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DIRECTORATE-GENERAL
CLIMATE ACTION
Directorate B - European and International Carbon Markets

Methodology report template for the data collection

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1 INTRODUCTION

1.1 Status of the methodology report template

The “CIMs”¹ (Community-wide and fully-harmonised Implementing Measures pursuant to Article 10a of the revised EU ETS Directive²) require that operators of installations have to submit baseline data to the competent authority for the purpose of calculating the level of free allocation for each installation from 2013 onwards. Article 7(7) of the CIMs state:

“Member States shall require operators to submit complete and consistent data and to ensure that there are no overlaps between sub-installations and no double counting. Member States shall, in particular, ensure that operators exercise due diligence and submit data that presents highest achievable accuracy so as to enable reasonable assurance of the integrity of data.

To this end, Member States shall ensure that each operator also submits a methodology report containing, in particular, a description of the installation, the compilation methodology applied, different data sources, calculation steps and, where applicable, assumptions made and the methodology applied to attribute emissions to the relevant sub-installations in accordance with paragraph 4. Member States may order the operator to demonstrate the accuracy and completeness of the data provided.”

In order to support the data collection exercise by Member States, the Commission provides an electronic template for data collection and several guidance documents. As a further measure to support Member States, and to achieve a broadly harmonised approach to data collection, this document provides a template for Methodology reports, which each operator is required to submit by virtue of Article 7(7) of the CIMs.

This reporting template is not mandatory but recommended. It is intended to cover all possible situations of the most complex installations. It is self-evident that operators of simpler installations will not have to fill in all sections of this report, but will be allowed to restrict themselves to what is relevant in their installations.

This template is based on a draft provided by Umweltbundesamt UBA of Austria. It takes into account the discussions at several meetings of the informal Technical Working Group on Benchmarking under the WGIII of the Climate Change Committee (CCC), as well as written comments received from stakeholders and experts from Member States. It was agreed that this guidance document reflects the opinion of the Climate Change Committee, at its meeting on 14 April 2011.

1.2 Use of the methodology report template

The methodology report template provides for a comprehensive list of the possible information that the operators need to provide through the methodology report, in order to comply with the requirements of the CIMs. Its use is, as stated above, not mandatory but recommended. It might be modified in order

¹ Draft Commission Decision of [Date of adoption and OJ reference to be added when available] determining transitional Union-wide rules for the harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC, available as a draft at

http://ec.europa.eu/clima/documentation/ets/docs/decision_benchmarking_15_dec_en.pdf

² Directive 2003/87/EC; Consolidated version at

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:02003L0087-20090625:EN:NOT>

to better take into account of the national circumstances and existing requirements, i.e. concerning the implementation of the provisions on monitoring and reporting. In case modifications are made, the methodology report shall always provide at least for the same level of detail and information as the one provided by the Commission, included in this document.

1.3 Scope of this guidance documents

This methodology report template is intended for Member States' Competent Authorities and may be either used as it is or used as a basis for developing a Member State specific template.

1.4 Additional guidance

Next to the methodology report template, other guidance is provided for the national Competent Authorities, like the guidance documents on the data collection and allocation process, as a telephone helpdesk, and the EC-website, with list of guidance documents, FAQs and useful references, http://ec.europa.eu/clima/policies/ets/benchmarking_en.htm .

2 INSTALLATION DATA AND BOUNDARIES

2.1 Identification of the Installation to which this report relates

Name of the installation:	
Unique ID (as generated by the reporting template in section A.I.1.f):	

2.2 Please provide a description of your installation at a level of detail that allows the verifier and the Competent Authority to fully understand all the installation's processes related to their inputs, outputs and corresponding emissions. For this purpose, please provide a simplified flow chart of your installation, if available³. If such description and flow chart are contained in the approved monitoring plan of the installation, it is sufficient to attach the monitoring plan to this report.

2.3 If the boundaries of the installation change from 2013 onwards, please list here all changes relating to emission sources and source streams compared to the current greenhouse gas emissions permit.

2.4 **If there is more than one sub-installation relevant for your installation**, please attribute, to the extent possible, those sub-installations to physical units in correspondence to the description given under 2.2. The description should be supported by a graphical description if this improves the clarity of the description. If necessary, source streams (i.e. amounts of fuels, process materials etc) should be considered at the level of those physical units.

2.5 Please provide a justification for the baseline period chosen. If single years are excluded, because the installation has not been operated for at least one day, or if the installation is claimed to be an installation "operated only occasionally" in accordance with Article 9(8) of the CIMs, please provide evidence as appropriate.

³ If this is provided as a separate file, a reference to this file should be provided in sheet "I_Comments" of the data collection template.

3 SOURCE STREAMS

To the extent the installation does not have a monitoring plan approved by the Competent authority, or if the installations boundaries from 2013 onwards will be different from those in the current approved monitoring plan, it is important to have information about the energy inputs and emissions associated with each source stream. It is needed for underpinning the attribution of emission data to individual sub-installations in line with the description of those sub-installations given under point 2.4, and for allowing plausibility checks for measurable heat, other heat, fuel input, and process emissions data. However, most operators have already such information independently verified and submitted to competent authorities in the framework of either annual reporting pursuant to Article 14 or at least during the first half of 2010 under Article 9a(2) of the EU ETS Directive. Therefore Member States may consider waiving this reporting requirement in the context of the baseline data collection under the CIMs.. Submission of detailed source stream data will be mandatory for installations, for which the operator has not submitted verified emissions reports to the competent authority before, or if the boundaries of the installation will change from 2013 onwards.

Furthermore Member States may ask all operators for complete data if this is not fully contained in their national reporting templates for annual emission reports. The minimum reporting requirement is the reporting of energy input from fuels as well as emissions aggregated over the whole installation.

Please get confirmation from your competent authority (e.g. from their website, guidance paper or information workshops, if available) regarding the level of detail required for this part of the report. The electronic template provided by the Commission and potentially customised by your competent authority will contain information about the required level of detail in section B.I.

In order to simplify reporting in this chapter of the methodology report, please refer to your approved monitoring plan instead of answering the questions of this section, if applicable. If the Member State has waived the requirement of detailed source stream data reporting, also this section can be disregarded, with the exception of point 3.1.

If the installation does not have a monitoring plan approved by the CA, the Monitoring and Reporting Guidelines (MRG 2007 including their latest amendments⁴) shall be the basis for reporting.

3.1 Please confirm here to which level of detail you are required to report source stream data (Options are: Full reporting; emissions per source stream; installation totals).

⁴ Commission Decision 2007/589/EC and amendments. The consolidated version is available at

http://eur-lex.europa.eu/Result.do?T1=V1&T2=2007&T3=589&RechType=RECH_consolidated&Submit=Search

The latest amendments related to sectors to be included from 2013 onwards have been agreed by the Climate Change Committee in December, but are not yet published. For a copy please contact the competent authority.

- 3.2 *Describe the methodology, calculation steps and assumptions performed for the determination of relevant emissions from each source stream.*
- 3.3 *Describe the data sources or procedures applied for determining activity data, NCV, emission factor, oxidation factor, conversion factor, carbon content (in particular if a mass balance approach has been chosen), biomass content, and the calculation approach how the direct emissions have been calculated. How have stock changes been taken into account, if relevant?*
- 3.4 *If CEMS (continuous emission measurement systems) have been used to determine direct emissions, please describe your equipment, calibration and quality control measures. Further describe how the biomass content and the proxy NCV value have been determined.*
- 3.5 *If your installation has N₂O emissions covered by the revised EU ETS Directive, please describe the process and sub-installation the greenhouse gas stems from. Please also describe your measuring system, including calibration and quality control measures.*
- 3.6 *If your installation emits perfluorocarbons from primary aluminium production as covered by the revised EU ETS Directive, please describe how relevant parameters and calculation factors such as anode effects, slope emission factor, the AEO/CE ratio, overvoltage coefficient and the C₂F₆ weight fraction have been determined.*
- 3.7 *If CO₂ has been transferred or geologically stored, please describe how the capture rate and the amount transferred and stored has been determined.*

4 PRODUCT BENCHMARK SUB-INSTALLATIONS

This chapter is only relevant if you have identified at least one product benchmark sub-installation within the boundaries of your installation.

If there is more than one product benchmark relevant for your installation, please provide an individual copy of this chapter 4 for each benchmark separately.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet "I_Comments" of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

4.1 *Type of product benchmark sub-installation:*

4.2 *Please describe all inputs, outputs and corresponding emissions that have been identified, aggregated and attributed to this sub-installation, if other sub-installations than this one are relevant at your installation. If relevant, describe especially how intermediate products have been determined to belong to this sub-installation, avoiding any double counting.*

4.3 *Please describe in detail how the production data needed for determining historic activity levels in each baseline year have been determined in accordance with the product definition of Annex I of the CIMs⁵. Which sources have been used for the data acquisition for the determination of activity levels (e.g. invoices and relevant sales database, production protocols,..). Are there alternative data sources available for corroborating the primary data source? Please describe how stock changes, if relevant, have been determined.*

4.4 *If different products were produced in one production line which do not all fall under the same product benchmark, please describe in detail how the inputs, outputs and corresponding emissions were attributed to the relevant sub-installations.*

⁵ This may include conversion of sales data to net production levels of 100% pure substances, or other states as outlined in Annex I of the CIMs.

- 4.5 *If relevant data are missing, please duly justify this lack of data.*
- 4.6 *If relevant data are missing, please describe how missing data has been substituted. In particular, describe any assumptions and conservative estimates made to determine proxy data.*
- 4.7 ***Only in case that either fall-back sub-installations or more than one product BM are relevant in your installation,****please specify how you have set the relevant system boundaries of this sub-installation. At which points within your installation have product, material, measurable heat or fuel flows been measured and monitored?*
- 4.8 ***Only in case that either fall-back sub-installations or more than one product BM are relevant in your installation,*** *if products belonging to different sub-installations are produced on one production line (physical unit), please describe in detail how the inputs, outputs and corresponding emissions were attributed to the relevant sub-installations.*
- 4.9 *If this sub-installation is covered by a product benchmark with consideration of exchangeability of fuel and electricity, please clearly explain the method for quantifying the share of electricity available which was attributed to this sub-installation. Attribute, to the extent possible, to physical parts of the installation where this electricity is consumed.*
- 4.10 *If the initial installed capacity is determined based on monthly production data⁶, please describe the way monthly data are gathered, and give an indication for the quality of these data.*

⁶ in accordance with Article 7(3) point a

- 4.11 *If the initial installed capacity of this sub-installation cannot be determined based on monthly production data⁷, please provide a justification and describe the procedure used for experimental verification. In particular, describe in detail all relevant operation conditions. Furthermore describe the operation conditions of other sub-installations that import and consume materials, measurable heat, fuel, waste gases or electricity from the same source streams as the sub-installation concerned, if this has an influence on the operation of the sub-installation under consideration.*
- 4.12 *If significant capacity changes have occurred in the period 1 January 2005 to 30 June 2011, please describe the physical changes related to the technical configuration. List furthermore for each physical change which units are affected and the relevant dates (start up of the changed installation or start of changed operation pursuant to Article 3(o) of the CIMs).*
- 4.13 *If you have reported physical changes under point 4.12, please describe in detail how the added or reduced capacity has been determined (i.e. how you have chosen and determined appropriate monthly production data).*
- 4.14 *If you have reported physical changes under point 4.12, please describe all assumptions and data used to determine that the capacity change was a significant one. In particular demonstrate either that the sub-installation after the change can be operated at a capacity that is at least 10% higher (lower) compared to the initial installed capacity of the sub-installation before the change, or that the changed activity level is resulting in a change of the preliminary allocation level of more than 50,000 allowances representing at least 5% of the preliminary annual number of emission allowances allocated free of charge for this sub-installation.*
- 4.15 *If significant capacity changes have been reported under point 4.12, please describe in detail how you have determined the historical capacity utilisation factor to be applied for this capacity change under Article 9(9) of the CIMs.*

⁷ in accordance with Article 7(3) point a

- 4.16 *If significant capacity changes have been reported under point 4.12, please describe the methodology and all assumptions that led to the definition of the “start of changed operation” in accordance with Article 3(o).*
- 4.17 *If your installation has started operations during the selected baseline period, please describe the methodology and all assumptions that led to the determination of the “start of normal operation” of this sub-installation in accordance with Article 3(n).*
- 4.18 *If your installation has been operating less than two calendar years during the relevant baseline period, please describe in detail how the relevant capacity utilisation factor for this sub-installation has been determined. Please provide information on the installation’s intended normal operation, maintenance, common production cycle, energy and greenhouse gas efficient techniques and on the typical capacity utilisation in the sector concerned compared to sector-specific information. Relevant guidance documents or standard values issued by your competent authority is to be taken into account and referenced.*
- 4.19 *If this sub-installation is covered by the mineral oil refinery or the aromatics benchmark, please describe in detail how the respective CWT throughputs have been determined. Please describe in detail all measurement methods, assumptions and calculations made for that purpose.*
- 4.20 *If this sub-installation is covered by product benchmarks referred to in Annex III of the CIMs except those referred to under point 4.19, please describe the methodology for determination of all heat, fuel and material flows and parameters given in that Annex. Please describe in detail all measurement methods, assumptions and calculations made for that purpose. (Note: please just refer, to the extent relevant, to your approved monitoring plan and annual emission reports, if no further steps were necessary.)*

4.21 *If you have imported measurable heat from installations or other entities and consumed in this sub-installation, please describe how the amount of measurable heat coming from non-ETS installations or entities encompassed by the product benchmark sub-installation has been determined.*

5 HEAT BENCHMARK SUB-INSTALLATIONS

This chapter is only relevant if you have identified at least one heat benchmark sub-installation within the boundaries of your installation.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet “I_Comments” of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

5.1 *Please describe all inputs, outputs and corresponding emissions that have been identified, aggregated and attributed to the heat benchmark sub-installations. Please also refer for this purpose to the flow chart provided under 2.2.*

5.2 *Please describe in detail for activity data which sources have been used for the data acquisition used for the determination of activity levels (e.g. invoices or relevant sales databases for imports and exports, mass or energy balances, heat meters, steam tables,..). Are there alternative data sources available for corroborating the primary data source?*

5.3 *If different products were produced in one production line, please describe in detail how the inputs, outputs and corresponding emissions were attributed to the relevant sub-installation. This is only relevant if some of those products are identified to be exposed to significant risk of carbon leakage⁸ and some are not.*

⁸ For a list of sectors that have been identified to be exposed to a significant risk of carbon leakage, please refer to Commission Decision 2010/2/EU. Revisions of this Decision in the future are possible. (Decision 2010/2/EU can be found at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:001:0010:0018:EN:PDF>)

- 5.4 *If measurable heat is produced within the boundaries of your installation, please describe the processes the measurable heat stems from. Relate this to physical parts of your installation.*
- 5.5 *Describe for all measurable heat produced, imported and exported the transfer medium used (including temperature, pressure and saturation levels as appropriate).*
- 5.6 *Describe how the net heat content of the measurable heat was determined. Describe all measurements considering mass flow, temperature and pressure. In particular describe all calculations made to determine the heat content allowing a full understanding of the energy balance.*
- 5.7 *If no measurement of the measurable heat was carried out for at least part of the heat balance given under point 5.6, please list and describe any existing documents (e.g. in particular invoices, operation cost, production protocols,...) providing sufficient evidence on (estimated) amounts of measurable heat produced, imported or exported, if available. Such documents must be based on a sound and transparent methodology. Clearly distinguish between CHP and non-CHP heat.*
- 5.8 *If no measurement of the measurable heat was carried out and no documents referred to in 5.7 exist, describe in detail any assumptions, and all calculations made to determine proxy data for measurable heat. In particular, describe the determination of fuel flows, NCV and efficiencies assumed.*

- 5.9 *If your installation has imported measurable heat from other installations, please describe how you have determined the amount of measurable heat originating from installations covered by the EU ETS and the amount from installations or entities not covered by the EU ETS.*
- 5.10 *If your installation has imported measurable heat from sub-installations covered by nitric acid benchmarks, please describe how the amount of measurable heat received from these sub-installations has been determined. This information is also required if the nitric acid production is part of your installation itself.*
- 5.11 *If you have exported measurable heat to non-ETS installations or entities, please describe how you have determined the carbon leakage status of the processes in which this measurable heat was consumed. Relate, to the extent possible, to entities and installations, where feasible to sub-installations of those installations, and list relevant NACE and PRODCOM codes.*
- 5.12 *If you have exported measurable heat, please describe how you have determined the amount of measurable heat exported to private households.*
- 5.13 *If you have exported measurable heat to private households, please describe how the emissions associated with the heat quantities delivered to private households has been determined.*
- 5.14 *If you have exported measurable heat to installations or entities not covered by the EU ETS, please describe to which extent losses have been determined and considered.*

- 5.15 *If relevant data are missing, please duly justify the lack of data.*
- 5.16 *If relevant data are missing, please describe how missing data has been substituted. In particular, describe any assumptions and conservative estimates made to determine proxy data.*
- 5.17 *Please list all relevant products or product groups (including their NACE / PRODCOM codes) which are produced within your installation with the heat from this sub-installation. You may also refer just to the reporting template if you have input that data there. Describe the method which you have applied for ensuring that no double counting (in particular for by-products and intermediates) and no data gaps occur.*
- 5.18 *If the inputs, outputs and corresponding emissions of the one or two heat benchmark sub-installations serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL), provide detailed information how the eligible amount of measurable heat available at your installation was attributed to the CL and the non-CL heat benchmark sub-installation. Attribute, to the extent possible, the flows of measurable heat to physical units. If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.*
- 5.19 *If the inputs, outputs and corresponding emissions of the heat benchmark sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL),, please describe the measurement system applied for determining those net heat amounts, if applicable. Describe the location within your installation and the type of measuring instruments.*
- 5.20 *If the inputs, outputs and corresponding emissions of the heat benchmark sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL)and no measurements were carried out as mentioned under 5.19 that allow the distinction of the eligible amount of measurable heat between serving sectors deemed or not deemed to be exposed to a*

significant risk of carbon leakage, please describe in detail any assumptions and calculations made to determine the ratio of CL to non-CL heat benchmark sub-installation. If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.

5.21 Where relevant, if the initial installed capacity is determined based on monthly production data⁹, please describe the way monthly data are gathered, and give an indication of the quality of these data.

5.22 Where relevant, if the initial installed capacity of this sub-installation cannot be determined based on monthly activity data, please give a justification, and describe the procedure used for experimental verification. In particular, describe in detail all relevant operation conditions. Furthermore describe the operation conditions of other sub-installations that import and consume materials, measurable heat, fuel, waste gases or electricity from the same source streams as the sub-installation concerned, if this has an influence on the operation of the sub-installation under consideration.

5.23 If significant capacity changes have occurred in the period 1 January 2005 to 30 June 2011, please describe the physical changes related to the technical configuration.

5.24 If you have reported physical changes under point 5.23, please describe in detail how the initial installed capacity of this heat benchmark sub-installation has been determined.

5.25 If you have reported physical changes under point 5.23, please describe in detail how the added or reduced capacity has been determined.

⁹ in accordance with Article 7(3) point a

- 5.26 *If you have reported physical changes under point 5.23, please describe all assumptions and data used to determine that the capacity change was a significant one. In particular demonstrate either that the sub-installation after the change can be operated at a capacity that is at least 10% higher (lower) compared to the initial installed capacity of the sub-installation before the change, or that the changed activity level is resulting in a change of the preliminary allocation level of more than 50,000 allowances representing at least 5% of the preliminary annual number of emission allowances allocated free of charge for this sub-installation.*
- 5.27 *If significant capacity changes have been reported under point 5.23, please describe in detail how you have determined the historical capacity utilisation factor to be applied for this capacity change under Article 9(9) of the CIMs.*
- 5.28 *If significant capacity changes have been reported under point 5.23, please describe the methodology and all assumptions that led to the definition of the “start of changed operation” in accordance with Article 3(o).*
- 5.29 *If your installation has started operations during the selected baseline period, please describe the methodology and all assumptions that led to the determination of the “start of normal operation” of the heat benchmark sub-installations in accordance with Article 3(n), clearly distinguishing between the CL and non-CL heat benchmark sub-installation.*
- 5.30 *If your installation has been operating less than two calendar years during the relevant baseline period, please describe in detail how the relevant capacity utilisation factor for the heat benchmark subinstallation has been determined. Please provide information on the installation’s intended normal operation, maintenance, common production cycle, energy and greenhouse gas efficient techniques and on the typical capacity utilisation in the sector concerned compared to sector-specific information.*

6 FUEL-BENCHMARK SUB-INSTALLATIONS

This chapter is only relevant if you have identified at least one fuel benchmark sub-installation within the boundaries of your installation.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet "I_Comments" of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

- 6.1 *Please describe all inputs, outputs and corresponding emissions that have been identified, aggregated and attributed to the fuel benchmark sub-installation. Please also refer for this purpose to the flow chart provided under 2.2.*

- 6.2 *Please describe in detail for activity data which sources have been used for the data acquisition used for the determination of activity levels (e.g. invoices or relevant sales databases for imports and exports, mass or energy balances,..). Are there alternative data sources available for corroborating the primary data source?*

- 6.3 *If different products were produced in one production line, please describe in detail how the inputs, outputs and corresponding emissions were attributed to the relevant sub-installation. This is only relevant if some of those products are identified to be exposed to significant risk of carbon leakage and some are not.*

- 6.4 *If measurable heat is available at your installation and you have identified a fuel benchmark subinstallation, please describe how you assessed that there is neither double counting nor a data gap between the measurable heat available and the fuel benchmark sub-installation. Where feasible, please identify source streams and physical units relating to each non-measurable heat amount.*

- 6.5 *If relevant data are missing, please duly justify the lack of data.*
- 6.6 *If relevant data are missing, please describe how missing data has been substituted. In particular, describe any assumptions and conservative estimates made to determine the substituting data.*
- 6.7 *If the inputs, outputs and corresponding emissions of the fuel benchmark sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL), provide detailed information how the eligible amount of measurable heat available at your installation was attributed to each of the CL and the non-CL fuel benchmark sub-installation. Attribute, to the extent possible, the mass and volume flows of fuels to physical units. If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.*
- 6.8 *If the inputs, outputs and corresponding emissions of the fuel benchmark sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL), please describe – if applicable – the measurement system applied for determining mass or volume flows of fuels for the purpose of attributing amounts to CL and non-CL sub-installations. Describe the location within your installation and the type of measuring instruments.*
- 6.9 *If the inputs, outputs and corresponding emissions of the fuel benchmark sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL) and no measurements were carried out mentioned under 6.8 that allow the distinction of the fuel flow between serving sectors deemed or not deemed to be exposed to a significant risk of carbon leakage, please describe in detail any assumptions and calculations made to determine the ratio of CL to non-CL fuel benchmark sub-installation. If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.*

- 6.10 *Where relevant, if the initial installed capacity is determined based on monthly production data¹⁰, please describe the way monthly data are gathered, and give an indication for the quality of these data.*
- 6.11 *Where relevant, if the initial installed capacity of this sub-installation cannot be determined based on monthly activity data, please give a justification, and describe the procedure used for experimental verification. In particular, describe in detail all relevant operation conditions. Furthermore describe the operation conditions of other sub-installations that import and consume materials, measurable heat, fuel, waste gases or electricity from the same source streams as the sub-installation concerned, if this has an influence on the operation of the sub-installation under consideration.*
- 6.12 *If significant capacity changes have occurred in the period 1 January 2005 to 30 June 2011, please describe the physical changes related to the technical configuration.*
- 6.13 *If you have reported physical changes under point 6.12, please describe in detail how the initial installed capacity has been determined.*
- 6.14 *If you have reported physical changes under point 6.12, please describe in detail how the added or reduced capacity has been determined.*
- 6.15 *If you have reported physical changes under point 6.12, please describe all assumptions and data used to determine that the capacity change was a significant one. In particular demonstrate either that the sub-installation after the change can be operated at a capacity that is at least 10% higher (lower) compared to the initial installed capacity of the sub-installation before the change, or that the changed activity level is resulting in a change of the preliminary allocation level of more than 50,000*

¹⁰ in accordance with Article 7(3) point a

allowances representing at least 5% of the preliminary annual number of emission allowances allocated free of charge for this sub-installation.

- 6.16 If significant capacity changes have been reported under point 6.12, please describe in detail how you have determined the historical capacity utilisation factor to be applied for this capacity change under Article 9(9) of the CIMs.*
- 6.17 If significant capacity changes have been reported under point 6.12, please describe the methodology and all assumptions that led to the determination of the “start of changed operation” in accordance to Article 3(o).*
- 6.18 If your installation has started operations during the selected baseline period, please describe the methodology and all assumptions that led to the determination of the “start of normal operation” of the fuel benchmark sub-installations in accordance with Article 3(n), clearly distinguishing between the CL and non-CL fuel benchmark sub-installation.*
- 6.19 If your installation has been operating less than two calendar years during the relevant baseline period, please describe in detail how the relevant capacity utilisation factor for the fuel benchmark subinstallation has been determined. Please provide information on the installation’s intended normal operation, maintenance, common production cycle, energy and greenhouse gas efficient techniques and on the typical capacity utilisation in the sector concerned compared to sector-specific information.*
- 6.20 If flaring is relevant in your installation which is not included in product benchmark sub-installations, please explain how it was classified into “safety flaring” (Article 3(p) of the CIMs) and other flaring.*

6.21 *If safety flaring is relevant in your installation and is not included in product benchmark sub-installations, please describe the method used for quantifying the relevant fuel quantities (location and type of measurement instruments if applicable, assumptions and calculations made if applicable).*

7 PROCESS EMISSIONS SUB-INSTALLATIONS

This chapter is only relevant if you have identified at least one process emissions sub-installation within the boundaries of your installation.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet “I_Comments” of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

7.1 *Please describe all inputs, outputs and corresponding emissions that have been identified, aggregated and attributed to the process emissions sub-installation. Please also refer for this purpose to the flow chart provided under 2.2.*

7.2 *If the greenhouse gas emitted from the process emissions sub-installation is carbon dioxide, please state here if waste gases are relevant. Relate to your descriptions given in chapter 8.*

7.3 *If the greenhouse gas emitted from the process emissions sub-installation is carbon dioxide and waste gases are not relevant, please describe which activities listed in Article 3(h) carried out in your installation.*

7.4 *If different products were produced in one production line, please describe in detail how the inputs, outputs and corresponding emissions were attributed to the relevant*

sub-installation. This is only relevant if some of those products are identified to be exposed to significant risk of carbon leakage and some are not.

- 7.5 *Please describe in detail for activity data which sources have been used for the data acquisition used for the determination of activity levels (e.g. invoices or relevant sales databases for imports and exports, mass or energy balances,..). Are there alternative data sources available for corroborating the primary data source?*
- 7.6 *If relevant data are missing, please duly justify the lack of data.*
- 7.7 *If relevant data are missing, please describe how missing data has been substituted. In particular, describe any assumptions and conservative estimates made to determine the substituting data.*
- 7.8 *Please describe how you distinguished whether a process emissions sub-installation is serving sectors or subsectors deemed or not deemed to be exposed to a significant risk of carbon leakage. Please list all relevant products or product groups (including their NACE / PRODCOM codes) which are produced within your installation and are related to process emissions sub-installations. You may also refer just to the reporting template if you have input that data there. Describe the method which you have applied for ensuring that no double counting (in particular for by-products and intermediates) and no data gaps occur.*
- 7.9 *If the inputs, outputs and corresponding emissions of the process emissions sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL), provide detailed information how the eligible amount of measurable heat available at your installation was attributed to each of the CL and the non-CL process emissions sub-installation. Attribute, to the extent possible, source streams to physical units. . If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.*

- 7.10 *If of the inputs, outputs and corresponding emissions of the process emissions sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL), please describe – if applicable – the measurement system applied for determining the relevant source streams. Describe the location within your installation and the type of measuring instruments.*
- 7.11 *If the inputs, outputs and corresponding emissions of the process emissions sub-installation serve as well sectors deemed to be exposed to a significant risk of carbon leakage (CL) as sectors not deemed so (non-CL) and no measurements were carried out mentioned under 7.10 that allow the distinction of the fuel flow between serving sectors deemed or not deemed to be exposed to a significant risk of carbon leakage, please describe in detail any assumptions and calculations made to determine the ratio of CL to non-CL process emissions sub-installation. If the 95% rule (Article 10(5) of the CIMs) is applied, explain the assumptions made and the way you applied this rule.*
- 7.12 *Where relevant, if the initial installed capacity is determined based on monthly production data¹¹, please describe the way monthly data are gathered, and give an indication for the quality of these data.*
- 7.13 *Where relevant, if the initial installed capacity of this sub-installation cannot be determined based on monthly activity data, please describe the procedure used for experimental verification. In particular, describe in detail all relevant operation conditions. Furthermore describe the operation conditions of other sub-installations that import and consume materials, measurable heat, fuel, waste gases or electricity from the same source streams as the sub-installation concerned, if this has an influence on the operation of the sub-installation under consideration.*

¹¹ in accordance with Article 7(3) point a

- 7.14 *If significant capacity changes have occurred in the period 1 January 2005 to 30 June 2011, please describe the physical changes related to the technical configuration.*
- 7.15 *If you have reported physical changes under point 7.14, please describe in detail how the initial installed capacity has been determined.*
- 7.16 *If you have reported physical changes under point 7.14, please describe in detail how the added or reduced capacity has been determined.*
- 7.17 *If you have reported physical changes under point 7.14, please describe all assumptions and data used to determine that the capacity change was a significant one. In particular demonstrate either that the sub-installation after the change can be operated at a capacity that is at least 10% higher (lower) compared to the initial installed capacity of the sub-installation before the change, or that the changed activity level is resulting in a change of the preliminary allocation level of more than 50,000 allowances representing at least 5% of the preliminary annual number of emission allowances allocated free of charge for this sub-installation.*
- 7.18 *If significant capacity changes have been reported under point 7.14, please describe in detail how you have determined the historical capacity utilisation factor to be applied for this capacity change under Article 9(9) of the CIMs.*
- 7.19 *If significant capacity changes have been reported under point 7.14, please describe the methodology and all assumptions that led to the determination of the “start of changed operation” in accordance to Article 3(o).*

7.20 *If your installation has started operations during the selected baseline period, please describe the methodology and all assumptions that led to the determination of the “start of normal operation” of the process emissions sub-installations in accordance with Article 3(n), clearly distinguishing between the CL and non-CL process emissions sub-installation.*

7.21 *If your installation has been operating less than two calendar years during the relevant baseline period, please describe in detail how the relevant capacity utilisation factor for the process emissions subinstallation has been determined. Please provide information on the installation’s intended normal operation, maintenance, common production cycle, energy and greenhouse gas efficient techniques and on the typical capacity utilisation in the sector concerned compared to sector-specific information.*

8 WASTE GASES

This chapter is only relevant if you have identified the occurrence of any waste gases within the boundaries of your installation which are outside the boundaries of any product benchmark sub-installation.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet “I_Comments” of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

8.1 *If waste gases have been produced within the boundaries of your installation, please describe the fuels and processes the waste gases stem from. Relate to physical parts of your installation.*

8.2 *If waste gases have been produced, imported or exported, please describe how the mass or volume flow, composition data and NCV of the waste gases have been determined by measurement, if applicable.*

- 8.3 *If no measurement of the mass or volume flow, composition data and NCV of the waste gas was carried out, please list and describe any existing documents (e.g. in particular invoices) providing sufficient evidence on (estimated) amounts, composition data and NCV of waste gases produced, imported or exported, if available. Such documents must be based on a sound and transparent methodology.*
- 8.4 *If no measurement of mass or volume flow, composition data or NCV of the waste gas was carried out and no documents referred to in 8.3 exist, please describe in detail any assumptions, conservative estimates and all calculations made to determine proxy data. In particular, describe the determination of waste gas flows, composition data and NCV assumed. Such estimations must be based on a scientifically sound and transparent methodology.*
- 8.5 *If waste gases have been imported, please describe how this import was assessed to stem from ETS or non-ETS installations.*
- 8.6 *If waste gases have been exported, please describe how it was determined if the installations in which the waste gases have been consumed are covered by the ETS or not.*
- 8.7 *If waste gases have been exported, please describe how the processes in which they were consumed were assessed whether they were serving sectors or subsectors deemed or not deemed to be exposed to a significant risk of carbon leakage.*
- 8.8 *If applicable, please describe how you have determined the amount of waste gases used for electricity production.*

Note: If waste gases not included in product benchmark sub-installations have been flared in your installation, make sure that you fill also section 6, and in particular questions 6.20 and 6.21.

9 ELECTRICITY

This chapter is only relevant if electricity has been produced during the baseline period (for determining if the installation is an electricity generator as defined by Article 3(u) of the ETS Directive, or if at least one product benchmark sub-installation is with consideration of exchangeability of fuel and electricity.

All calculations have to be complete and comprehensible. If calculations are too complex to include in this document, please attach a file containing the full calculation steps to this report. Add also a reference to that file in sheet "I_Comments" of the data collection template. Alternatively, you may add those calculations directly in the second part of that sheet as a preferred location.

9.1 If electricity is produced within the boundaries of your installation, please describe the processes electricity stems from. Relate to physical parts of your installation. Identify especially all CHP units in your installation.

9.2 Please describe the measurement systems (location, type,...) used for determining data on production, consumption, input and export of electricity, as applicable, or any documents used therefore (in particular invoices, production protocols,...). Describe in detail any assumptions, conservative estimates and all calculations made to determine proxy data. In particular, describe the determination of fuel flows, NCV and efficiencies assumed. This is relevant in particular for CHP.

10 TECHNICAL CONNECTIONS

This chapter is only relevant if you have identified technical connections to other installations (i.e. cross-boundary flows of measurable heat, waste gases or transferred CO₂).

Only information not yet included in the baseline data reporting template needs to be reported here. Note that more detailed information on cross-boundary heat flows are contained in section 5.

10.1 Please describe those connections by relating to physical units.

10.2 Please describe which sub-installations are affected by those connections. Relate, to the extent possible, to physical units.

10.3 Please describe how you assessed whether the installation or entity, which is technically connected, is covered by the EU ETS or not.

10.4 Please describe how you assessed whether the installation or entity, which is technically connected, is a district heating network or not.

10.5 Please describe how you assessed whether the installation or entity, which is technically connected, is an installation producing nitric acid.

11 DATA ACQUISITION AND DATA QUALITY MANAGEMENT

- 11.1 *Please provide a simplified analysis of the inherent and control risk associated with the data management process that prevent material misstatements associated with this baseline report.*
- 11.2 *Please describe the most important control measures and activities set up for mitigating the risks identified under section 11.1.*
- 11.3 *Please describe how it was ensured that only data with highest achievable accuracy has been used. Describe especially the quality checks applied, in particular horizontal checks (i.e. comparison of data from different sources) and vertical checks (timeline consistency). Where applicable, reference shall be provided to standards or legislation on which the data determination is based.*
- 11.4 *How is the acquired data handled and stored? How is the quality of stored and transferred data assured throughout all data handling processes? Please briefly describe the relevant IT systems used, if applicable.*
- 11.5 *Please describe how have assured that no double counting of any inputs, outputs and corresponding emissions occurred, if not yet described in the previous sections.*