitoring plan. The risk assessment is to comply with section 4 of the MRR Guidance Document No. 6 on data flow activities.<br><br>Auditing and Notification<br><br>EHS will in collaboration with Facilities perform annual internal reviews on the processes outlined in this procedure, along with a review of items contained in Article 62 of the MRR. Any actions will be logged in the Enviromanager program for follow up.<br><br>EHS shall without undue delay propose changes and notify the Agency to the monitoring methodology when;<br><br>Data availability has changed, allowing higher accuracy in the determination of emissions, a change occurred in greenhouse gas emission sources, a change in the M&R, the range of fuels detailed in the approved monitoring and reporting proposal has changed, errors are detected in data resulting from the monitoring methodology,the monitoring plan is not in conformity with the MRR and the Agency has requested a change,in response to suggestions for improvement contained in the verification report.<br><br>In the event of a failure of the monitoring and reporting methodology for the site, the site shall put in place an interim monitoring and reporting methodology (to thehighest tier available) and inform the Agency in writing. |

| | |
|---|---|
| | This notification shall be made without undue delay in accordance with permit conditions. This shall include details of the interim monitoring and reporting methodology and shall explain the measures which shall be taken to enable a prompt restoration of compliance. Examples include failure to secure delivery details, compile reports as required under the monitoring and reporting methodology. A record of non-compliances with the approved monitoring and reporting plan will be maintained on site and shall be available for inspection by authorised persons of the Agency and / or the Verifier at all reasonable times. |
| Post or department responsible for the procedure and for any data generated | Engineering & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.7, Quality assurance of metering/measuring equipment<br><br>The internal meters mentioned in the M&R will be maintained and calibrated by Maintenance & Facilities to guarantee the agreed certainty. External originating calibration details e.g. Bord Gais meter will be retained by the M&F Department. Where non-compliance with required performance is identified for any meter appropriate corrective and preventative actions are taken. |
| Post or department responsible for the procedure and for any data generated | (M&F) & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | Procedure for the Management of Greenhouse Gas Emissions/ Janssen Corporate IT Policies |
| Reference for procedure | DS-SOP-5041/ This is Covered by Janssen Corporate IT |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.7, Quality Assurance of information technology used. Janssen corporate IT Policies ensure the quality assurance of the information technology used for data flow activities. These policies address the control of access, back-up, recovery, continuity planning and the security of the information technology used to support the GHG monitoring & reporting requirements. |
| Post or department responsible for the procedure and for any data generated | Janssen IT Department |
| Location where records are kept | Janssen IT Department/ (M&F) & EHS Departments |
| Name of IT system used | N/A |
| List of EN or other standards applied | N/A |

**ee. Review and Validation of Data**

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

| | |
|---|---|
| Title of procedure | Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.7, Fuel Consumption Data & Internal Reviews<br><br>Fuel Consumption Data:<br><br>Fuel consumption data is reviewed monthly against budget targets. Budgets are set annually on recent years consumption and expected site developments/changes. Missing or incomplete data is detected when comparisons are made against budget values.<br><br>Internal Reviews:<br><br>The EHS department in collaboration with the M&F department will perform annual internal reviews on the GHG management data flow processes (including data validation where relevant) along with a review of items contained in Article 62 of the MRR. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |

| | |
|---|---|
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Sections 5.7 & 5.8<br><br>The EHS department in collaboration with the M&F department will perform annual internal reviews. Any items identified which require correction will be logged in the Enviromanager program for follow-up and actioned for closure.<br><br>In the event of failure of the monitoring and reporting methodology for the site, the site shall put in place an interim procedure and notify the agency in writing without undue delay. In relation to corrective actions, causes of error are identified and appropriate corrective and preventative actions are undertaken if data flow and control activities do not function effectively. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | DS-SOP-5041 |
| Reference for procedure | Procedure for the Management of Greenhouse Gas Emissions |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.7, Control of Outsourced activities<br><br>- All data relevant to the monitoring and reporting of Greenhouse gas emissions is annually verified by an |

| | |
|---|---|
| | external qualified person per the requirements of the Accreditation and Verification Regulations (Commission Regulation (EC))<br><br>- Consultants may be used to assist in internal audits<br><br>- These are the only out-sourced activities relevant to Articles 59&64 of the MRR. |
| Post or department responsible for the procedure and for any data generated | (M&F) & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 | Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.5, Record keeping<br><br>The site will keep records as required by the MRR, in accordance with Art. 66 and Annex IX, for a period of at least 10 years. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen Network |
| 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 2015 |

## 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 | DS-SOP-5041 - Procedure for the Management of Greenhouse Gas Emissions |
| Reference for procedure | DS-SOP-5041 |
| Diagram reference | N/A |
| Brief description of procedure. The description should cover the essential parameters and operations performed | Section 5.9, Changes in operation<br><br>Any proposals for modification of the monitoring plan will be notified to the EPA without delay.<br><br>Each year in advance of AIER preparation or during the year if any significant changes to the combustion activity takes |

| | |
|---|---|
| | place, the site shall<br><br>• check 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.<br><br>• If partial cessation or a significant capacity increase or reduction applies, the site shall commence process of informing the Agency to ensure such information is submitted to the Agency by 31 December each year.<br><br>Prepare and submit the annual declaration of operability to the Agency by 21 January each year. |
| Post or department responsible for the procedure and for any data generated | Facilities & EHS Departments |
| Location where records are kept | Janssen IT System |
| Name of IT system used | Janssen IT Network |

## 13. Abbreviations

### II. Abbreviations Acronyms or definitions

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

| Abbreviation | Definition |
|---|---|
| SAP | Systems, Applications and Products in Data Processing |
| MAARs | Management Awareness & Action Review |

## 14. Additional Information

Any other information:

| Attachment | Description |
|---|---|
| Firepumps.docx | FirePumps design data |
| Gas Networks Ireland_Metering Summary 2018.pdf | Gas Meter calibration summary |

| Attachment | Description |
|---|---|
| IE0311854-S-44-5501-I02-0001_New Diesel Generator.pdf | Diesel Generator capacity |
| Calculation of TIC from generator fuel consumption.xlsx | Calculate TIC |

## 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.**