



Headquarters,  
Johnstown Castle Estate,  
County Wexford, Ireland

## GREENHOUSE GAS EMISSIONS PERMIT

<b>Permit Register Number:</b>	IE-GHG023-10352-10
<b>Operator:</b>	Eli Lilly Kinsale Limited Dunderrow Kinsale Cork P17 NY71
<b>Installation Name:</b>	Eli Lilly Kinsale Limited
<b>Site Name:</b>	Eli Lilly Kinsale Limited
<b>Location:</b>	Dunderrow Kinsale 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 N<sup>o</sup> IE-GHG023-10352.

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>
P0009-04

## Status Log

### Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG023-10352-10	14 October 2020	02 June 2021	Addition of two emission sources and their related emission points, boilers S24 (EP 21) and S25 (EP22); new internal gas meter added to Measurement Devices Table (MD11); update to status as low emitter category threshold now exceeded.

### Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG023-10352-1	GHG Permit Application	19 June 2013	20 June 2013	
IE-GHG023-10352-2	GHG Variation	16 January 2014	09 July 2014	1. Removal of all references to the emergency generators EG-1 and EG-2 which have been removed from the installation. 2. Inclusion of acetylene and propane (LPG) as additional de minimis source streams and 3. the addition of three emission sources S12, S13 and S14.
IE-GHG023-10352-3	GHG Variation	22 December 2014	22 April 2015	To include the two mobile auxiliary generation engines S15 and S16 at the Emergency Generator Centre 5 (EG-5) ; Following review, the thermal input capacities for S4, S6, S8, S9 and S10 have been revised; Procedures in the Management Section of the Permit have been updated.

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG023-10352-4	GHG Variation	20 July 2015	25 January 2016	Addition of a new Combined Heat and Power (CHP) Plant (S18) and a new emergency generator (S17); Inclusion of Volatile Organic Carbon emissions as a source stream; inclusion of gas oil as a potential emergency back-up fuel (de minimis source stream) in S1,S2,S3; Minor modifications to Data Flow Activities in relation to Natural Gas usage in EU ETS Emission Sources; Update of Measuring Devices Table
IE-GHG023-10352-5	GHG Variation	13 May 2016	11 August 2016	The addition of (EG1), a new emergency generator (S19), using the source stream F2 (gas oil).  The inclusion of the emission source S20 (fire pad) using the source stream F4 (LPG) .
IE-GHG023-10352-6	GHG Variation	23 May 2017	01 June 2017	Transfer of permit from Eli Lilly S.A. to Eli Lilly Kinsale Limited; update of installation name and site name; update of IPC/IE License Register Number; Update of position title for main installation contact.
IE-GHG023-10352-7	GHG Variation	10 August 2018	28 November 2018	Clarification update to the description of the monitoring approach for VOC emissions.  Update of thermal input capacity of emission source S9.
IE-GHG023-10352-8	GHG Variation	07 March 2019	19 June 2019	(1) The addition of emission source S21 a new additional site emergency generator (4.81 MW).  (2)The addition of emission source S22 new back-up diesel powered Power Washer (0.02 MW).  (3) Change to LPG/propane monitoring methodology to take into account new propane supply tank at the fire pad.
IE-GHG023-10352-9	GHG Variation	18 February 2020	16 June 2020	Addition of a new emission source S23 (emergency generator 9) and the corresponding emission point EP20.

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

Schedule 1

Schedule 1 to the Regulations.



## Reasons for the Decision

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

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## 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:

Eli Lilly Kinsale Limited  
Dunderrow  
Kinsale  
Cork  
P17 NY71

Company Registration Number: 590814

from

### The Former Operator:

Eli Lilly S.A.  
Dunderrow,

Kinsale  
Cork  
P17 NY71

to carry out the following

### Categories of activity:

Annex 1 Activity
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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)
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at the following installation(s):

Eli Lilly Kinsale Limited **Installation number:** 21

located at

Dunderrow  
Kinsale  
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 02 May 2017, *Eli Lilly Kinsale Limited* is deemed to have assumed and accepted all liabilities, requirements and obligations provided for in or arising under the permit, regardless of how and in respect of what period, including the period 2005-2017, 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.: 21

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
(S11) Hazardous Waste Incinerator

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

**Table 2 Emission Sources and Capacities:**

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S1	Boiler 3	6.75	MW
S2	Boiler 4	7.1	MW
S3	Boiler 5	7.5	MW
S4	Regenerative Thermal Oxidiser 1 (RTO 1)	1.33	MW
S5	Regenerative Thermal Oxidiser 2 (RTO 2)	1.35	MW
S6	Emergency Generator Centre 5 (EG-5) (Main Engine)	4.84	MW
S7	Emergency Generator 4 (EG-4)	0.8	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S8	Emergency Generator 3 (EG-3)	0.28	MW
S9	Emergency Firewater Pump - 04P2	0.68	MW
S10	Emergency Firewater Pump - 04P4	0.64	MW
S12	IE9 Maintenance Workshop	0.01	MW
S13	IE28 Laboratories	0.01	MW
S14	IE7 Power Washer 1	0.05	MW
S15	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 1)	1.96	MW
S16	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 2)	1.96	MW
S17	Emergency Generator 6 (EG-6)	4.97	MW
S18	Combined Heat and Power Plant (CHP Plant)	9.93	MW
S19	Emergency Generator 1 (EG-1)	0.51	MW
S20	Fire Pad	0.01	MW
S21	Emergency Generator 8 (EG-8)	4.81	MW
S22	IE7 Power Washer 2	0.02	MW
S23	Emergency Generator 9	4.85	MW

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S24	IE40 Condensing Boiler 1	0.87	MW
S25	IE40 Condensing Boiler 2	0.87	MW

- 1.4 The activity shall be controlled, operated and maintained so that emissions of carbon dioxide shall take place only as set out in this GHG Emissions Permit. The permit does not control emissions of gases other than carbon dioxide. All agreed plans, programmes and methodologies required to be carried out under the terms of this permit, become part of this permit.
- 1.5 This GHG Permit is for the purposes of GHG emissions permitting under the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 and any amendments to the same only and nothing in this permit shall be construed as negating the Operator's statutory obligations or requirements under any other enactments or regulations unless specifically amended by the Regulations.
- 1.6 Any reference in this permit to 'installation' shall mean the installation as described in the Greenhouse Gas Emissions Permit application and any amendments approved by the Agency.

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

## Condition 2. Notification

- 2.1 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in a change in:
- 2.1.1 the nature or functioning of the installation;
  - 2.1.2 the capacity of the installation as detailed in this permit;
  - 2.1.3 the fuels used at the installation;
  - 2.1.4 the range of activities to be carried out at the installation
- that may require updating of the GHG permit shall be carried out or commenced without prior notice to and without the prior written agreement of the Agency.
- 2.2 The Operator shall notify the Agency in writing of the cessation of all or part of any activity listed in Table 1 of this permit no later than one month from the date of cessation or by 31 December of the year of cessation, whichever is sooner.
- 2.3 The Operator shall apply for an update of this GHG Permit where there is a change to the Operator name and/or registered address of the Operator, within seven days of the change.
- 2.4 For installations or parts of installations which have not come into operation when the application for this permit was made the Operator shall notify the Agency of the date of commencement of the activity within seven days of commencement.
- 2.5 The Operator shall notify the Agency in writing within three days of becoming aware of any factors which may prevent compliance with the conditions of this permit.
- 2.6 The Operator shall submit to the Agency by 21 January of each year a declaration of operability. The declaration submitted shall be in the format required by the Agency.

- 2.7 All notifications required under Condition 2 above shall be made to the address given in the Explanatory Note included with this permit.
- 2.8 The Operator shall submit to the Agency by 31 December of each year all relevant information about any planned or effective changes to the capacity, activity level and operation of an installation. The information submitted shall be in the format required by the Agency.

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

### **Condition 3. Monitoring and Reporting**

- 3.1 The Operator shall monitor and record greenhouse gas emissions on site in accordance with the M&R Regulation and the approved Monitoring Plan attached at Appendix 1 to this GHG permit and in compliance with any other guidance approved by the Agency for the purposes of implementing the Directive and/or the Regulations.
- 3.2 The Operator shall modify the monitoring plan in any of the following situations:
- 3.2.1 new emissions occur due to new activities carried out or due to the use of new fuels or materials not yet contained in the monitoring plan;
  - 3.2.2 the change of availability of data, due to the use of new measurement instrument types, sampling methods or analysis methods, or for other reasons, leads to higher accuracy in the determination of emissions;
  - 3.2.3 data resulting from the previously applied monitoring methodology has been found incorrect;
  - 3.2.4 changing the monitoring plan improves the accuracy of the reported data, unless this is technically not feasible or incurs unreasonable costs;
  - 3.2.5 the monitoring plan is not in conformity with the requirements of the M&R Regulation and the Agency requests a change;
  - 3.2.6 it is necessary to respond to the suggestions for improvement of the monitoring plan contained in the verification report.

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

- 3.3 Temporary changes to the monitoring methodology:
- 3.3.1 Where it is for technical reasons temporarily not feasible to apply the tier in the monitoring plan for the activity data or each calculation factor of a fuel or material stream as approved by the Agency, the Operator shall apply the highest achievable tier until the conditions for application of the tier approved in the monitoring plan have been restored. The Operator shall take all necessary measures to allow the prompt restoration of the tier in the approved monitoring plan. The Operator shall notify the temporary change to the monitoring methodology without undue delay to the Agency specifying:
    - (i) The reasons for the deviation from the tier;
    - (ii) in detail, the interim monitoring methodology applied by the Operator to determine the emissions until the conditions for the application of the tier in the monitoring plan have been restored;

- (iii) the measures the Operator is taking to restore the conditions for the application of the tier in the approved monitoring plan;
  - (iv) the anticipated point in time when application of the approved tier will be resumed.
- 3.3.2 A record of all non-compliances with the approved monitoring plan shall be maintained on-site and shall be available on-site for inspection by authorised persons of the Agency and/or by the Verifier at all reasonable times.
- 3.4 The Operator shall appoint a Verifier to ensure that, before their submission, the reports required by Condition 3.5 below are verified in accordance with the criteria set out in Schedule 5 of the Regulations, the A&V Regulation and any more detailed requirements of the Agency.
- 3.5 The written report of the verified annual reportable emissions and the verification report in respect of each calendar year shall be submitted to the Agency by the Operator no later than 31 March of the following year. The reports shall be in the format required by the Agency and meet the criteria set out in the M&R and A&V Regulations.
- 3.6 The Operator shall enter the verified annual reportable emissions figure for the preceding year into the Registry no later than 31 March of the following year. This figure shall be electronically approved by the Verifier in the registry no later than 31 March of each year.
- 3.7 Where an Operator is applying the Fall-Back methodology, the Operator shall assess and quantify each year the uncertainties of all parameters used for the determination of the annual emissions in accordance with the ISO Guide to the Expression of Uncertainty in Measurement or another equivalent internationally accepted standard and include the verified results in the written report of the verified annual reportable emissions to be submitted to the Agency by 31 March each year.
- 3.8 An Operator shall submit to the Agency for approval a report containing the information detailed in (i) or (ii) below, where appropriate, by the following deadlines:
  - (a) for a category A installation, by 30 June every four years;
  - (b) for a category B installation, by 30 June every two years;
  - (c) for a category C installation, by 30 June every year.
  - (i) Where the Operator does not apply at least the tiers required pursuant to the first subparagraph of Article 26(1) and to Article 41(1) of the M&R Regulation, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply the required tiers. Where evidence is found that measures needed for reaching those tiers have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan and submit proposals for implementing appropriate measures and its timing.
  - (ii) Where the Operator applies a fall-back monitoring methodology, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply at least tier 1 for one or more major or minor source streams. Where evidence is found that measures needed for reaching at least tier 1 for those source streams have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan, submit proposals and a timeframe for implementing appropriate measures.
- 3.9 Where the verification report states outstanding non conformities, misstatements or recommendations for improvements the Operator shall submit a report to the Agency for approval by 30 June of the year in which the verification report is issued. This requirement does not apply to the Operator of an installation with low emissions where the verification report contains recommendations for improvements only. The report shall describe how and when the Operator

has rectified or plans to rectify the non-conformities identified and to implement recommended improvements. Where recommended improvements would not lead to an improvement of the monitoring methodology this must be justified by the Operator. Where the recommended improvements would incur unreasonable costs the Operator shall provide evidence of the unreasonable nature of the costs. The Operator shall implement the improvements specified by the Agency in response to the report submitted in accordance with this Condition in accordance with a timeframe set by the Agency.

- 3.10 The Operator shall make available to the Verifier and to the Agency any information and data relating to emissions of carbon dioxide which are required in order to verify the reports referred to in Condition 3.5 above or as required by the Agency to facilitate it in establishing benchmarks and/or best practice guidance.
- 3.11 Provision shall also be made for the transfer of environmental information, in relation to this permit, to the Agency's computer system, as may be requested by the Agency.
- 3.12 The Operator shall retain all information as specified in the M&R Regulation for a period of at least 10 years after the submission of the relevant annual report. This shall include all annual emissions reports submitted by the Former Operator(s) in respect of the installation.
- 3.13 A record of independent confirmation of capacities listed in this permit shall be available on-site for inspection by authorised persons of the Agency at all reasonable times.
- 3.14 The Operator shall keep records of all modifications of the monitoring plan. The records shall include the information specified in Article 16.3 of the M&R Regulation.
- 3.15 The Operator shall ensure that members of the public can view a copy of this permit and any reports submitted to the Agency in accordance with this permit at all reasonable times. This requirement shall be integrated with the requirements of any public information programme approved by the Agency in relation to any other permit or licence held by the Operator for the site.
- 3.16 Any discrepancies with regard to reports submitted by the Former Operator(s) in respect of this installation become the liability of the Operator.

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

## **Condition 4. Allowances**

- 4.1 Surrender of Allowances
- 4.1.1 The Operator shall, by 30 April in each year, surrender to the Agency, or other appropriate body specified by the Agency, allowances equal to the annual reportable emissions in the preceding calendar year.
- 4.1.2 The number of allowances to be surrendered shall be the annual reportable emissions for the preceding calendar year plus such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due, including any liabilities arising from the period before the permit was transferred. This includes allowances to cover the amount of any annual reportable emissions in respect of which allowances were not surrendered in accordance with Condition 4.1.1 in the previous year, and the amount of any reportable emissions which were discovered during the previous year to have been unreported in reports submitted under Condition 3 in that or in earlier years.
- 4.1.3 In relation to activities or parts of activities which have ceased to take place and have been notified to the Agency in accordance with Condition 2.2 above, the Operator shall surrender to the Agency allowances equal to the annual reportable emissions from such

activities in the preceding calendar year or part thereof, together with such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due as described in Condition 4.1.2 above.

- 4.1.4 The Operator may, from 2008 onwards, subject to the provisions of the Regulations and the relevant National Allocation Plan for that compliance year, surrender emission reduction units (ERUs) and certified emission reduction units (CERs) in place of allowances.
- 4.2 The holding, transfer, surrender and cancellation of allowances shall be in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC, any amendment or revision to the same and any guidance issued by the Agency or the National Administrator.
- 4.3 The Operator shall provide the National Administrator with all the necessary information for the opening of an Operator holding account for the installation described in Condition 1 of this permit within twenty working days of the issue of this permit, unless such an account is already open.

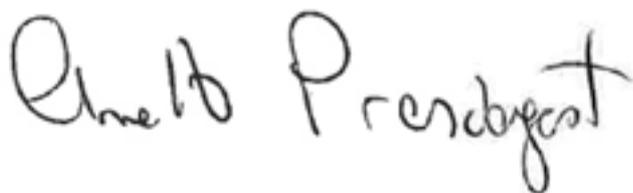
*Reason: To provide for the surrendering, holding, transfer and cancellation of allowances in respect of reported emissions.*

## Condition 5. Penalties

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

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

Signed by the Authorised Person on this the 02 June 2021:



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Ms. Annette Prendergast  
Inspector/ Authorised Person

# Appendix 1 to Greenhouse Gas Emissions Permit Number IE-GHG023-10352

## 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>	Eli Lilly Kinsale Limited
<b>Site name</b>	Eli Lilly Kinsale Limited
<b>Address</b>	Dunderrow Kinsale Cork Ireland

<b>Grid reference of site main entrance</b>	E159700 N052700
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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
P0009-04	Eli Lilly Kinsale Limited	Environmental Protection Agency

Has the regulated activity commenced at the Installation? Yes

<b>Date of Regulated Activity commencement</b>	01 January 2005
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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** Eli Lilly Kinsale Limited

**Company Registration Number** 590814

#### 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	Dunderrow
Address Line 2	N/A
City/Town	Kinsale
County	Cork
Postcode	P17 NY71

**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 Eli Lilly Kinsale Limited  
Dunderrow  
Kinsale  
Co Cork  
P17 NY71  
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.

A range of fossil fuel combustion activities with a combined total rated thermal input capacity exceeding 20 MW are undertaken at the installation. These fuel combustion activities are undertaken to support the manufacture of Active Pharmaceutical Ingredients (APIs) by both chemical and biological based processes at the installation. The primary purpose of the installation is therefore the manufacture of Active Pharmaceutical Ingredients, whilst it is the supporting fuel combustion activities at the site to which Directive 2009/29/EC applies. In addition, a Hazardous Waste Incinerator is also operated at the installation in which fuel is also combusted but this activity is outside the scope of Directive 2009/29/EC. All parts of the installation are operated by the single named Operator.

The fuels used at the site are Natural Gas, Diesel Oil, Acetylene and Propane (LPG) and there is also a de minimis VOC source stream that is combusted in the two Regenerative Thermal Oxidisers (RTO 1 and RTO 2) at the site.

Natural Gas is the primary fuel combusted in 3 Boilers that are used to generate steam for process and space heating at the installation. The Thermal Input Capacity (TIC) of these three boilers ranges from 6.75 MW to 7.5 MW. A Combined Heat and Power (CHP) Plant with a TIC of ~9.93MW uses Natural Gas to produce electricity and secondary thermal energy (e.g. steam) for use at the installation. There are also two smaller high efficiency eco-condensing boilers (TIC for each ~0.87 MW), which operate as duty / standby to each other, which are also fueled by natural gas and which supply heat to the IE40 building at the site.

Natural Gas is also combusted in RTO 1 and RTO 2, which are in place for the treatment of VOC waste gases from the chemical based API manufacturing processes at the installation. The CO<sub>2</sub> emissions arising from the combustion of the VOC is also accounted for by this monitoring and reporting plan. Only one of the RTO units can be operational at any one time, with the other RTO in place to provide redundancy. The TIC of the RTO 1 and RTO 2 have been calculated as 1.33 MW and 1.35 MW respectively.

Diesel Oil is primarily used as the fuel for the Emergency Electrical Power Generators and Emergency Firewater Pumps in place at the installation. Diesel Oil is also used in power washing operations by the installation. The main central emergency electricity generation at the installation is provided at EG-5, EG-6, EG-8, EG-9 which can provide emergency electrical power to most of the installation in the event of an interruption to the primary electrical power supply

imported into the site. The total TIC of the EG-5 system has been calculated as 8.76 MW based on calculated TICs of 4.84 MW for the main permanent EG-5 engine and calculated TICs of 1.96MW each for the two mobile auxiliary engines at EG-5. The TIC of EG-6, EG-8 and EG-9 have been calculated as 4.97 MW, 4.81 MW and 4.85 MW respectively. In addition, there are another three substantially smaller Diesel Oil powered emergency generators (EG-4, EG-3 and EG-1) which provide emergency electrical power to limited applications at the installation local to the generators should this be needed. The calculated TIC of EG-4 is 0.8 MW, the TIC of EG-3 is 0.275 MW and the calculated TIC of EG-1 is 0.51 MW. There are also two Diesel Oil powered Emergency Firewater Pumps (O2P4 and O4P4) and the TIC of these units has been calculated as ~0.68 MW and ~0.64 MW respectively. On an ongoing basis, Diesel Oil is only likely to be consumed at the installation in the emergency generators and emergency fire pumps during the periodic testing of these units, as the probability of emergency situations occurring that require the use of this equipment is very low. Diesel Oil is also potentially used to a much lesser extent in two diesel fuelled power washer owned and operated by the installation (calculated TIC ~0.05 MW and ~0.02 MW). Finally in the unlikely event of an interruption to the Natural Gas supply to the site it may be necessary to operate the 3 site boilers using Diesel Fuel for a short period until the gas supply is restored.

Minor quantities of Acetylene from cylinders are used periodically in welding applications at the maintenance workshop and to a lesser extent in a lab instrument at the installation. Propane (LPG) from cylinders is also used in the labs at the installation and at the site fire pad, whilst Propane (LPG) from a single cylinder is also available for potential emergency use in the firing of the 3 Steam Boilers that are fuelled by Natural Gas. Propane (LPG) will only be potentially used for firing of the Steam Boilers in exceptional emergency situations. In addition, a small local Propane (LPG) tank is installed at the site fire pad for use in fire fighting training.

Natural Gas is also used in the Hazardous Waste Incinerator that is operated at the installation, but again this activity is not within the scope of Directive 2009/29/EC.

**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)	62.1	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
IEOY-S04-04-000001_(Rev 14).pdf	ETS Site Plan

### 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>) 28730.2

Justification for the use of a conservative estimate of CO<sub>2</sub> emissions. This is due to expansion of existing facilities and increased use of onsite CHP plant.

Installation Category: A

## 6. Emissions Details

### j. About your emissions

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

### k. Emission Sources

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

Emission Source Reference	Emission Source Description
S1	Boiler 3
S2	Boiler 4
S3	Boiler 5
S4	Regenerative Thermal Oxidiser 1 (RTO 1)
S5	Regenerative Thermal Oxidiser 2 (RTO 2)

<b>Emission Source Reference</b>	<b>Emission Source Description</b>
S6	Emergency Generator Centre 5 (EG-5) (Main Engine)
S7	Emergency Generator 4 (EG-4)
S8	Emergency Generator 3 (EG-3)
S9	Emergency Firewater Pump - 04P2
S10	Emergency Firewater Pump - 04P4
S11	Hazardous Waste Incinerator
S12	IE9 Maintenance Workshop
S13	IE28 Laboratories
S14	IE7 Power Washer 1
S15	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 1)
S16	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 2)
S17	Emergency Generator 6 (EG-6)
S18	Combined Heat and Power Plant (CHP Plant)
S19	Emergency Generator 1 (EG-1)
S20	Fire Pad
S21	Emergency Generator 8 (EG-8)
S22	IE7 Power Washer 2
S23	Emergency Generator 9
S24	IE40 Condensing Boiler 1
S25	IE40 Condensing Boiler 2

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

<b>Emission Source Reference</b>	<b>Emission Source Description</b>
S1	Boiler 3
S2	Boiler 4
S3	Boiler 5
S4	Regenerative Thermal Oxidiser 1 (RTO 1)
S5	Regenerative Thermal Oxidiser 2 (RTO 2)
S6	Emergency Generator Centre 5 (EG-5) (Main Engine)
S7	Emergency Generator 4 (EG-4)
S8	Emergency Generator 3 (EG-3)
S9	Emergency Firewater Pump - 04P2
S10	Emergency Firewater Pump - 04P4
S12	IE9 Maintenance Workshop

Emission Source Reference	Emission Source Description
S13	IE28 Laboratories
S14	IE7 Power Washer 1
S15	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 1)
S16	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 2)
S17	Emergency Generator 6 (EG-6)
S18	Combined Heat and Power Plant (CHP Plant)
S19	Emergency Generator 1 (EG-1)
S20	Fire Pad
S21	Emergency Generator 8 (EG-8)
S22	IE7 Power Washer 2
S23	Emergency Generator 9
S24	IE40 Condensing Boiler 1
S25	IE40 Condensing Boiler 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
EP1	Combined Stack for Boilers 3, 4 and 5
EP2	Combined Stack for Regenerative Thermal Oxidisers RTO 1 and RTO 2
EP3	Emergency Generator Centre 5 (EG-5) (Main Engine) Exhaust
EP4	Emergency Generator 4 (EG-4) Exhaust
EP5	Emergency Generator 3 (EG-3) Exhaust
EP6	Emergency Firewater Pump - 04P2 - Exhaust
EP7	Emergency Firewater Pump - 04P4 - Exhaust
EP8	Hazardous Waste Incinerator Stack
EP 9	IE9 Maintenance Workshop
EP10	IE28 Laboratories
EP11	IE7 Power Washer 1
EP12	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 1) Exhaust
EP13	Emergency Generator Centre 5 (EG-5) (Auxiliary Mobile Engine 2) Exhaust

Emission Point Reference	Emission Point Description
EP14	Emergency Generator 6 (EG-6) Exhaust
EP15	Combined Heat and Power Plant (CHP Plant) Stack
EP16	Emergency Generator 1 (EG-1) Exhaust
EP17	Fire Pad
EP18	Emergency Generator 8 (EG-8) Exhaust
EP19	IE7 Power Washer 2
EP20	Emergency Generator 9 (EG-9) Exhaust
EP21	IE40 Condensing Boiler 1 Exhaust Stack
EP22	IE40 Condensing Boiler 2 Exhaust Stack

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

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

Source Stream Reference	Source Stream Type	Source Stream Description
F1 (Natural Gas)	Combustion: Other gaseous & liquid fuels	Natural Gas
F2 (Gas Oil)	Combustion: Commercial standard fuels	Gas/Diesel Oil
F3 (Acetylene)	Combustion: Other gaseous & liquid fuels	Acetylene
F4 (LPG)	Combustion: Other gaseous & liquid fuels	Liquefied Petroleum Gases
F5 (Volatile Organic Carbon)	Combustion: Other gaseous & liquid fuels	Volatile Organic Carbon

### n. Emissions Summary

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

Source streams ( Fuel / Material )	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
F1 (Natural Gas)	S1,S2,S3,S4,S5,S18,S24,S25	EP1,EP2,EP15,EP21,EP22	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F2 (Gas Oil)	S1,S2,S3,S6,S7,S8,S9,S10,S14,S15,S16,S17,S19,S21,S2	EP1,EP11,EP12,EP13,EP14,EP16,EP18,EP19,EP20,EP3,	Combustion of fuels in installations with a total

Source streams ( Fuel / Material )	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
	2,S23	EP4,EP5,EP6,EP7	rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F3 (Acetylene)	S12	EP 9	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)
F4 (LPG)	S1,S2,S3,S13,S20	EP1,EP10,EP17	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F5 (Volatile Organic Carbon)	S4,S5	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 (Natural Gas)	S11	EP8

## 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)? No

**8. Monitoring Approaches**

**q. Monitoring Approaches**

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

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

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

Calculation	Yes
Measurement	No
Fall-back approach	No
Monitoring of N <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 five source streams used at the site are Natural Gas, Diesel Oil, Acetylene, Propane (LPG) and Volatile Organic Carbon (VOC).

A calculation approach is used to determine the annual EU-ETS emissions from the installation based on the activity data and calculation factors for each source stream as follows:

(1) Natural Gas:

The EU-ETS Annual Activity Data for this major source stream at the installation (or the Total Fuel consumed in the year in EU-ETS emissions sources using this source stream) is determined, as outlined in the 'Data Flow Activities' section of this monitoring plan, as follows: The activity data (in kWh) for natural gas at the installation is determined through a combination of (a) natural gas invoices for the installation from the Natural Gas Supplier and (b) sub-metering to subtract the non EU ETS Natural Gas consumption at the installation (i.e. natural gas consumed in the Hazardous Waste Incinerator). As kWh shown on the Natural Gas bills are based on Gross Calorific Value, a conversion factor of gross to net calorific value (from the document "Country Specific Net Calorific Values and CO<sub>2</sub> Emission Factors for use in Annual Installation Emission Report" for the reporting year) is applied and then converted to TJ by multiplying by 3.6 x 10<sup>-6</sup>. The country specific Emission Factor for Natural Gas (tCO<sub>2</sub>/TJ) is then applied and an oxidation factor of 1.0. In summary CO<sub>2</sub> emissions arising from combustion of natural gas is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions from Natural Gas = kWh (EU ETS sources) \* gross to net conversion factor \* 3.6 x 10<sup>-6</sup> \* Emission Factor (tCO<sub>2</sub>/TJ) \* Oxidation Factor (1.0)

(2) Diesel Oil:

The Annual Activity Data for this 'de-minimis' source stream at the installation is to be conservatively estimated based on the measured run time and the expected diesel oil consumption (per unit of runtime) of the EU-ETS emissions sources using this source stream over the entire reporting period. Depending on the emission source, the run time of each unit is determined based on the readings recorded by the engine clocks on each unit or based on the log records for each unit as specified in installation procedure no. KIN-EM-012. The expected diesel oil consumption in each emission source is based on the manufacturer's datasheet for the unit engine or based on an equivalent information source as outlined in installation procedure no. KIN-EM-012. Total Gas oil consumed (kt) (for each emission source) = Runtime per annum (hours) \* Expected Gas Oil Consumption Rate (Litres/Hour) \* Specific Gravity of Gas Oil \* 0.000001 (conversion factor for kgs to kt).

In the unlikely event of there being an interruption to the Natural Gas supply to the site, as described in further detail in site procedure KIN-EM-012 there are emergency provisions in place to operate the site boilers using Gas Oil as the back-up fuel. The total Gas Oil consumption in the site boilers during any such emergency situation can be readily determined (in kt) based on the continuous tank level measurement device in place on the single Gas Oil tank configured to supply the boilers and if applicable based on any fuel imports into the supply tank by vendor deliveries during such an emergency as recorded by vendor invoices. In summary, Total Gas oil consumed (kt) (in site boilers during emergency) = Supply Tank Level (Litres) at start of emergency period - Supply Tank Level (Litres) at end of emergency period + Imports (Litres) into supply tank during emergency period \* Specific Gravity of Gas Oil \* 0.000001 (conversion factor for kgs to kt).

The annual activity data (or Total Fuel consumed in the reporting period) is multiplied by the country specific net calorific value and emission factor for gas oil and an oxidation factor of 1.0 is then applied. In summary CO<sub>2</sub> emissions arising from the combustion of gas oil (diesel) is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions from gas oil = Total Gas oil consumed (kt) \* NCV (TJ/kt) \* Emission Factor (tCO<sub>2</sub>/TJ) \* Oxidation Factor (1.0)

(3) Acetylene:

The Annual Activity Data for this 'de minimis' source stream at the installation is to be conservatively estimated, based on the purchase / usage of Acetylene Cylinders for the EU-ETS emissions sources using this source stream during the reporting period. The annual activity data (or Total Fuel consumed in the reporting period) is multiplied by the Tier 1 net calorific value and emission factor for Acetylene and an oxidation factor of 1.0 is then applied. In summary CO<sub>2</sub> emissions arising from the combustion of Acetylene is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions from Acetylene = Estimated Total Acetylene consumed (kt) \*NCV (TJ/kt)\*Emission Factor (tCO<sub>2</sub>/TJ)\* Oxidation Factor (1.0)

(4) Propane (LPG-Liquefied Petroleum Gases):

The Annual Activity Data for this 'de minimis' source stream at the installation is to be conservatively estimated, based on the purchase / usage of Propane Cylinders for the EU-ETS emissions sources using this source stream during the reporting period. In addition, the quantity of LPG consumed through the small local LPG tank installed at the site fire pad is determined based on the measured tank level and measured vendor deliveries as follows: Tank Level at the start of the year (expressed in KG) - Tank Level at the end of the year (expressed in KG) + Vendor Deliveries during the year (as per invoices) (expressed in KG) = Annual quantity of LPG used from tank during the year (expressed in KG).

The annual activity data (or Total Fuel consumed in the reporting period) is multiplied by the country specific net calorific value and emission factor for Propane and an oxidation factor of 1.0 is then applied. In summary CO<sub>2</sub> emissions arising from the combustion of Propane is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions from Propane = Estimated Total Propane consumed (kt) \*NCV (TJ/kt)\*Emission Factor (tCO<sub>2</sub>/TJ)\* Oxidation Factor (1.0)

(5) Volatile Organic Carbon (VOC):

The Annual Activity Data for this 'de minimis' source stream at the installation is to be conservatively estimated, based on periodic monitoring data of VOCs for the EU-ETS emissions sources using this source stream during the reporting period. The annual activity data is calculated using periodic monitoring data (quarterly) of each individual VOC source at the inlet to the RTO using gas chromatography and converted to the carbon equivalent for each VOC input. The quantity of each VOC source (kg) is calculated based on total annual flow measurement at the outlet of the Thermal oxidiser (on the basis that the total flow at the inlet is equal to the total flow at the outlet). It is then converted to CO<sub>2</sub> by dividing by the atomic mass of carbon and multiplying by the molar mass of CO<sub>2</sub> (3.664 tCO<sub>2</sub>/tC). The calculation assumes that 99.5% of the VOC is converted into CO<sub>2</sub> in line with the average Destruction Removal efficiency (DRE) established during commissioning of a representative RTO at the installation.

In summary CO<sub>2</sub> emissions arising from the combustion of VOCs is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions (tonnes) from VOC = ((VOC (kg)\*Carbon Equivalent Factor\*99.5%) / (Atomic Mass of Carbon)) \* Molar Mass CO<sub>2</sub> (g/mol) (3.664 tCO<sub>2</sub>/tC). The NCV of the source stream will be estimated based on literature values and the components of the gas.

(6) The Annual EU-ETS CO<sub>2</sub> emissions arising from the combustion of Natural Gas, Diesel Oil, Acetylene, Propane (LPG) and VOC are calculated using the approach and formulae above for each source stream and then each of these values are summed to give the Total Annual EU-ETS CO<sub>2</sub> emissions for the installation. (Note: The calculations factors in the above formulae (i.e. the NCV, the Emission Factor and the Oxidation Factor) are as outlined in the 'Calculations Factors' section of this monitoring plan).

### s. Measurement Devices

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

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

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1 (Natural Gas)	S1,S2,S3,S4,S5,S11, S18,S24,S25	MD1	Turbine meter	40 - 5000	Sm <sup>3</sup> /h	2	Near Installation Boundary
F1 (Natural Gas)	S11	MD2	Turbine meter	40 - 650	m <sup>3</sup> /hr	1.5	At the Emissions Source (S11)
F1 (Natural Gas)	S1	MD3	Turbine meter	65 - 1000	m <sup>3</sup> /hr	1.5	At the Emission Source
F1 (Natural Gas)	S2	MD4	Turbine meter	65 - 1000	m <sup>3</sup> /hr	1.5	At the Emissions Source
F1 (Natural Gas)	S3	MD5	Turbine meter	65 - 1000	m <sup>3</sup> /hr	1.5	At the Emissions Source
F1 (Natural Gas)	S4	MD6	Turbine meter	16 - 250	m <sup>3</sup> /hr	1.5	At the Emissions Source
F1 (Natural Gas)	S5	MD7	Turbine meter	16 - 250	m <sup>3</sup> /hr	1.5	At the Emissions Source
F2 (Gas Oil)	S6,S7,S8,S9,S10,S14, S15,S16,S17,S19,S21, S22,S23	N/A - Run time Estimates	N/A - Run time Estimates	N/A	N/A	N/A	N/A
F3 (Acetylene)	S12	N/A - Purchasing Records/Cylinder Usage Estimates	N/A	N/A	N/A	N/A	N/A
F4 (LPG)	S1,S2,S3,S13,S20	N/A - Purchasing	N/A	N/A	N/A	N/A	N/A

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
		Records/Cylinder Usage Estimates/LPG Tank Level Gauge					
F1 (Natural Gas)	S18	MD8	Thermal Mass Flow Meter	0 - 2000	Nm3/hr	1.5	At the Emissions Source
F2 (Gas Oil)	S1,S2,S3	MD9	Level gauge	0 - 100	%	2.5	In Situ on Tank 969
F5 (Volatile Organic Carbon)	S4,S5	RTO Outlet Flow meter	N/A	N/A	N/A	N/A	N/A
F2 (Gas Oil)	S1,S2,S3	M10	Invoices	N/A	N/A	N/A	Gas Oil Vendor Meter
F1 (Natural Gas)	S24,S25	MD11	Rotary meter	1.6 - 300	m3/hr	2	In gas supply line to IE40 boilers immediately adjacent to boilers

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1 (Natural Gas)	MD1	Continual	Trade partner	Yes	Yes	Yes
F1 (Natural Gas)	MD2	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD3	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD4	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD5	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD6	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD7	Continual	Operator	N/A	N/A	N/A
F2 (Gas Oil)	N/A - Run time	Continual	Operator	N/A	N/A	N/A

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
	Estimates					
F3 (Acetylene)	N/A - Purchasing Records/Cylinder Usage Estimates	Continual	Operator	N/A	N/A	N/A
F4 (LPG)	N/A - Purchasing Records/Cylinder Usage Estimates/LPG Tank Level Gauge	Continual	Operator	N/A	N/A	N/A
F1 (Natural Gas)	MD8	Continual	Operator	N/A	N/A	N/A
F2 (Gas Oil)	MD9	Continual	Operator	N/A	N/A	N/A
F5 (Volatile Organic Carbon)	RTO Outlet Flow meter	Continual	Operator	N/A	N/A	N/A
F2 (Gas Oil)	M10	Batch	Trade partner	Yes	Yes	Yes
F1 (Natural Gas)	MD11	Continual	Operator	N/A	N/A	N/A

#### t. Applied Tiers

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

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

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

(iii) The competent authority may allow an operator to apply even lower tiers than those referred to in the sub paragraph (ii) with a minimum of tier 1 for a transition period of up to three years if the operator can demonstrate to the satisfaction of the competent authority that this is not technically feasible or would lead to unreasonable cost to apply the

higher tier and provides an improvement plan detailing how and by when at least the tier referred to in sub paragraph (ii) will be achieved. The improvement plan should be referenced in subsequent table and provided to the competent authority at the time of submission of this plan.

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

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

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

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

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

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions tCO <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)
F1 (Natural Gas)	S1,S2,S3,S4,S5,S18,S24,S25	MD1, MD2	<2.5%	Standard	2	2b	2a	N/A	1	N/A	N/A	28500	99.2	Major	Yes	n/a	n/a
F2 (Gas Oil)	S1,S2,S3,S6,S7,S8,S9,S10,S14,S15,S	M10,MD9,N/A - Run time Estima	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	30	0.1	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 <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)
	16,S17, S19,S21,S22,S23	tes															
F3 (Acetylene)	S12	N/A - Purchasing Records/Cylinder Usage Estimates	N/A	Standard	No tier	1	1	N/A	1	N/A	N/A	0.1	0	De-minimis	N/A	n/a	n/a
F4 (LPG)	S1,S2,S3,S13,S20	N/A - Purchasing Records/Cylinder Usage Estimates/LPG Tank Level Gauge	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	0.1	0	De-minimis	N/A	n/a	n/a
F5	S4,S5	RTO	N/A	Standard	No tier	No tier	No tier	N/A	1	N/A	N/A	200	0.7	De-	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 <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)
(Volatile Organic Carbon)		Outlet Flow meter		rd										minimis			

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

28730.2

**u. Uncertainty Calculations**

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

<b>Attachment</b>	<b>Description</b>
EU ETS Uncertainty Assessment Eli Lilly Kinsale Dec-2020.pdf	EU ETS Uncertainty Assessment Eli Lilly Kinsale Dec-2020

**v. Applied tiers**

Applied tiers for each source stream

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
F1 (Natural Gas)	S1,S2,S3,S4,S5,S18,S24,S25	2	2b	2a	N/A	1	N/A	N/A
F2 (Gas Oil)	S1,S2,S3,S6,S7,S8,S9,S10,S14,S15,S16,S17,S19,S21,S22,S23	No tier	2a	2a	N/A	1	N/A	N/A
F3 (Acetylene)	S12	No tier	1	1	N/A	1	N/A	N/A
F4 (LPG)	S1,S2,S3,S13,S20	No tier	2a	2a	N/A	1	N/A	N/A
F5 (Volatile Organic Carbon)	S4,S5	No tier	No tier	No tier	N/A	1	N/A	N/A

**w. Justification for Applied tiers**

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

<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

### x. Default Values

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

Source Stream Refs.	Emission Source Refs.	Parameter	Reference Source	Default Value applied (where appropriate)
F1 (Natural Gas)	S1,S2,S3,S4,S5,S18,S24,S25	Emission Factor	Ireland's National Greenhouse Gas Inventory	n/a
F1 (Natural Gas)	S1,S2,S3,S4,S5,S18,S24,S25	OxF	MRR	1.0
F2 (Gas Oil)	S1,S2,S3,S6,S7,S8,S9,S10,S14,S15,S16,S17,S19,S21,S22,S23	NCV and Emission Factor	Ireland's National Greenhouse Gas Inventory	n/a
F2 (Gas Oil)	S1,S2,S3,S6,S7,S8,S9,S10,S14,S15,S16,S17,S19,S21,S22,S23	OxF	MRR	1.0
F3 (Acetylene)	S12	NCV and Emission Factor	As published on the EPA Website	n/a
F3 (Acetylene)	S12	OxF	MRR	1.0
F4 (LPG)	S1,S2,S3,S13,S20	NCV and Emission Factor	Ireland's National Greenhouse Gas Inventory	n/a
F4 (LPG)	S1,S2,S3,S13,S20	OxF	MRR	1.0
F5 (Volatile Organic Carbon)	S4,S5	Carbon Content	Article 36 of MRR (Conversion of carbon content estimated based on residual VOC determination into the respective value of a CO2 related emission factor.)	3.664 tCO2/tC
F5 (Volatile Organic Carbon)	S4,S5	OxF	MRR	1.0

### Sampling and Analysis

Do you undertake sampling and analysis of any of the  Yes

parameters used in the calculation of your CO<sub>2</sub> emissions?

**y. Analysis**

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

Source Stream Refs.	Emission Source Refs.	Parameter	Method of Analysis	Frequency	Laboratory Name	Laboratory ISO17025 Accredited	Evidence Reference
F5 (Volatile Organic Carbon)	S4,S5	Volatile Organic Carbon Content	GC	Quarterly	In House	No	See additional details below and attached procedures

Detail about the written procedures for the above analysis.

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

Title of procedure	Monitoring of Volatile Organics using MTI/HP/Agilent Portable Micro Gas Chromatographs
Reference for procedure	Procedure number KIN-E00017
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	<p>In house sampling of volatile organic compounds is carried out on a quarterly basis by in house monitoring using gas chromatography.</p> <ol style="list-style-type: none"> <li>1. Prior to sampling ensure normal operation of RTO.</li> <li>2. A sampling loop is attached to a vacuum pump in order extract a sample from the monitoring source and route it to the sample inlet port of the instrument.</li> <li>3. Prior to running samples and calibration gases the instrument is set to run blank samples.</li> <li>4. The method is selected on the instrument, the instrument is calibrated using calibration gases and sampling and analysis is commenced.</li> <li>5. Calibration and analysis data is recorded on the instrument and stored electronically.</li> </ol>
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	Electronic copies in the secure dedicated folder on the installations 'Depts' network drive.
Name of IT system used	N/A
List of EN or other standards applied	N/A

**z. Sampling Plan**

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

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

Attachment	Description
KIN-E00017.pdf	Sampling Procedure
KIN-E00017-Att-A.pdf	Sampling Plan Procedure Attachment A

Title of procedure	Environmental Laboratory Air Emissions Monitoring Programme
Reference for procedure	Procedure Number KIN-30313
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure describes the sites air emissions monitoring schedule that includes emission point locations, the parameters to be measured, frequency of monitoring and the analysis method. The sampling schedule is reviewed annually and updated as required.
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	Regulus Database
Name of IT system used	N/A
List of EN or other standards applied	N/A

**aa. Sampling Plan Appropriateness**

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

Title of procedure	Environmental Laboratory Air Emissions Monitoring Programme
Reference for procedure	Procedure Number KIN-30313
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The procedure describes the sites air emissions monitoring schedule that includes emission point locations, the parameters to be measured, frequency of monitoring and the analysis method. The sampling schedule is reviewed annually and updated as required, which includes consideration of the sampling plan appropriateness.
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	Regulus Database
Name of IT system used	N/A
List of EN or other standards applied	N/A

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

**bb. Tracking Instruments**

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

Title of procedure	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: Tracking of Instruments)
Diagram reference	N/A

Brief description of procedure.	This section of the procedure describes the requirements associated with the Tracking of Instruments used for determining activity data at the installation. This section of the procedure also references any other relevant site procedures associated with these requirements. This section of the procedure includes the requirement for the retention of a master list of the relevant instruments outlining the status, description and location of the instruments, the approach used to assign appropriate ID references for the instruments and the record retention requirements for these instruments (e.g. calibration records etc).
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	(1) Hardcopies of the Tracking Instrument records are maintained in a Secure Site Archive, (2) Electronic Copies in the secure dedicated folder on the installation's 'Depts' Network Drive
Name of IT system used	N/A
List of EN or other standards applied	N/A

## 11. Management

### cc. 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 Compliance Representative	(1) Compilation and submission of the annual EU-ETS emissions report for the installation.  (2) Ensure all the necessary documentation associated with the relevant tracking instruments etc is maintained.  (3) Ensure all requirements associated with Greenhouse Gas emissions permit and the Monitoring & Reporting Regulation for the installation are met.  (4) Ensure all the relevant Revenue forms, invoices and other records required for determination of the activity data for the installation are retained and readily available.  (5) Maintenance and update of the monthly tracking record of the installation's EU-ETS emissions.  (6) Ensures any other documents and records related to the installation's GHG permit and required to be retained are retained and readily available when required.

Attachment	Description
N/A	N/A

**dd. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Assignment of Responsibilities')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	The section of the procedure describes the measures in place at the installation for managing the assignment of responsibilities for monitoring and reporting of EU-ETS emissions from the installation and for managing the competency of the responsible personnel. This section of the procedure also references any other relevant site procedures associated with these requirements. Assignment of responsibility is made by an appropriate level of installation management and is based on experience and competence of the personnel involved. Training is required for all personnel involved in the EU-ETS monitoring and reporting processes (including those in back-up or deputisation roles) and the training records related to this procedure are maintained to record competency and understanding of the processes.
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department and Training Department
Location where records are kept	Training Records are maintained electronically in the SAP/LEADS Training Database for the installation
Name of IT system used	N/A
List of EN or other standards applied	N/A

**ee. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Monitoring Plan Appropriateness')

<p>Diagram reference</p> <p>Brief description of procedure. The description should cover the essential parameters and operations performed</p>	<p>N/A</p> <p>This section of the procedure describes the provisions in place at the installation that are associated with the regular evaluation of the monitoring plan appropriateness. This section of the procedure also references any other relevant site procedures and processes associated with these requirements. The provisions in place to ensure the monitoring plan appropriateness and the regular evaluation of the plan include:</p> <p>(1) The annual activities to be undertaken during the preparation of the installation's EU-ETS emissions report will include a review of the list of emissions sources and source streams versus the situation in the field (with the appropriate local operational personnel if required) to ensure this list remains valid.</p> <p>(2) The process described below to manage the Quality Assurance of Metering / Measuring Equipment is also the primary means by which compliance with the applied tier uncertainty thresholds for the activity data is ensured.</p> <p>(3) The annual activities undertaken during the preparation and verification of the installation's EU-ETS emissions report includes a review of potential opportunities for improvement of the monitoring methodology applied.</p> <p>(4) The procedure user is directed in this section and elsewhere in the procedure to ensure that the current published calculation factors are used, as outlined in the 'Calculation Factors' section of this monitoring plan.</p>
<p>Post or department responsible for the procedure and for any data generated</p> <p>Location where records are kept</p>	<p>Environmental Compliance Department</p> <p>(1) Hardcopy records - Secure Site Archive, (2) Electronic copy records - in the secure dedicated folder on the installation's 'Depts' network drive.</p>
<p>Name of IT system used</p> <p>List of EN or other standards applied</p>	<p>N/A</p> <p>N/A</p>

**ff. Data Flow Activities**

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

<p>Title of procedure</p> <p>Reference for procedure</p>	<p>The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation</p> <p>Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Data Flow Activities')</p>
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<p>Diagram reference</p> <p>Brief description of procedure. The description should cover the essential parameters and operations performed</p>	<p>N/A</p> <p>This section of the procedure describes in an overarching format the process, the specific requirements and the responsibility associated with the Data Flow Activities for the monitoring and reporting of EU-ETS emissions from the installation. Any other relevant site procedures used in the Data Flow Activities are referenced in this section. Combustion of the one major source stream at the installation, namely Natural Gas will typically be associated with &gt;99.8% of the EU-ETS emissions from the installation and therefore the EU-ETS Data Flow Activities primarily relate to the monthly tracking and reconciliation of the relevant consumption of Natural Gas at the installation through a combination of; (a) Natural Gas invoices for the installation from the Natural Gas supplier, and (b) sub-metering at the installation used to deduce the non EU-ETS Natural Gas consumption at the installation (i.e. natural gas consumed in the Hazardous Waste Incinerator). This section of the procedure describes in detail all of the steps involved in these Data Flow Activities as outlined in the below in the 'Description of the relevant processing steps for each specific data flow activity'.</p>
<p>Post or department responsible for the procedure and for any data generated</p> <p>Location where records are kept</p>	<p>Environmental Compliance Department</p> <p>(1) Hardcopy records - Secure Site Archive, (2) Electronic copy records - in the secure dedicated folder on the installation's 'Depts' network drive.</p>
<p>Name of IT system used</p>	<p>(1) SAP (for invoice processing), (2) OSI-PI (for natural gas meter interface readings by installation representatives)</p>
<p>List of EN or other standards applied</p> <p>List of primary data sources</p>	<p>N/A</p> <p>(1) Monthly Natural Gas invoices sent to the installation by the supplier</p> <p>(2) OSI-PI Software system (to interface with the natural gas meter / sub-meter readings in order to review and determine total monthly EU-ETS Natural Gas usage)</p> <p>(3) Copies of the monthly Revenue Commissioners forms : 'Declaration of Usage of Natural Gas by a Greenhouse Gas Emissions Permit Holder' (who wish to have their entitlement to relief from Natural Gas Carbon Tax granted at source). This monthly form documents the output of the determination by installation personnel of the total monthly EU-ETS Natural Gas usage at the installation.</p> <p>(4) Technical data sheets or equivalent for Emergency Generators and Emergency Fire pumps used to determine Diesel Oil consumption during periodic testing etc based on conservative run time estimates.</p> <p>(5) For LPG Purchasing Records/Cylinder Usage</p>

<p>Description of the relevant processing steps for each specific data flow activity.</p>	<p>Estimates/LPG Tank Level Gauge</p> <p>(6) Acetylene Purchasing Records/Cylinder Usage Estimates</p> <p>(7) VOC- Readings from RTO Outlet Flow meter</p> <p>(1) An initial monthly Natural Gas invoice is used to obtain the 'Total Site Monthly Natural Gas Use' for each month (i.e. both EU-ETS and Non EU-ETS).</p>
<p>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</p>	<p>(2) The OSI-PI software system is then used on a monthly basis to interface with the installation's Natural Gas sub meters to determine the 'Total Monthly Non EU-ETS Natural Gas usage' relative to the 'Total Site Monthly Natural Gas Use' as obtained from the initial monthly invoice.</p> <p>(3) The final overall output of this monthly determination is then documented as the '% of the Natural Gas supplied...covered by the EPA Greenhouse Gas Emissions Permit' in the monthly 'Declaration' form for Revenue. This % value recorded on the Declaration form is the equivalent of the 'Total Monthly EU-ETS Natural Gas usage' at the installation. A copy of the Declaration form is then sent to both the Natural Gas supplier and the Revenue Commissioners and a copy is also then retained at the installation for EU-ETS monitoring and reporting purposes.</p> <p>(4) Further to this, the KWh quantity of Natural Gas supplied to the installation for the month that was used in EU-ETS emissions sources and the KWh quantity that was used in non EU-ETS emissions sources is finalised based on the total KWh quantity of Natural Gas supplied to site as reported by the supplier and based on the EU-ETS and non EU-ETS data supplied by the installation to supplier. These EU-ETS and non EU-ETS KWh quantities are then reported in the final Natural Gas invoice issued by the supplier as the KWh quantities subject to 'Partial Carbon Tax' and 'Full Carbon Tax' respectively (or using equivalent terminology).</p> <p>(5) The final 'Total Site EU-ETS Monthly Natural Gas Use' in KWh for each individual monthly period is then recorded directly from the final Natural Gas invoice issued by the supplier as the KWh quantity subject to 'Partial Carbon Tax' reported in the invoice (or using equivalent terminology). The total site monthly Natural Gas consumption in cubic meters (or kilo cubic meters as appropriate) reported on the monthly invoice is then used by the installation to determine the 'Total Site EU-ETS Monthly Natural Gas Use' in cubic meters based on the equivalent KWh quantities reported in the final monthly invoices. (Note: it is important that the relevant KWh quantities are obtained directly from the final invoices issued by the supplier to ensure</p>

consistency in subsequent EU-ETS calculations).

(6) The EU-ETS Annual Activity Data for the Natural Gas source stream (or the Total Fuel consumed in the year) is calculated as the sum of all the individual 'Total Site EU-ETS Monthly Natural Gas Use' quantities calculated for the reporting period.

(7) A record of the above calculations is retained in a secure and password protected Microsoft Excel file used to document and calculate the annual EU-ETS natural gas consumption, natural gas net calorific value and the EU-ETS emissions for the installation for the reporting period.

(8) Diesel Oil:

The annual activity data for this De Minimis source stream at the installation is to be conservatively estimated based on the measured run time and the expected diesel oil consumption (per unit of runtime) of the EU-ETS emissions sources using this source stream over the entire reporting period. Depending on the emission source, the run time of each unit is determined based on the readings recorded by the engine clocks on each unit or based on the log records for each unit as specified in installation procedure no. KIN-EM-012. The expected diesel oil consumption in each emission source is based on the manufacturer's datasheet for the unit engine or based on an equivalent information source as outlined in installation procedure no. KIN-EM-012. Details of the calculation of these run time based estimates are also completed and retained in the same secure and password protected Microsoft Excel file used to document and calculate the annual EU-ETS emissions for the installation arising from the combustion of Natural Gas.

Note: In the event an interruption to the natural gas supply to the site it may be necessary to operate the site boilers using Diesel Oil for a short period. Refer to the 'Calculation' section of this monitoring plan and to site procedure KIN-EM-012 for details on the provisions in place to monitor Diesel Oil consumption in the site boilers during such an interruption to the natural gas supply to the site. Details of the associated emissions calculations are also completed and retained in the same secure and password protected Microsoft Excel file used to document and calculate the annual EU-ETS emissions for the installation arising from the combustion of Natural Gas.

(9) Acetylene:

The Annual Activity Data for this 'De Minimis' source stream at the installation is to be conservatively estimated,

based on the purchase / usage of Acetylene Cylinders for the EU-ETS emissions sources using this source stream during the reporting period. The annual activity data (or Total Fuel consumed in the reporting period) is multiplied by the Tier 1 net calorific value and emission factor for Acetylene and an oxidation factor of 1.0 is then applied. In summary CO<sub>2</sub> emissions arising from the combustion of Acetylene is calculated as follows:

EU-ETS Annual CO<sub>2</sub> emissions from Acetylene = Estimated Total Acetylene consumed (kt) \*NCV (TJ/kt)\*Emission Factor (tCO<sub>2</sub>/TJ)\* Oxidation Factor (1.0)

(10) Propane (LPG-Liquefied Petroleum Gases):

The Annual Activity Data for this 'de minimis' source stream at the installation is to be conservatively estimated, based on the purchase / usage of Propane Cylinders for the EU-ETS emissions sources using this source stream during the reporting period. In addition, the quantity of LPG consumed through the small local LPG tank installed at the site fire pad is determined based on the measured tank level and measured vendor deliveries as follows: Tank Level at the start of the year (expressed in KG) - Tank Level at the end of the year (expressed in KG) + Vendor Deliveries during the year (as per invoices) (expressed in KG) = Annual quantity of LPG used from tank during the year (expressed in KG).

The annual activity data (or Total Fuel consumed in the reporting period) is multiplied by the country specific net calorific value and emission factor for Propane and an oxidation factor of 1.0 is then applied.

(11) Volatile Organic Carbon (VOC):

The Annual Activity Data for this 'De Minimis' source stream at the installation is to be conservatively estimated, based on the inlet concentrations of VOCs for the EU-ETS emissions sources using this source stream during the reporting period. The annual activity data is calculated using periodic monitoring data (quarterly) of each individual VOC source at the inlet to the RTO and converted to the carbon equivalent for each VOC input and converted to CO<sub>2</sub> by dividing by the atomic mass of carbon and multiplying by the molar mass of CO<sub>2</sub>.

The NCV of the VOCs source stream will be estimated based on literature values and the components of the gas.

(12) The Annual EU-ETS CO<sub>2</sub> emissions arising from the combustion of Natural Gas, Diesel Oil, Acetylene and

Propane (LPG) are calculated following the formula and using the calculation factors etc. outlined in the 'Calculation' and 'Calculation Factors' sections of the monitoring plan.

Submit relevant documents to record data flow activities

Attachment	Description
N/A	N/A

**gg. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Assessing and Controlling Risks')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This section of the procedure describes the provisions in place at the installation to assess the inherent risks and control risks associated with the Dataflow activities involved in the determination of the installation's annual EU-ETS emissions. This section of the procedure also references any other relevant site procedures or documents associated with these requirements. In brief the procedure describes the process that is to be used in assessing and controlling risks and also references the output of the most recent iteration of this process. The process includes consideration of the inherent risks and lists these risks with an assessment of the probability that each of these risks could result in a material misstatement at any point in the dataflow activities and the potential significance or impact of this on the overall uncertainty of the process during each individual reporting period. In assessing these inherent risks, the various controls that are in place to mitigate these risks are taken into account to ensure that the risks are controlled to acceptable levels. Furthermore, the risk of material misstatements occurring at any point in the dataflow activities despite the controls in place to mitigate these risks (i.e. control risks) are also to be considered to determine if additional controls would be required. Written procedure provisions are in place that

	concern the required control activities as listed in Article 58 (3) of the MRR as referenced in this section of the procedure.
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	Regulus Database
Name of IT system used	N/A
List of EN or other standards applied	N/A

**hh. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Quality Assurance of Metering / Measuring Equipment')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	<p>This section of the procedure describes the provisions that are in place to provide quality assurance of metering / measuring equipment used in the determination of the installation's annual EU-ETS emissions. This section of the procedure also references any other relevant site procedures or documents associated with these requirements. The procedural requirements that are in place related to this include:</p> <p>(1) All metering / measuring equipment used in the determination of the installation's EU-ETS emissions must be shown to be capable of meeting the stated uncertainty specification and must be sufficiently robust as described in the procedure.</p> <p>(2) Factory calibration and installation commissioning records for each piece of metering / measuring equipment under the control of the installation must be reviewed and retained to demonstrate the required instrument performance.</p> <p>(3) Periodic (e.g. annual) Gas Metering Calibration records for the metering / measuring equipment outside the control of the installation are requested from the Gas Network operator and are reviewed and retained to provide assurance of the required level of instrument performance.</p> <p>(4) To ensure that the uncertainty of the installation gas submetering system (used to deduce the non EU-ETS gas</p>

consumption) continues to be sufficient to meet the activity data tier uncertainty requirements, a monthly analysis is performed that compares the sum of the sub meter totalised gas consumption volumes to the totalised monthly site billing meter gas consumption volumes. (This is also considered an alternative to periodic calibration checks of the sub-meter instruments).

(5) If the results of this monthly analysis indicates that the activity data tier uncertainty requirements were not met during the particular billing period (i.e. one calendar month), this is to be investigated and corrective actions implemented to ensure the required level of accuracy is achieved for future monthly billing periods. This will provide an adequate level of assurance that the required activity data uncertainty will be achieved over the entire annual reporting period.

Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	(1) Hardcopy records - Secure Site Archive, (2) Electronic copy records - in the secure dedicated folder on the installation's 'Depts' network drive.
Name of IT system used	N/A
List of EN or other standards applied	N/A

**ii. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Quality Assurance of Information Technology used for Data Flow Activities')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This section of the procedure describes the provisions that are in place at the installation to provide quality assurance of Information Technology (IT) used for Data Flow Activities. This section of the procedure also references any other relevant site procedures or documents associated with these requirements.

The procedural requirements that are in place related to this include:

(1) The monthly analysis of the billing gas meter vs. the various gas site sub meters as described above in the section on 'Quality Assurance of Metering / Measuring Equipment' is completed via the installation OSI-PI and Process Control IT systems. This assessment also serves to provide monthly quality assurance of the associated IT systems used to interface with the meters in addition to providing quality assurance of the metering instruments.

(2) Access is controlled and restricted to the installation's IT systems to authorised personnel only who each have unique log-in names and passwords etc. Similar measures are in place for the various individual software systems of the installation's IT, providing further levels of control and restrictions in addition to quality assurance of the input and output from these systems.

(3) Virus protection is installed and enabled on all the installations IT infrastructure.

(4) A firewall has been set up around the installations networks to prevent unauthorised access of the installation's IT systems.

(5) Files are secured using NTFS security permissions. Permissions can be set on files and folders to deny or grant access to specific individuals or groups of users.

(6) Extensive IT back-up provisions and back-up testing are provided at the installation as described in local IT procedures.

(7) Physical security provisions for various elements of the installation's IT infrastructure are described in local IT procedures.

(8) Further local IT procedures specific to the relevant aspects of process control IT systems include; (a) Back-up of data and software, (b) Control System Testing, and (c) Security.

Post or department responsible for the procedure and for any data generated  
Location where records are kept  
Name of IT system used  
List of EN or other standards applied

(1) Environmental Compliance, (2) IT Department, (3) Process Automation Department  
As referenced in local procedures  
N/A  
N/A

**jj. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Review and Validation of Data')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This section of the procedure describes the provisions that are in place at the installation to ensure an adequate level of review and validation of the data is completed. Any other relevant site procedures or sections of this procedure that also serve to ensure an adequate level of review and validation of the data and that are applicable are also referenced.

The procedural provisions that are in place related to these requirements include:

(1) The annual verification process completed by the accredited external verifier is considered to be the ultimate review and validation of the data and the process used to determine the EU-ETS emissions from the installation over the reporting period. However further procedural provisions are also in place that take effect throughout and / or at various stages of the reporting period to provide further levels of review and validation of data as outlined below.

(2) An annual check list is outlined of the complete set of primary data sources (e.g. purchasing records, metering records and Revenue Commissioners forms) that are required to determine the annual EU-ETS emissions from the installation and the procedure user is directed to cross check the actual record of primary data sources against this checklist to ensure the complete data set is taken into account when determining the annual EU-ETS emissions.

(3) The procedure directs the user, in advance of completing the annual EU-ETS emissions report, to compare the determined annual EU-ETS emissions for the reporting period with the equivalent emissions reported for the installation from the previous 3 years and with the free emissions allowance allocation for the installation. Any significant differences between these figures should be readily explained and credible. This will help assess the validity of the determined EU-ETS emissions for the reporting period.

(4) The review and reconciliation of the monthly natural gas

invoices, the site billing natural gas meter records and the natural gas sub-meter records is used to determine the total EU-ETS natural gas usage by the installation on a monthly basis as described above in the 'Data Flow Activities' section. This involves a comparison of the same final combined data output from independent sources (i.e. invoices, metering and sub metering records). Achievement of the required level of agreement between the independent data sources serves to validate the different data sources.

(5) Article 62 1(c)(ii) is not applicable as the current data flow activities do not involve the use of calculation factors that have been determined by analysis, calculated or obtained from the supplier.

(6) Criteria for the potential rejection of data relate primarily to the required uncertainty for the Activity Data Tier.

Post or department responsible for the procedure and for any data generated

Environmental Compliance Department

Location where records are kept

(1) Hardcopy records - Secure Site Archive, (2) Electronic copy records - in the secure dedicated folder on the installation's 'Depts' network drive.

Name of IT system used

N/A

List of EN or other standards applied

N/A

**kk. 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

The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation

Reference for procedure

Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Corrections and Corrective Actions')

Diagram reference

N/A

Brief description of procedure. The description should cover the essential parameters and operations performed

This section of the procedure describes the system that is in place at the installation that would be used to handle corrections and corrective actions related to the Article 58 and 63 of the MRR. Any other relevant site procedures are also referenced in this section of the procedure.

The following is an outline of the actions that would be taken to manage and complete any related corrections and corrective actions if data flow activities and control activities were found not to function effectively:

(1) An 'Observation Tracking Record' would be raised on

the installation's TrackWise observation / deviation management system to document the nature of the issue causing the data flow activities or control activities not to function effectively.

(2) An investigation would be completed to assess the nature and potential cause of the issues and this would be documented in the Observation Tracking Record.

(3) Depending on the outcomes of the investigation, any corrections and corrective actions that are deemed necessary would be managed and documented through the Observation Tracking Record and any linked 'Child' records in the TrackWise Observation/Deviation Management system.

Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	TrackWise Events Database
Name of IT system used	TrackWise
List of EN or other standards applied	N/A

**II. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Control of Outsourced Activities')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	<p>(1) This section of the procedure outlines that none of the data flow or control activities within the installation are currently outsourced and therefore these considerations are generally not currently applicable to the installation. The procedure also states that should any of the data flow or control activities at the installation be outsourced in the future then the requirements of Article 64 of the MRR will need to be taken into consideration and provisions put place to meet these requirements.</p> <p>(2) This section of the procedure does however highlight that Periodic (e.g. annual) Gas Metering Calibration records for the metering / measuring equipment outside the control of the installation are requested from the Gas Network Operator and are reviewed and retained by installation personnel to demonstrate the required level of</p>

Post or department responsible for the procedure and for any data generated	instrument performance. Environmental Compliance Department
Location where records are kept	Currently not applicable.
Name of IT system used	N/A
List of EN or other standards applied	N/A

**mm. Record Keeping and Documentation**

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

Title of procedure	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: 'Record Keeping and Documentation')
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This section of the procedure describes the system that is in place to manage record keeping and documentation. The data and information stipulated in Annex IX of the MRR is stored for at least 10 years as specified in Article 66 and such that information is made readily available upon request of the competent authority or verifier . The installation's 'Document Management and Archiving Procedure' no. KIN-17119 also outlines the requirements that must be met at the installation and is referenced for applicability to this section of the procedure.
	The main procedural provisions that to relate to the data and information requirements of Article 66 and Annex IX of the MRR include:
	(1) All related records and documents (hardcopies and/or electronic copies) are named and labelled consistently and appropriately so that these can be readily identified.
	(2) Appropriate indexing techniques are used for both hardcopies and electronic copies of records and documents so that these can be readily located and retrieved when required.
	(3) Records and documents are retained for the minimum required time periods required for legal and other purposes. There is a requirement to label documents and records entering the secure site archive with the retention date.
	(4) Records and documents are stored in secure archives and/or IT systems to protect the items from loss or corruption and to ensure the items will be available when

required.

Post or department responsible for the procedure and for any data generated Environmental Compliance Department  
 Location where records are kept (1) Secure site archive, (2) TrackWise Observation / Deviation Management System  
 Name of IT system used N/A  
 List of EN or other standards applied N/A

**nn. Risk Assessment**

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

Attachment	Description
Risk Assessment of EU ETS Emissions Monitoring and Reporting Activities (Rev Dec 2020).pdf	Risk Assessmen for EU ETS Emissions Monitoring & Reporting (Dec-2020)

**oo. Environmental Management System**

Does your organisation have a documented Environmental Management System? Yes

Is the Environmental Management System certified by an accredited organisation? No

**12. Changes in Operation**

**pp. 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	The Monitoring and Verification of the Site Annual Greenhouse Gas Allocation
Reference for procedure	Procedure No. KIN-EM-012 (Procedure Section Entitled: Changes in Operation)
Diagram reference	N/A
Brief description of procedure. The description should cover the essential parameters and operations performed	This section of the procedure describes the provisions in place at the installation to ensure that all relevant information about any planned or effective changes to the capacity, activity level and operation of an installation is regularly reviewed to identify any changes that have an impact on the installation's allocation under COMMISSION IMPLEMENTING REGULATION (EU) 2019/1842 of 31 October 2019 laying down rules for the application of Directive 2003/87/EC of the European Parliament and of the Council as regards further arrangements for the adjustments to free allocation of emission allowances due to activity level changes. An annual report on the activity level of each sub-installation in the preceding calendar year shall be submitted to the EPA in accordance with the requirements of the Regulation. The main relevant provisions at the installation as described in this section of the procedure include: The installation's change management, project delivery and facilities delivery procedures and systems will function to involve and inform the installation's Environmental Compliance Department personnel of upcoming changes planned at the installation with the potential to impact all regulatory and competent authority reporting and information submission requirements. This would include those requirements related to installation's GHG Emissions Permit, such as changes that may impact the annual EU-ETS emissions from the installation as a result of material changes to the capacity, activity level or operation of the installation.
Post or department responsible for the procedure and for any data generated	Environmental Compliance Department
Location where records are kept	(1) Secure site archive, and/or (2) Secure dedicated folder on the installation 'Depts' Network Drive
Name of IT system used	N/A

### 13. Abbreviations

#### qq. Abbreviations Acronyms or definitions

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

Abbreviation	Definition
RTO	Regenerative Thermal Oxidiser
EU-ETS	European Union - Emissions Trading Scheme
TIC	Thermal Input Capacity
CHP	Combined Heat and Power
VOC	Volatile Organic Carbon

### 14. Additional Information

Any other information:

Attachment	Description
Eli Lilly BGE 2012 Metering Summary & Cal Cert.pdf	BGE Metering Summary & Cal Cert for Eli Lilly from 2012
Eli Lilly Gas Metering Cal Certs & Tech Data.pdf	Cal Certs and Tech Data for Eli Lilly Meter Refs MD2-MD7
Eli Lilly Responses to EPA ETS Queries June 2013.pdf	Eli Lilly Response to EPA ETS Queries June 2013
2028 EG1 EG2 Removal Confirmation Letter (2).pdf	Letter evidence for the removal of EG1 and EG2 from the installation
Review of In-house Gas Meters at Eli Lilly Kinsale Dec-2014.pdf	Review of In-house Gas Meters at Eli Lilly Kinsale Dec-2014
OV_KEU Natural Gas Flow Meter_EUETS Ref MD2.pdf	Op Verification for Gas Meter MD2
OV_Boiler 3 Natural Gas Flow Meter_EUETS Ref MD3.pdf	Op Verification for Gas Meter MD3
OV_Boiler 4 Natural Gas Flow Meter_EUETS Ref MD4.pdf	Op Verification for Gas Meter MD4
OV_Boiler 5 Natural Gas Flow Meter_EUETS Ref MD5.pdf	Op Verification for Gas Meter MD5
OV_RTO1 Natural Gas Flow Meter_EUETS Ref MD6.pdf	Op Verification for Gas Meter MD6
OV_RTO2 Natural Gas Flow Meter_EUETS Ref MD7.pdf	Op Verification for Gas Meter MD7
Estimate of Thermal Input Capacity of Emergency Generator 5.pdf	Input Capacity Calculations for EG-5 System
Estimate of Thermal Input Capacity of Emergency Generator 3.pdf	Input Capacity Calculations for EG-3

<b>Attachment</b>	<b>Description</b>
Estimate of Thermal Input Capacity of RTO-1.pdf	Input Capacity Calculations for RTO-1
Estimate of Thermal Input Capacity of Cumins Firewater Pump 04P4.pdf	Input Capacity Calculations for Firewater Pump 04P4
Eli Lilly CHP Plant - Thermal Input Capacity.pdf	CHP Plant Thermal Input Capacity Info
Eli Lilly-Thermal Input Capacity Estimate EG-6.pdf	EG-6 Thermal Input Capacity Info
EliLilly_CHP_NatGasMeter_TechInfo.pdf	Tech Info for CHP Gas Meter
Eli Lilly-Thermal Input Capacity Estimate EG-1.pdf	EG-1 Thermal Input Capacity Info
Scan of Eli Lilly Joint Declaration for Permit Transfer.pdf	Scan of the Joint Declaration for the Permit Transfer for new company name 2017
Cert of Inc.-Eli Lilly Kinsale Ltd.pdf	Certification of Incorporation for new company name 2017
CRO No.-Eli Lilly Kinsale Ltd.pdf	Reference for CRO number for new company name 2017.
Estimate of Thermal Input Capacity of Clark Firewater Pump 04P2.pdf	Input Capacity Calculations for Firewater Pump 04P2
Eli Lilly-Thermal Input Capacity Estimate EG-8.pdf	Thermal Input Capacity Estimate EG-8
Estimate of Thermal Input Capacity of IE7 Power Washer 2 (S22).pdf	Estimate of Thermal Input Capacity of IE7 Power Washer 2 (S22)
Eli Lilly-Thermal Input Capacity Estimate EG-9.pdf	Thermal Input Capacity Estimate EG-9
IE40 Boilers - Thermal Input Capacity.pdf	IE40 Condensing Boilers - Thermal Input Capacity Confirmation
IE40 Natural Gas Meter Details-Eli Lilly Kinsale.pdf	IE40 Natural Gas Meter Details

## 15. Confidentiality

### rr. 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.**