



Republic of the Philippines  
**CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**

ADVISORY CIRCULAR NO: 01-18

TO : ALL PHILIPPINE REGISTERED AIR OPERATORS

FROM : DIRECTOR GENERAL

SUBJECT : CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION (CORSIA)

DATE : 14 DECEMBER 2018

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AOE + att'ees

## INTRODUCTION

The 38th Session of the ICAO Assembly in 2013, through Resolution A38-18 decided to develop a Global Market Based Measure (GMBM) which should deliver carbon neutral growth for international aviation as of 2020 (CNG2020). At the 39th Session, on 6 October 2016, ICAO adopted a resolution to implement a global market-based measure for international aviation, in the form of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), as part of basket of measures to achieve the global aspirational goal of keeping the global net CO2 emissions from international aviation at the same level from 2020. The Assembly requested the Council to develop the Standards and Recommended Practices (SARPs) and related guidance material for the implementation of CORSIA.

CORSIA will be implemented in three phases. CORSIA enters into a pilot phase (2021-2023) followed by a first phase (2024-2026) and a second phase (2027-2035). It is only until 2026 that the participation of the member states is voluntary after which more stringent requirements from the scheme would be mandated to all the member states.

A "CORSIA Package" was then developed which consist of:

- the First Edition of Annex 16 – Environmental Protection, Volume IV – CORSIA;
- new Volume IV to Doc 9501, Environmental Technical Manual (ETM); and
- ICAO CORSIA Implementation Elements and Supporting Documents.

CORSIA applies to all international flights on the routes between the participating States (Route based). Hence flights between a participating State and a non-participating State are exempted.

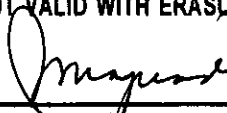
For the flights between participating States, aeroplane operators need to offset emissions above the baseline emissions level. The baseline emissions level is based on the average of total emissions covered by CORSIA between 2019 and 2020. Any increase in CO2 emissions covered by the scheme compared to the baseline represents the sector's offsetting requirements for that year.

## DEFINITIONS

The following definitions shall be considered for the purposes of MC for CORSIA:

"Aerodrome Pair" means a group of two aerodromes composed of a departing aerodrome and an arrival aerodrome;

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**"Aeroplane Operators (i.e. operator)"** means juridical subject owning one or more aeroplane which are not leased or chartered to any other subject for operation, having personnel, assets and system in place to ensure the safety of its employees and the general public;

**"Air Operator Certificate"** means where the aeroplane operator does not possess an ICAO Designator but has a valid air operator certificate (or equivalent), the State to which the aeroplane fulfils its requirements under annex 16 Volume IV shall be the State that issues the air operator certificate (or equivalent);

**"Aviation Alternative Fuel"** means non-petroleum-based drop-in aviation fuel;

**"CORSIA"** means Carbon Offsetting and reduction scheme for international aviation as defined by ICAO Assembly resolution 39-3 in 2016. Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (GMBM) scheme. In this Resolution, Member States decided to implement a global MBM scheme in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA);

**"Domestic Flight"** means the operation of an aircraft from take-off at an aerodrome of a State or its territories and landing at an aerodrome of the same State or its territory;

**"Emission Monitoring Plan" (EMP)** means the collaborative tool between CAAP and the aeroplane operator. The plan shall be drafted by each aeroplane operator attributed to CAAP and be approved by CAAP. The EMP shall identify the most appropriate methods and means for CO2 emissions monitoring based on operator-specific basis and shall facilitate the reporting required information to the State;

**"Fuel Uplift"** means measurement of fuel provided by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight (in litre);

**"Great Circle Distance"** means the shortest distance, rounded to the nearest kilometre, between the origin and the destination aerodromes, measured over the earth's surface modelled according to the World Geodetic System 1984 (WGS84);

**"ICAO Designator"** means where the aeroplane operator has an ICAO Designator, the State to which the aeroplane operator fulfils its requirements under Annex 16 Volume IV shall be the Notifying State;

**"International Flight"** means the operation of an aircraft from take-off at an aerodrome of a State or its territory, and landing at an aerodrome of another State or its territory;

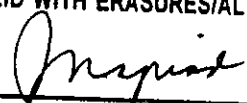
**"Material Changes"** means a change that affects i) the status or eligibility for an option under the emissions monitoring requirements, and ii) an aeroplane operator's approach to monitoring;

**"National Accredited Body"** means an authorized body by a State attesting that a verification body is competent to provide specific verification services;

**"New Entrant"** means any aeroplane operator that commences an aviation activity falling within the scope of SARPs annex 16, volume 4, or after its entry into force and whose activity is not in whole or in part a continuation of an aviation activity previously performed by another aeroplane operator;

**"Notifying State"** means the State that has submitted to ICAO the request for the registration of or change in the three-letter designator of an aeroplane operator over which it has jurisdiction;

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**"Operator"** means the person, organization or enterprise engaged in or offering to engage in an aircraft operation;

**"Place of Juridical Registration"** means where the aeroplane operator does not possess an ICAO designator or air operator certificate, the State where the aeroplane operator is registered as juridical person shall be the State to which the aeroplane operator fulfils its requirements under annex 16 Volume IV. Where the aeroplane operator is a natural person, the State of residence and registration of this person shall be the State to which the aeroplane operator fulfils its requirements under Annex 16 Volume IV;

**"Reporting Period"** means the period which commences on 01 January and finished on 31 December in a given year for which an aeroplane operator or State reports required information. The flight departure time (UTC) determines which reporting period a flight belongs to;

**"State Pair"** means a group of two Contracting States composed of a departing Contracting State or its territories and an arrival Contracting State or its territories;

**"Sustainable Aviation Fuel"** means an aviation alternative fuel that meets the CORSIA sustainability criteria;

**"Verification Body"** means a legal entity that performs the verification of an Emissions Report and, when required, an Emissions Units Cancellation Report, as an accredited independent third party;

**"Verification Report"** means a document drafted by the verification body, containing the verification statement and required supporting information;

## ACRONYMS

- "AOC" means Air Operator Certificate;
- "CERT" means Certified Emissions Reduction Tool designed by ICAO;
- "CO<sub>2</sub>" means Carbon Dioxide;
- "ER" means Emissions Report;
- "ETM" means Environmental Technical Manual;
- "GHG" means Greenhouse Gases;
- "ISO" means International Organisation for Standardisation;
- "MRV" means Monitoring, Reporting and Verification;
- "MJ" means Megajoule
- "RTK" means the Revenue Tonnes- Kilometres (RTK);
- "UNFCCC" means the United Nations Framework Convention on Climate Change (UNFCCC), an international environmental treaty adopted on 9 May 1992 and opened for signature at the Earth Summit in Rio de Janeiro from 3 to 14 June 1992.

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## **GENERAL PROVISIONS**

### **1. Subject matter**

- (a) monitoring, reporting and verification of the data and information related to fuel consumption, in the international aviation in the Philippines.
- (b) Carbon Offsetting and Reduction Scheme for International Aviation

### **2. Administrative provisions**

ICAO's Standards and Recommended Practices (SARPs) Annex 16 Volume IV shall be applicable starting from 01.01.2019.

CAAP shall address the technical issues associated with the development and application of SARPs for the implementation of CORSIA dealing only with international aviation.

CAAP shall start reporting the measured and verified data from aeroplane operators attributed to the Philippines and operating international flights to ICAO.

The attribution of an aeroplane operator to the Philippines shall be determined as following:

- (a) ICAO Designator;
- (b) Air operator certificate (hereinafter AOC);
- (c) Place of juridical registration

CAAP shall submit to ICAO the list of aeroplane operators that are attributed to the Philippines in accordance with the Memorandum Circular by 30 April 2019.

CAAP shall use the document entitled "CORSIA aeroplane Operator to State Attribution".

CAAP shall submit to ICAO the list of verification bodies accredited in the State by 30 April 2019.

The aeroplane operator shall keep records on data and information on MRV, on CO<sub>2</sub> offsetting requirements from international flights and emissions reduction from the use of CORSIA eligible fuels and of emissions units for 10 years.

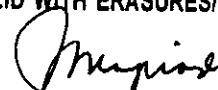
CAAP shall keep records as per aeroplane operator's CO<sub>2</sub> emissions per State pair during the period 2019-2020 to calculate the aeroplane operator's offsetting requirements during the 2030-2035 compliance period.

### **3. MRV applicability**

The MRV shall be applicable to aeroplane operators producing annual CO<sub>2</sub> emissions greater than 10 000 tonnes from international flights conducted by aeroplane with a maximum certified take-off mass greater than 5 700 Kg from 1 January 2019.

Aeroplane manufacturers and airports, flights preceding or following a humanitarian, medical or firefighting flights, Helicopter operations, International flights from police, military, customs and State aircraft shall be exempted by this mechanism.

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#### **4. OFFSETTING applicability**

Aeroplane operators conducting international flights between States included in the ICAO document "CORSIA State for Chapter 3 State Pairs" shall apply the offsetting requirements from 01 January 2021 to 31 December 2035.

### **MONITORING, REPORTING AND VERIFICATION OF AEROPLANE OPERATOR ANNUAL CO2 EMISSIONS**

#### **5. Monitoring**

- 1) Aeroplane operators shall perform a regular monitoring of fuel consumption following the methodology and indicators defined by individual standards agreed with CAAP in the emission monitoring plan (EMP) for the international aviation.

The Emission Monitoring Plan shall be submitted to CAAP for its approval by 18 January 2019. In particular, the CO2 emissions monitoring methods shall be considered as eligible, if the aeroplane operator monitors and records its fuel use from international flights, in accordance with an eligible monitoring method as presented into the appendix of this advisory circular and approved by CAAP.

Operators pursuant to paragraph (1) of this Article, shall enter into negotiation with CAAP to define details and procedures on how to collect data from 1st January 2019 as per CORSIA implementation in the international aviation.

In particular, for the **2019-2020 period**, the aeroplane operator:

- i. with annual CO2 emissions from international flights greater than or equal to 500 000 tonnes shall use a fuel use monitoring method;
- ii. with annual CO2 emissions from international flights, as defined in Part 1, of less than 500 000 tonnes shall use either a fuel use monitoring method or the ICAO CORSIA CO2 Estimation and Reporting Tool (CERT);
- iii. if its annual CO2 emissions from international flights increases above the threshold of 500 000 tonnes in 2019, the aeroplane operator may continue to use the monitoring method chosen in accordance to sub-paragraph (ii) during 2020 period;

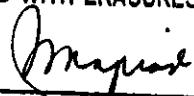
- 2) CAAP shall approve the emissions monitoring plan (EMP) by 30 April 2019.

In case, an aeroplane operator does not have an approved EMP as of 30 April 2019, it shall monitor and record its CO2 emissions in accordance with the eligible monitoring method outlined in the EMP and submitted to CAAP.

In case, the EMP of an aeroplane operator is determined to be incomplete or inconsistent with the eligible fuel use monitoring methods, CAAP shall approve a different eligible fuel use monitoring method within the EMP for a period lasting no later than 30 June 2019.

In case, an aeroplane operator does not have sufficient information to use a fuel use monitoring method, CAAP shall approve the use of the ICAO CORSIA CERT for a period lasting no later than 30 June 2019.

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An aeroplane operator shall use the same eligible monitoring method for the entire compliance period, in particular the same monitoring method during the 2019-2020 period that it expects to use during the 2021-2023 period, taking into account its expected annual CO2 emissions during the 2021-2023 period.

In case, an aeroplane operator needs to change its monitoring method, it shall submit a revised EMP to CAAP by 30 September 2020 in order to implement the new monitoring method starting from 1st January 2021.

In case of material changes, the aeroplane operator shall resubmit the EMP to CAAP for approval.

An aeroplane operator shall inform CAAP of changes that would affect CAAP's oversight such as, change in corporate name or address, even if the changes do not fall within the definition of a material change.

In case of a new entrant operator, it shall be entitled to submit the EMP to CAAP for approval within three months of falling within the scope of MRV applicability requirements.

For the **2021-2035 period**, the aeroplane operator with annual CO2 emissions from international flights subject to offsetting requirements:

- i. of greater than or equal to 500 000 tonnes, shall use a fuel use monitoring method as described in this AC for the flights. For international flights, not subject to offsetting requirements, the aeroplane operator shall use either a fuel use monitoring method, as described in this AC or the CERT;
- ii. of less than 500 000 tonnes, shall use either a fuel use monitoring method or the CERT as described in this AC;
- iii. increases above the threshold of 500 000 tonnes in a given year (y), and also in year (y+1), the aeroplane operator shall submit an updated EMP by 30 September of year (y + 2). The aeroplane operator shall change to a fuel use monitoring method, as described in this AC, on 1 January of year (y+3);
- iv. decreases below the threshold of 500 000 tonnes in a given year (y), and also in year (y+1), the aeroplane operator may change monitoring method on 1 January of year (y+3). If the aeroplane operator chooses to change its monitoring method, it shall submit an updated EMP by 30 September of year (y + 2).3)

When calculating CO2 emissions from aeroplane fuel use, the aeroplane operator

- i. shall apply a fuel density value to calculate fuel mass where the amount of fuel uplift is determined in units of volume;
- ii. shall record the fuel density which may be an actual or a standard value of 0.8 kg per litre that is used for operational and safety reasons such as in an operational, flight or technical log. The procedure for informing the use of actual or standard density shall be included in the EMP along with a reference to the relevant aeroplane operator documentation;
- iii. using a fuel use monitoring method, as defined in this AC, shall determine the CO2 emissions from international flights using the following equation:

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$$CO_2 = I M_f * FCF_f$$

Where:

$CO_2$  = CO<sub>2</sub> emissions (in tonnes);

$M_f$  = Mass of fuel  $f$  used (in tonnes); and

$FCF_f$  = Fuel conversion factor of given fuel  $f$ , equal to 3.16 (in kg CO<sub>2</sub>/kg fuel) for Jet-A fuel and 3.10 (in kg CO<sub>2</sub>/kg fuel) for AvGas or Jet-B fuel.

In case, an aeroplane operator intends to claim for emissions reductions from the use of sustainable aviation fuels shall:

- (i) use a sustainable aviation fuel that meets the CORSIA sustainability criteria as defined within the ICAO document entitled, "CORSIA Sustainability Criteria for Sustainable Aviation Fuels";
- (ii) use sustainable aviation fuels from fuel producers that are certified by an approved Sustainable Certification Scheme included into the ICAO document entitled, "CORSIA Approved Sustainability Certification Schemes" which meet the requirements included in the ICAO document entitled "CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes";

In case an aeroplane operator cannot demonstrate the compliance of the sustainable aviation fuel with the CORSIA sustainability criteria, then it shall be accounted for as conventional aviation fuel.

## 6. Reporting

Operators shall report to CAAP the data and information related to the fuel consumption from international aviation that limit or reduce greenhouse gas emissions (i.e. CO<sub>2</sub> emissions).

- (a) An aeroplane operator conducting international flights shall report to CAAP on related CO<sub>2</sub> emissions information starting from 2020 considering the data from 2019 through the emissions report. The reporting procedures shall be conducted on an annual basis.


Operators shall provide CAAP with the data and information referred to in paragraph (1) of this Article in the format as required by the template provided by CAAP and agreed with CAAP in compliance with this AC.

In case an aeroplane operator has opted to use the CERT, the operator is not required to report information on the type and mass of fuel used.

Operators shall appoint a focal contact person empowered to collect, monitor and report the data and information related to fuel consumption. The operators' focal point shall ensure that the emissions report contains the information as defined in this AC.

The appointed focal point shall submit to CAAP, a copy of the verified emissions report, released by an accredited ISO 14065:2013 verification body, for approval, with the timeline as defined in administrative procedures.

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The aeroplane operator shall report its consolidated CO2 emissions from international flights, during the 2019-2020 period, including subsidiary aeroplane operators. Disaggregated data relating to each subsidiary aeroplane operator shall be appended to the main emissions report.

In specific circumstances where the aeroplane operator operates a limited number of State pairs that are subject to offset requirements, and a limited number of State pairs that are not subject to offset requirements, the aeroplane operator shall be entitled to request in writing to CAAP to avoid publishing data at the aeroplane operator level, as defined in the contents of an emissions report from the CAAP to ICAO. The operator shall clarify the reasons and in particular why disclosure shall harm its commercial interests. Based on this request, CAAP shall determine whether or not the data is confidential.

In specific circumstances where aggregated State pair data may be attributed to an identified aeroplane operator as a result of a limited number of aeroplane operators conducting flights on a State pair, that aeroplane operator may request in writing to CAAP to avoid publishing this data at State pair level. Explanations on the reasons shall be stressed and in particular why disclosure shall harm their commercial interests. Based on this request, CAAP shall determine whether or not the data is confidential.

- (b) CAAP shall decide on the level of aggregation State pair or aerodrome pair for which an aeroplane operator shall report the number of international flights, for the contents of an aeroplane operator emissions report regarding the number of international flights per State pair or aerodrome pair and CO2 emissions per aerodrome pair or State pair.

CAAP shall inform an aeroplane operator whether this information is to be reported at the level of State pair or aerodrome pair during the approval process for the EMP.

CAAP shall calculate and inform each of the aeroplane operators attributed to it of their average total annual CO2 emissions during the 2019 and 2020 period in accordance with the timelines as defined in this AC.

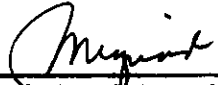
CAAP shall report to ICAO total annual CO2 emissions information in tonnes regarding all aeroplane operators conducting international flights divided per State pairs.

- (c) Considering the reporting of sustainable aviation fuels, an aeroplane operator shall subtract sustainable aviation fuels traded or sold to a third party from its total reported quantity of sustainable aviation fuels.
  - i. The aeroplane operator shall provide a declaration of all other GHG schemes it participates in where the emissions reductions from the use of sustainable aviation fuels may be claimed, and a declaration that it has not made claims for the same batches of sustainable aviation fuel under these other schemes.
  - ii. to claim emissions reductions from the use of sustainable aviation fuels in the emissions report, the aeroplane operator shall provide supplementary information to its aeroplane operator's emissions report within a given compliance period for all CORSIA eligible fuel received by a blender by the end of that compliance period.

The information provided is through to the blend point, and includes information received from both the neat (unblended) fuel producer and the fuel blender.

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The aeroplane operator shall opt to claim CORSIA eligible fuel on an annual basis to ensure all documentation is attended to timeously or to claim CORSIA eligible fuel within a given compliance period for all CORSIA eligible fuel received by a blender within that compliance period. For blending that occurs in the second half of the final year of a compliance period, the aeroplane operator and CAAP shall determine what, if any, flexibility is required in terms of submitting reports.

In case, the aeroplane operator purchases fuel from a supplier downstream from the fuel blender such as a distributor, another aeroplane operator, or an aerodrome-based fuel distributor, this fuel supplier shall provide all of the requisite documentation for the emissions reductions from the use of sustainable aviation fuels to be claimed by the aeroplane operator.

## **7. Verification**

The aeroplane operator shall be in charge of performing an internal pre-verification of its emissions report to ensure data quality and accuracy.

The Operator shall then engage and pay through its own resources an accredited verification body for the verification of its annual emissions report to be selected in the list of verification bodies published by ICAO and titled "CORSIA Central registry (CCR) information and data for transparency". The Verification process shall be conducted according to ISO standards using a reasonable level of assurance.

The verification body shall conduct the verification according to ISO 14064-3:2006, and the relevant requirements in the appendix of this AC.

Following the verification of the emissions report by the verification body, the Operator and the verification body shall both independently submit, upon the authorization of the operator, the copy of the emissions report and associated verification report to CAAP by 1 May 2020 and the same to be repeated for the following years.

The verification body and the national accreditation body shall have the following requirements:

- i. a verification body shall be accredited to ISO 14065:2013 and have the relevant requirements as detailed in the appendix of this AC in order to be eligible to verify the emissions report of the aeroplane operator;
- ii. a national accreditation body shall operate in accordance with ISO/IEC 17011

CAAP shall conduct an order of magnitude check of the verified emissions report for 2019 including any filling in of data gaps in case of non-reporting by aeroplane operators from 1st June 2020 to 31st August 2020 and the same to be repeated for the following years.

Data on sustainable aviation fuels shall be verified as per following:

- i. fuel purchases, transaction reports, fuel blending records and sustainability credentials shall constitute the documentary proof for the purpose of verification and approval of emissions reductions from the use of sustainable aviation fuels;
- ii. the aeroplane operator shall ensure that it, or its designated representative, has audit rights of the production records for the sustainable aviation fuels purchases; and

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- iii. subject to sub-paragraph (ii), in order to ensure this capability exists, sustainable aviation fuel procurement controls shall seek to enable audit rights for fuel purchasers, aeroplane operators, or their designated representatives.

## **8. Data gap management**

The aeroplane operator shall include data gap management in the EMP procedures to prevent data gaps.

The aeroplane operator using a fuel use monitoring method as described in this AC shall fill in data gaps using the CERT, provided that the data gaps during a compliance period do not exceed the following thresholds:

- (i) 2019-2020 period: 5% of international flights; and
- (ii) 2021-2035 period: 5% of international flights subject to offsetting requirements.

The aeroplane operator shall correct concerns identified with the data and information management system in a timely manner to mitigate ongoing data gaps and system weaknesses.

If the aeroplane operator realizes it has data gaps and system weaknesses exceeding the threshold in paragraph (i), then it shall engage with CAAP to take remedial action to address the identified data gaps and system weaknesses.

When the threshold is exceeded, the aeroplane operator shall state the percentage of international flights, for the 2019-2020 period, or flights subject to offsetting requirements for the 2021-2035 period, that had data gaps, and provide an explanation to CAAP in the annual emissions Report.

The aeroplane operator shall fill all data gaps and correct systematic errors and misstatements prior to the submission of the emissions report.

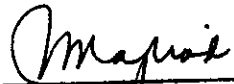
## **9. Error corrections to Emissions Reports**

If an error in the aeroplane operator's reported emissions is identified by CAAP, the verification body, or the aeroplane operator after the reported CO<sub>2</sub> emissions have been submitted to ICAO in accordance with the timeline as defined in this AC, CAAP shall update the reported CO<sub>2</sub> emissions to address the error.

CAAP shall assess any implications with respect to the aeroplane operator's offsetting requirements in previous years and, if necessary, make an adjustment to compensate for the error during the compliance period in which the error has been identified.

CAAP shall report an error in the aeroplane operator's CO<sub>2</sub> emissions to ICAO.

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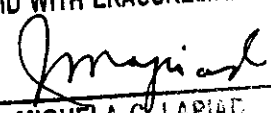
## **APPENDIX 1: APPLICABILITY AND ADMINISTRATION**

1. **ICAO Designator**

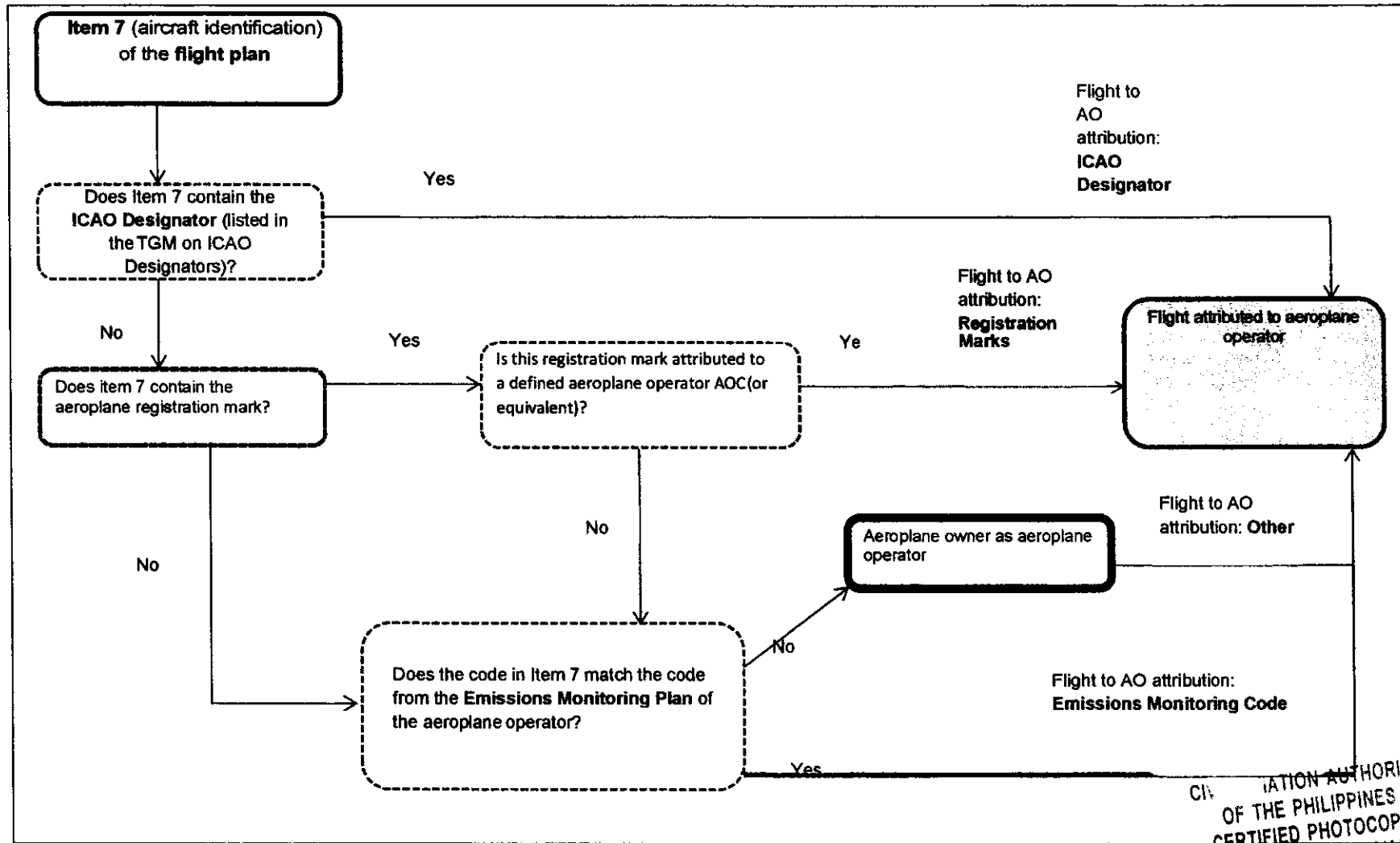
The ICAO Designators used for air traffic control purposes (Item 7) are listed in the Technical Guidance Material (TGM) on ICAO Designators for aircraft operating agencies, aeronautical authorities and services. This TGM is available on the CAAP's website

2. **The process for attributing a flight to an aeroplane operator**

The process is illustrated as follows:

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# Process for attribution of a flight to an aeroplane operator



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**3. The content of an Emissions Report from the CAAP to ICAO**

The emissions report from CAAP to ICAO shall comprise information on the aeroplane operators attributed to the Philippines and verification bodies accredited in the Philippines as follows:

#	Data Field	Details
Field 1	List of aeroplane operators attributed to the State	1.a Name and contact information of aeroplane operator 1.b Aeroplane operator Code 1.c Method and identifier used to attribute aeroplane operator to the Philippines in accordance with the MC
Field 2	List of verification bodies accredited in the State (for a given compliance period)	2.a State 2.b Name of verification body

**4. The CORSIA compliance periods and timeline**

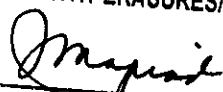
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**(1) 2019-2020 period**

- (a) During the period of 2019-2020, CAAP and aeroplane operators shall comply with the requirements according to the following timeline, where applicable:

<u>Timeline</u>	<u>Activity</u>
<u>1 January 2019 to 31 December 2019</u>	<u>The aeroplane operator shall monitor, in accordance with THIS MC CO<sub>2</sub> emissions for 2019 from international flights, as defined in THE MC</u>
<u>18 January 2019</u>	<u>The aeroplane operator shall submit Emissions Monitoring Plan to CAAP, unless there is a need to review in accordance with THE MC.</u>
<u>30 April 2019</u>	<u>CAAP shall approve Emissions Monitoring Plans once unless there is a review in accordance with THE MC.</u>
<u>30 April 2019</u>	<u>CAAP shall submit a list of aeroplane operators that are attributed to it to ICAO, as well as a list of verification bodies accredited in the Philippines in accordance with THE MC.</u>
<u>31 May 2019</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>

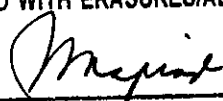
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Records and Archives Division  
12-19-18

<u>1 January 2020 to 31 December 2020</u>	<u>The aeroplane operator shall monitor, in accordance with THE MC CO<sub>2</sub> emissions for 2020 from international flights.</u>
<u>1 January 2020 to 31 May</u>	<u>The aeroplane operator shall compile 2019 CO<sub>2</sub> data to be verified by a verification body, in accordance with THE MC</u> <b><u>Recommendation: The Aeroplane operator may submit the Emissions Report for verification as soon as possible after its completion.</u></b>
<u>31 May 2020</u>	<u>The aeroplane operator and the verification body shall both submit the verified Emissions Report and associated Verification Report for 2019 to CAAP in accordance with THE MC</u>
<u>1 June 2020 to 31 August 2020</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2019, including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>
<u>30 June 2020</u>	<u>CAAP shall notify to ICAO the Philippines' decision to voluntarily participate, or to discontinue the voluntary participation in the CORSIA from 1 January 2021. CAAP shall also notify ICAO which option it has selected for calculating the aeroplane operator's CO<sub>2</sub> emissions during the 2021-2023 period.</u>
<u>1 August 2020</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2021 compliance year.</u>
<u>31 August 2020</u>	<u>CAAP shall submit required information regarding CO<sub>2</sub> emissions for 2019 to ICAO in accordance with THE MC</u>
<u>30 November 2020</u>	<u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in the PHILIPPINES in accordance with THE MC</u>
<u>31 December 2020</u>	<b><u>Recommendation: CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC The document is available on the ICAO CORSIA website.</u></b>

Note. — The time for verification of the aeroplane operator's Emissions Report is longer during the 2019-2020 period than subsequent Periods.

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(2) **2021-2023 period**

(a) During the period of 2021-2023, CAAP and aeroplane operators shall comply with the requirements according to the following timeline, where applicable:

<u>Timeline</u>	<u>Activity</u>
<u>1 January 2021 to 31 2021</u>	<u>The aeroplane operator shall monitor, in accordance THE MC CO<sub>2</sub> emissions for 2021 from international flights</u>
<u>1 January 2021 to 31 May 2021</u>	<u>The aeroplane operator shall compile 2020 CO<sub>2</sub> emissions data to be verified by a verification body, in accordance with THE MC</u> <u><b>Recommendation: The Aeroplane operator may submit their Emissions Report for verification as soon as possible after its completion.</b></u>
<u>31 May 2021</u>	<u>The aeroplane operator and the verification body shall both submit the verified Emissions Reports and associated Verification Report for 2020 to CAAP in accordance with THE MC</u>
<u>1 June 2021 to 31 August 2021</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2020 including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>
<u>30 June 2021</u>	<u>CAAP shall notify to ICAO of any change of the Philippines' decision to voluntarily participate, or to discontinue the voluntary participation in the CORSIA from 1 January 2022.</u>
<u>1 August 2021</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2022 compliance year.</u>
<u>31 August 2021</u>	<u>CAAP shall submit required information regarding CO<sub>2</sub> emissions for 2020 to ICAO in accordance with THE MC</u>
<u>30 September 2021</u>	<u>CAAP shall calculate and inform aeroplane operators attributed to it of their average total CO<sub>2</sub> emissions during 2019 and 2020, in accordance with THE MC</u>
<u>30 November 2021</u>	<u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO as well as updates to the list of verification bodies accredited in the Philippines in accordance with THE MC</u>

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<u>31 December 2021</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>
<u>1 January 2022 to 31 December 2022</u>	<u>The aeroplane operator shall monitor, in accordance with THE MC CO<sub>2</sub> emissions for 2022 from international flights, as defined in THE MC</u>
<u>1 January 2022 to 30 April 2022</u>	<u>The aeroplane operator shall compile 2021 emissions data to be verified by a verification body, in accordance with THE MC</u>
	<u><b>Recommendation:</b> The aeroplane operator may submit the Emissions Report for verification as soon as possible after completion.</u>
<u>30 April 2022</u>	<u>The aeroplane operator and the verification body shall both submit the Verified Emissions Report and associated Verification Report for 2021 to CAAP in accordance with THE MC</u>
<u>1 May 2022 to 31 July 2022</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2021 including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>
<u>30 June 2022</u>	<u>CAAP shall notify ICAO of any change in the Philippines decision to voluntarily participate, or to discontinue the voluntary participation in the CORSIA from 1 January 2023.</u>
<u>31 July 2022</u>	<u>CAAP shall submit required information regarding CO<sub>2</sub> emissions for 2021 to ICAO in accordance with THE MC</u>
<u>1 August 2022</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2023 compliance year.</u>
<u>31 October 2022</u>	<u>CAAP shall obtain and use the Sector's Growth Factor (SGF) for 2021 from the document "CORSIA Central Registry (CCR): Information and Data for the Implementation of CORSIA" that can be found on the ICAO CORSIA website.</u>

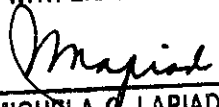
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 Central Records and Archives Division

<u>30 November 2022</u>	CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO as well as updates to the list of verification bodies accredited in the Philippines' in accordance with THE MC CAAP shall calculate and inform aeroplane operators of offsetting requirements for 2021 and based on a chosen formula in accordance with the CORSIA requirements.
<u>31 December 2022</u>	<b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarizing a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.
<u>1 January 2023 to 31 December 2023</u>	The aeroplane operator shall monitor, in accordance with the MC CO <sub>2</sub> emissions for 2023 from international flights.
<u>1 January 2023 to 30 April 2023</u>	The aeroplane operator shall compile 2022 emissions data to be verified by a verification body, in accordance with THE MC <b>Recommendation:</b> The aeroplane operator may submit their Emissions Report for verification as soon as possible after completing their Emissions Report.
<u>30 April 2023</u>	The aeroplane operator and the verification body shall both submit the Verified Emissions Report and associated Verification Report for 2022 to CAAP in accordance with THE MC
<u>1 May 2023 to 31 July 2023</u>	CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2022 including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC
<u>30 June 2023</u>	CAAP shall notify ICAO of any change in the Philippines' decision to voluntarily participate, or to discontinue the voluntary participation from 1 January.
<u>31 July 2023</u>	CAAP shall submit required information regarding CO <sub>2</sub> emissions for 2022 to ICAO in accordance with THE MC
<u>1 August 2023</u>	CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2024 compliance year.

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<u>31 October 2023</u>	<u>CAAP shall obtain and use the Sector's Growth Factor (SGF) for 2022 from the ICAO document entitled "CORSIA Central Registry (CCR): Information and Data for the Implementation of CORSIA" that is available on the ICAO CORSIA website.</u>
<u>30 November 2023</u>	<u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to as well as updates to the list of verification bodies accredited in the State in accordance with THE MC</u> <u>CAAP shall calculate and inform aeroplane operators of offsetting requirements for 2022 and based on a chosen formula.</u>
<u>31 December 2023</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarizing a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>

Note 1. — The time for verification of the aeroplane operator's Emissions Report is shorter during the 2021-2023 period than the 2019-2020 period.

**(3) 2024-2026 period**

- (a) During the period of 2024-2026, CAAP and aeroplane operators shall comply with the requirements according to the following timeline, where applicable:

<u>Timeline</u>	<u>Activity</u>
<u>1 January 2024 to 31 December 2024</u>	<u>The aeroplane operator shall monitor, CO<sub>2</sub> emissions for 2024 from international flights in accordance with THE MC</u>
<u>January 2024 to 30 April 2024</u>	<u>The aeroplane operator shall compile 2023 emissions be verified by a verification body, in accordance with THE MC</u> <u><b>Recommendation:</b> The aeroplane operator may submit the Emissions Report for verification as soon as possible after its completion.</u>
<u>30 April 2024</u>	<u>The aeroplane operator and the verification body shall both submit the Verified Emissions Report and associated Verification Report for 2023 to CAAP in accordance with THE MC</u>

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<u>1 May 2024 to 31 July 2024</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2023 including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>
<u>30 June 2024</u>	<u>CAAP shall notify ICAO of any change in the Philippines' decision to voluntarily participate, or to discontinue the voluntary participation in the CORSIA from 1 January 2025.</u>
<u>31 July 2024</u>	<u>CAAP shall submit required information regarding CO<sub>2</sub> emissions for 2023 to ICAO in accordance with THE MC</u>
<u>1 August 2024</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2025 compliance year.</u>
<u>31 October 2024</u>	<u>CAAP shall obtain and use the Sector's Growth Factor (SGF) for 2023 from the ICAO document entitled: "CORSIA Central Registry (CCR): Information and Data for the Implementation of CORSIA"</u>
<u>30 November 2024</u>	<u>CAAP shall calculate and inform aeroplane operators of offsetting requirements for 2023 based on a chosen formula.</u>  <u>CAAP shall calculate and inform aeroplane operators of their final offsetting requirements for the 2021 to 2023 Period.</u>  <u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in the Philippines' in accordance with THE MC</u>
<u>31 December 2024</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarizing a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>
<u>1 January 2025 to 31 December 2025</u>	<u>The aeroplane operator shall monitor CO<sub>2</sub> emissions for 2025 from international flights, as defined in THE MC</u>
<u>31 January 2025 or 60 days</u>	<u>The aeroplane operator shall cancel emissions units for compliance during the 2021 to 2023</u>

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<u>after the State informs aeroplane operators of their final 7 February 2025</u>	<u>The aeroplane operator shall request that their cancellation of Eligible Emissions Units for the 2021- 2023 period is communicated on the respective Eligible Emission Units Program registry (or registries) public website(s).</u>
<u>1 December 2024 to 30 April 2025</u>	<u>The aeroplane operator shall compile the Emissions Unit Cancellation Report covering the 2021-2023 period to be verified by a verification body.</u>
<u>1 January 2025 to 30 April 2025</u>	<u>The aeroplane operator shall compile 2024 emissions data to be verified by a verification body.</u> <u><b>Recommendation: The aeroplane operator may submit the Emissions Report for verification as soon as possible after its completion.</b></u>
<u>30 April 2025</u>	<u>The aeroplane operator and the verification body shall both submit the Verified Emissions Report and associated Verification Report for 2024 to CAAP</u>  <u>The aeroplane operator and the verification body shall submit the verified Emissions Unit Cancellation Report and the associated Verification Report for the 2021- 2023 period to CAAP</u>
<u>1 May 2025 to 31 July 2025</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2024, including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>  <u>If applicable, CAAP shall undertake an order of magnitude check of the verified Emissions Unit Cancellation Report for the 2021-2023 period.</u>
<u>30 June 2025</u>	<u>CAAP shall notify ICAO of any change in the Philippines' decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2026.</u>
<u>31 July 2025</u>	<u>CAAP shall submit required information regarding CO2 emissions for 2024 to ICAO in accordance with THE MC</u>  <u>If applicable, CAAP shall report to ICAO the required information regarding emissions unit cancellation for the 2021- 2023 period.</u>

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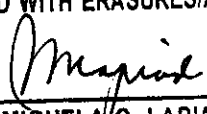
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<u>1 August 2025</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2026 compliance year.</u>
<u>31 October 2025</u>	<u>CAAP shall obtain and use the Sector's Growth Factor (SGF) for 2024 from the ICAO document entitled: "CORSIA Central Registry (CCR): Information and Implementation of CORSIA".</u>
<u>30 November 2025</u>	<u>CAAP shall calculate and inform aeroplane operators of their offsetting requirements for 2024.</u>  <u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO, as well as updates to the list of verification bodies accredited in the Philippines in accordance with THE MC</u>
<u>31 December 2025</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarizing a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>
<u>1 January 2026 to 31 December 2026</u>	<u>The aeroplane operator shall monitor CO<sub>2</sub> emissions for 2026 from international flights, in accordance with THE MC</u>
<u>1 January 2026 to 30 April 2026</u>	<u>The aeroplane operator shall compile 2025 emissions data to be verified by a verification body, in accordance with THE MC</u> <u><b>Recommendation:</b> The aeroplane operator may submit the Emissions Report for verification as soon as possible after its completion.</u>
<u>30 April 2026</u>	<u>The aeroplane operator and the verification body shall both submit the verified Emissions Report and associated Verification Report for 2025 to CAAP in accordance with THE MC</u>
<u>1 May 2026 to 31 July 2026</u>	<u>CAAP shall conduct an order of magnitude check of the verified Emissions Report for 2025, including any filling in of data gaps in case of non-reporting by aeroplane operators in accordance with THE MC</u>
<u>30 June 2026</u>	<u>CAAP shall notify ICAO of any change in its decision to voluntarily participate, or to discontinue the voluntary participation from 1 January 2027.</u>
<u>31 July 2026</u>	<u>CAAP shall submit required information regarding CO<sub>2</sub> emissions for 2025 to ICAO in accordance with THE MC</u>

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<u>1 August 2026</u>	<u>CAAP shall obtain and use the ICAO document entitled "CORSIA States for Chapter 3 State Pairs" applicable for the 2027 compliance year.</u>
<u>31 October 2026</u>	<u>CAAP shall obtain and use the Sector's Growth Factor (SGF) for 2025 from the ICAO document entitled; "CORSIA Central Registry (CCR): Information and Data for the Implementation of CORSIA".</u>
<u>30 November 2026</u>	<u>CAAP shall calculate and inform aeroplane operators of their offsetting requirements for 2025.</u>
	<u>CAAP shall submit updates to the list of aeroplane operators that are attributed to it to ICAO as well as updates to the list of verification bodies accredited in the State in accordance with THE MC</u>
<u>31 December 2026</u>	<u><b>Recommendation:</b> CAAP may obtain and use the ICAO document entitled "CORSIA Aeroplane Operator to State Attributions" summarising a list of aeroplane operators and the State to which they have been attributed in accordance with THE MC. The document is available on the ICAO CORSIA website.</u>

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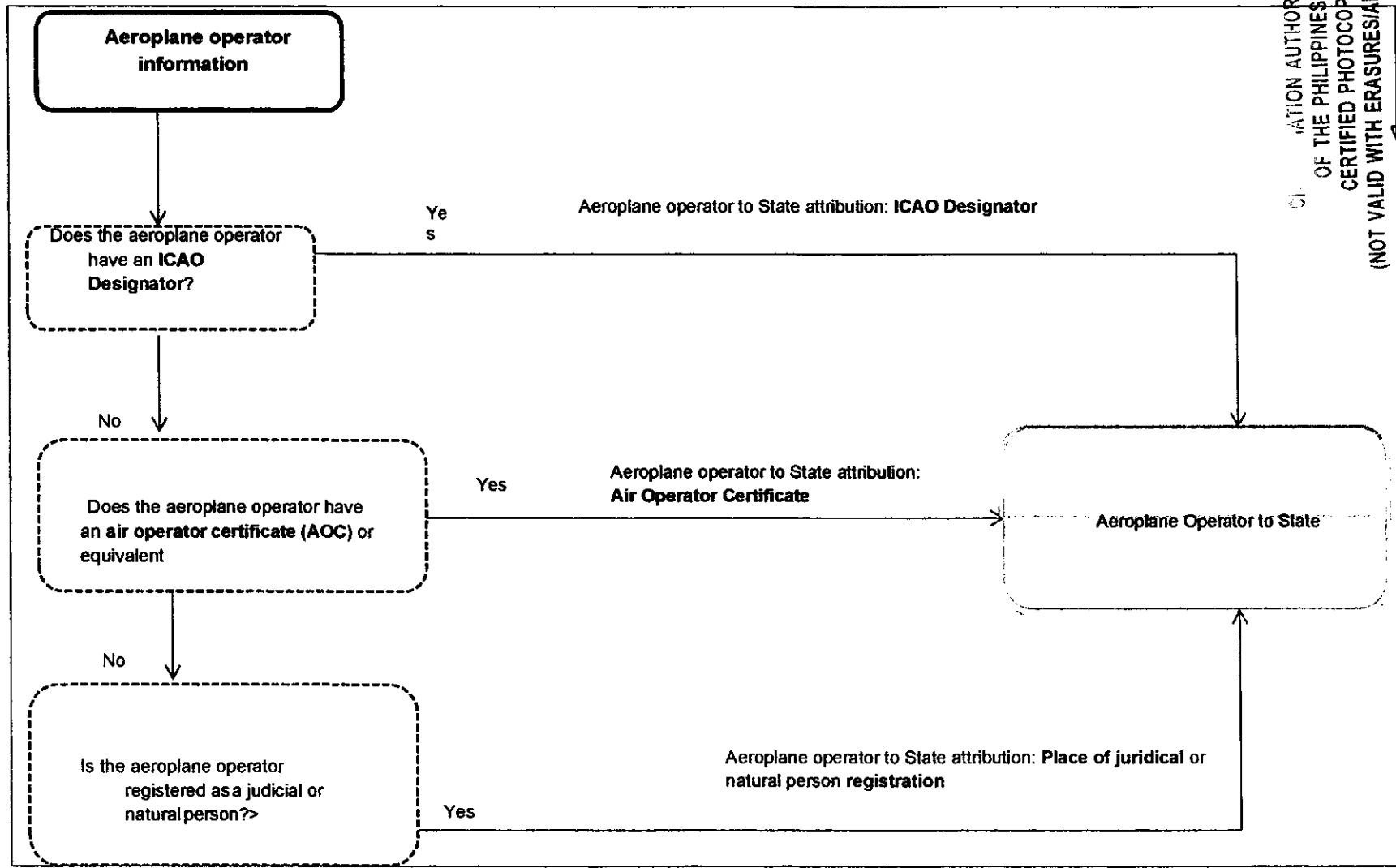
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## 5. The process for attribution of an aeroplane operator to a State

The process shall be the following:

Process for attribution of an aeroplane operator to a State



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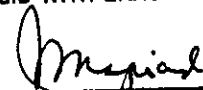
*Miguel*

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Records Officer III  
Legal Records and Archives Division

**6. Use of equivalent procedures**

- (1) The procedures prescribed in THE MC shall be used unless CAAP approves an equivalent procedure.
- (2) The use of equivalent procedures may be requested by applicant for many reasons, but not limited to:
  - (a) to make use of previously acquired or existing data; and
  - (b) to minimize the costs of demonstrating compliance with the requirements of THE MC

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## **APPENDIX 2. MONITORING, REPORTING AND VERIFICATION (MRV) OF AEROPLANE OPERATOR ANNUAL CO<sub>2</sub> EMISSIONS**

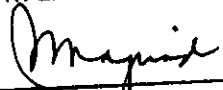
### **1. Location of indicators**

- (1) Location indicators are assigned by the Philippines and are checked by ICAO for conformity with the "formulation and assignment of location indicators".
- (2) Details on the "formulation and assignment of location indicators" and the list of ICAO four-letter location indicators for geographical locations throughout the world is defined in the Technical Guidance Material available on the CAAP'S website.

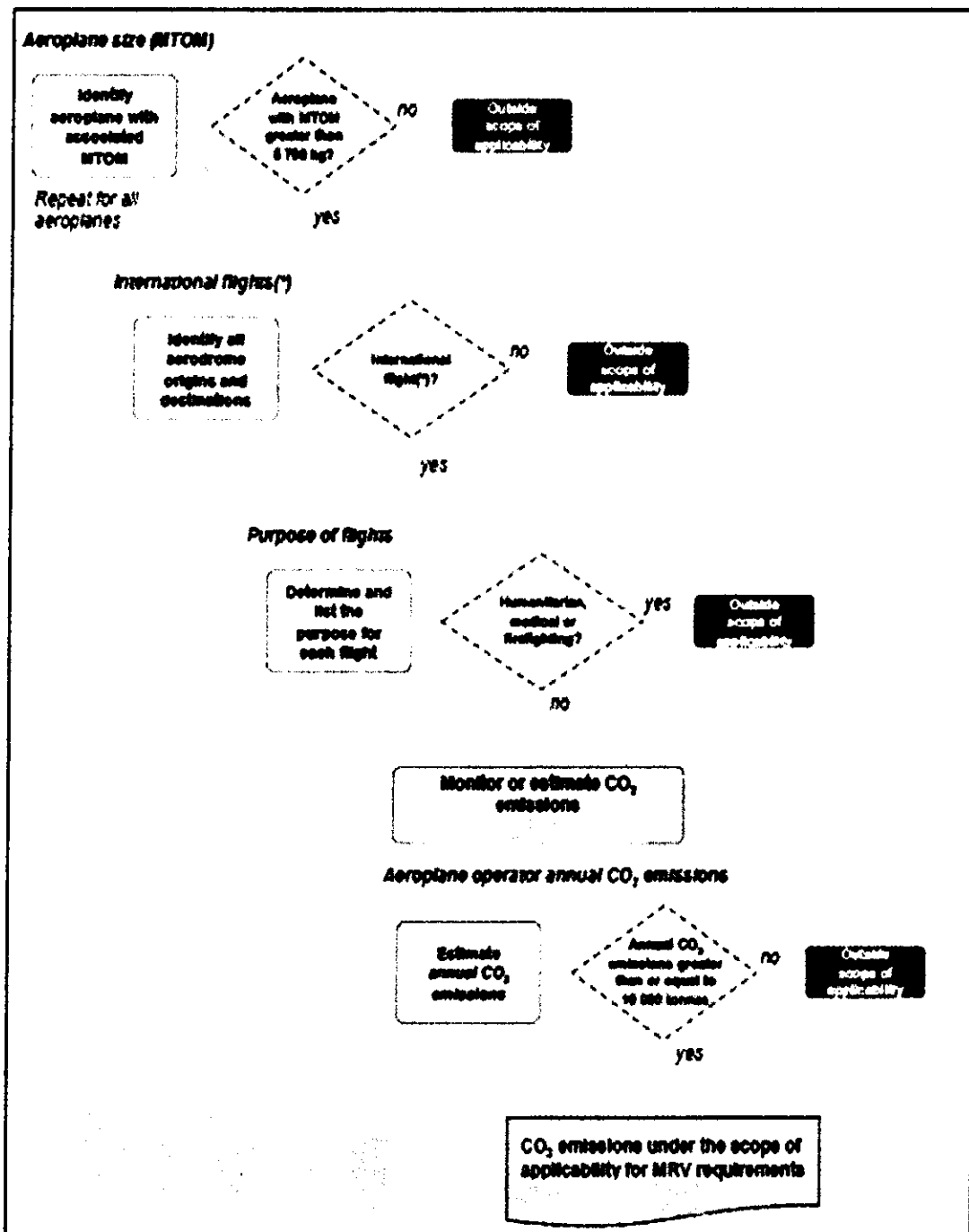
### **2. Determination of the applicability of the MRV requirements to international flights**

The process for the determination of the applicability of the MRV requirements to international flights shall be as follows:

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# Determination of the applicability of the MRV requirements to international flights



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Central Records and Archives Division

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### 3. Eligibility of monitoring methods

The determination of eligible monitoring methods and associated thresholds is provided in the TGM available on the CAAP'S website.

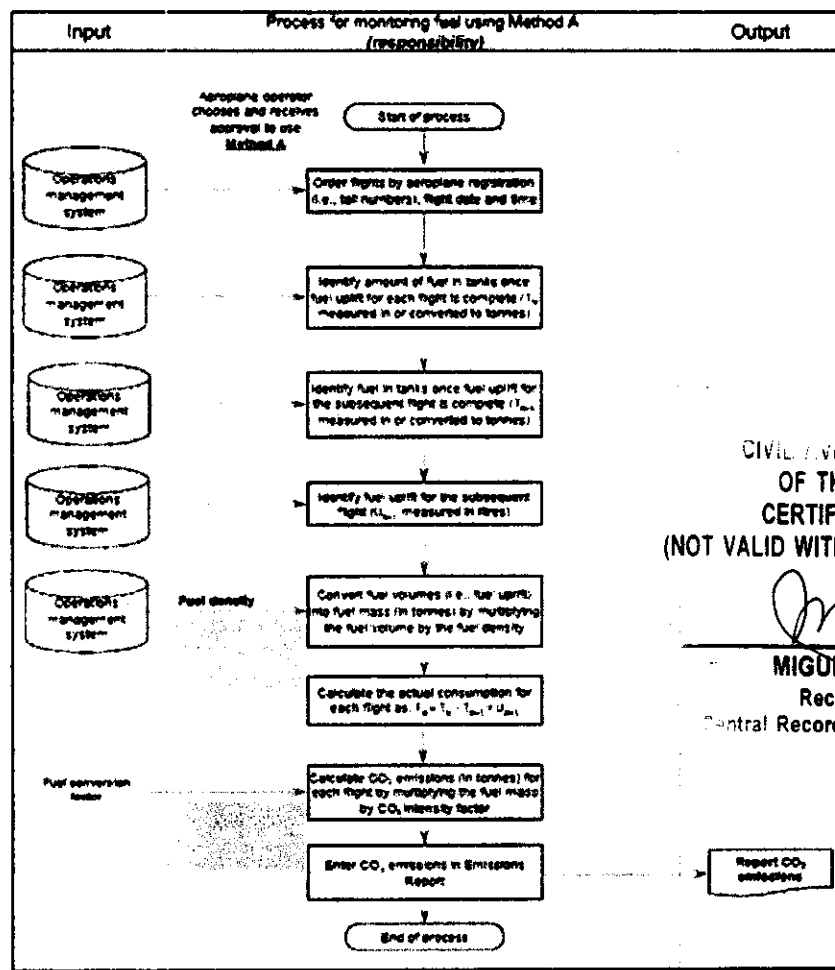
### 4. Fuel use monitoring methods

1) The procedures specified in this part are representative of the most accurate practices. Any equivalent procedures to those contained under this part shall only be allowed after prior application to and approval by CAAP:

2) The aeroplane operator, with the exception of an operator eligible to use the ICAO CORSIA CO<sub>2</sub> Estimation & Reporting Tool (CERT), shall choose from the following fuel use monitoring methods:

(a) Method A

The process for monitoring fuel use by flight using Method A shall be as follows:



(i) The aeroplane operator shall use the following formula to compute fuel

use according to Method A:

$$F_N = T_N - T_{N+1} + U_{N+1}$$

where:

$F_N$  = Fuel consumed for the flight under consideration (=flight  $N$ ) determined using Method A (in tonnes);

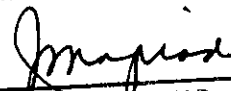
$T_N$  = Amount of fuel contained in aeroplane tanks once fuel uplifts for the flight under consideration (i.e., flight  $N$ ) are complete (in tonnes);

$T_{N+1}$  = Amount of fuel contained in aeroplane tanks once fuel uplifts for the subsequent flight (i.e., flight  $N+1$ ) are complete (in tonnes);

$U_{N+1}$  = Sum of fuel uplifts for the subsequent flight (i.e., flight  $N+1$ ) measured in volume and multiplied with a density value (in tonnes).

Note: Requirements on fuel density values are prescribed in THE MC. Fuel uplift  $U_{N+1}$  is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight. The process diagram for collecting the required data to implement Method A shall be as follows:

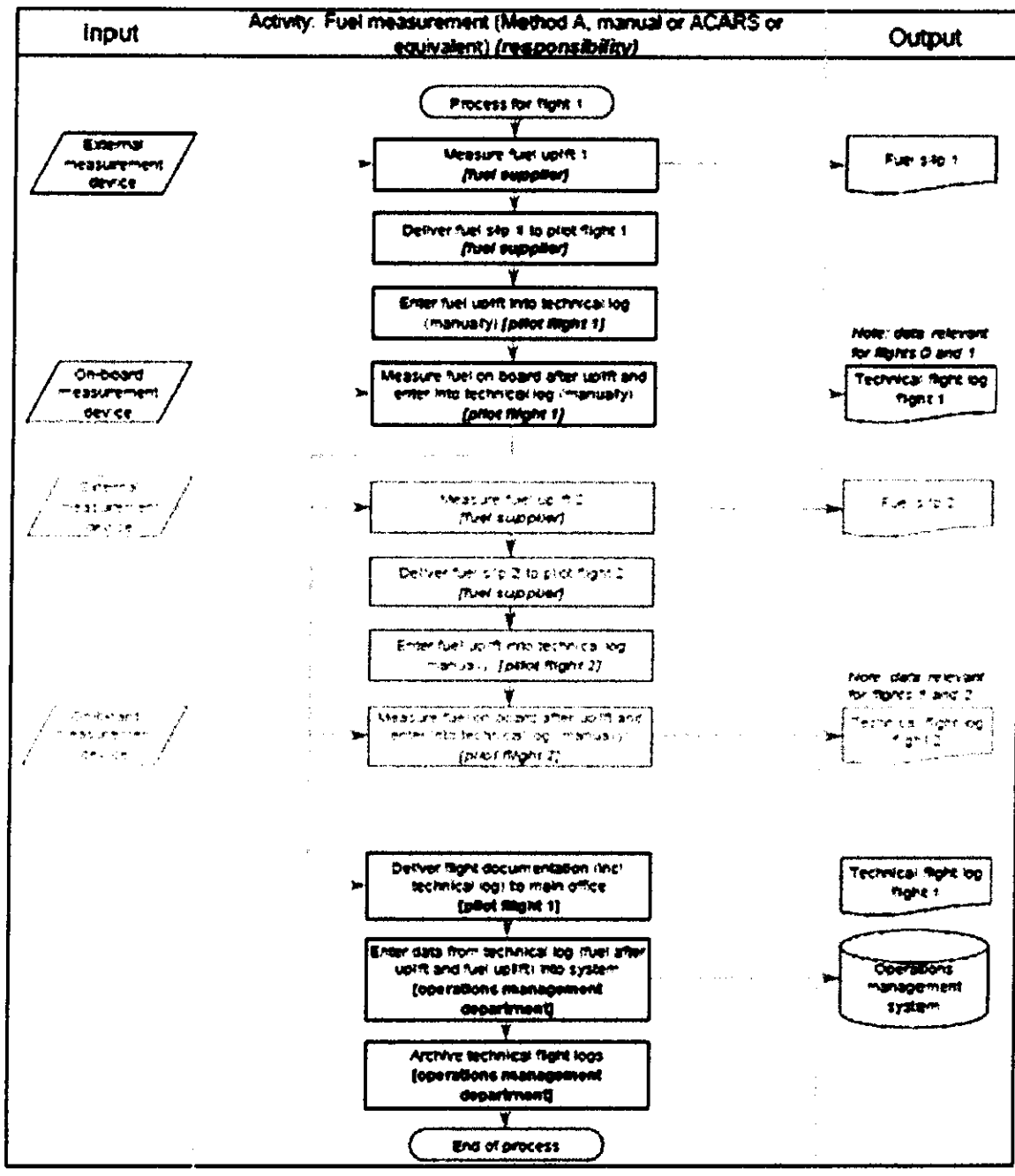
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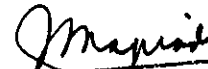
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Note: For ensuring completeness of the data, it is important to note that not only data generated during the flight under consideration (i.e., flight N) is needed, but also data generated from the subsequent flight (i.e., flight N+1). This is of particular importance when a domestic flight is followed by an international flight, as defined in THE MC or vice versa. In order to avoid data gaps it is therefore recommended that, the Block-on fuel or the amount of fuel in the tank after all fuel uplifts for a flight is always recorded on flights of aeroplane which are used for international flights, as defined in THE MC. For the same reasons, fuel uplift data for all flights of those aeroplanes should be collected, before deciding which flights are international.

- (ii) The aeroplane operator performing on an ad-hoc basis, flights attributed to another aeroplane operator, shall provide to the latter the fuel measurement values according to the Block-off / Block-on method.
- (iii) Where no fuel uplift for the flight or subsequent flight takes place, the amount of fuel contained in aeroplane tanks (TN or TN+1) shall be determined at block-off for the flight or subsequent flight. In exceptional cases the variable TN+1 cannot be determined. This is the case when an aeroplane performs activities other than a flight, including undergoing major maintenance involving the emptying of the tanks, after the flight to be monitored. In such case the aeroplane operator may substitute the quantity "TN+1 + UN+1" with the 'Amount of fuel remaining in tanks at the start of the subsequent activity of the aeroplane or fuel in tanks at Block-on, as recorded by technical logs.

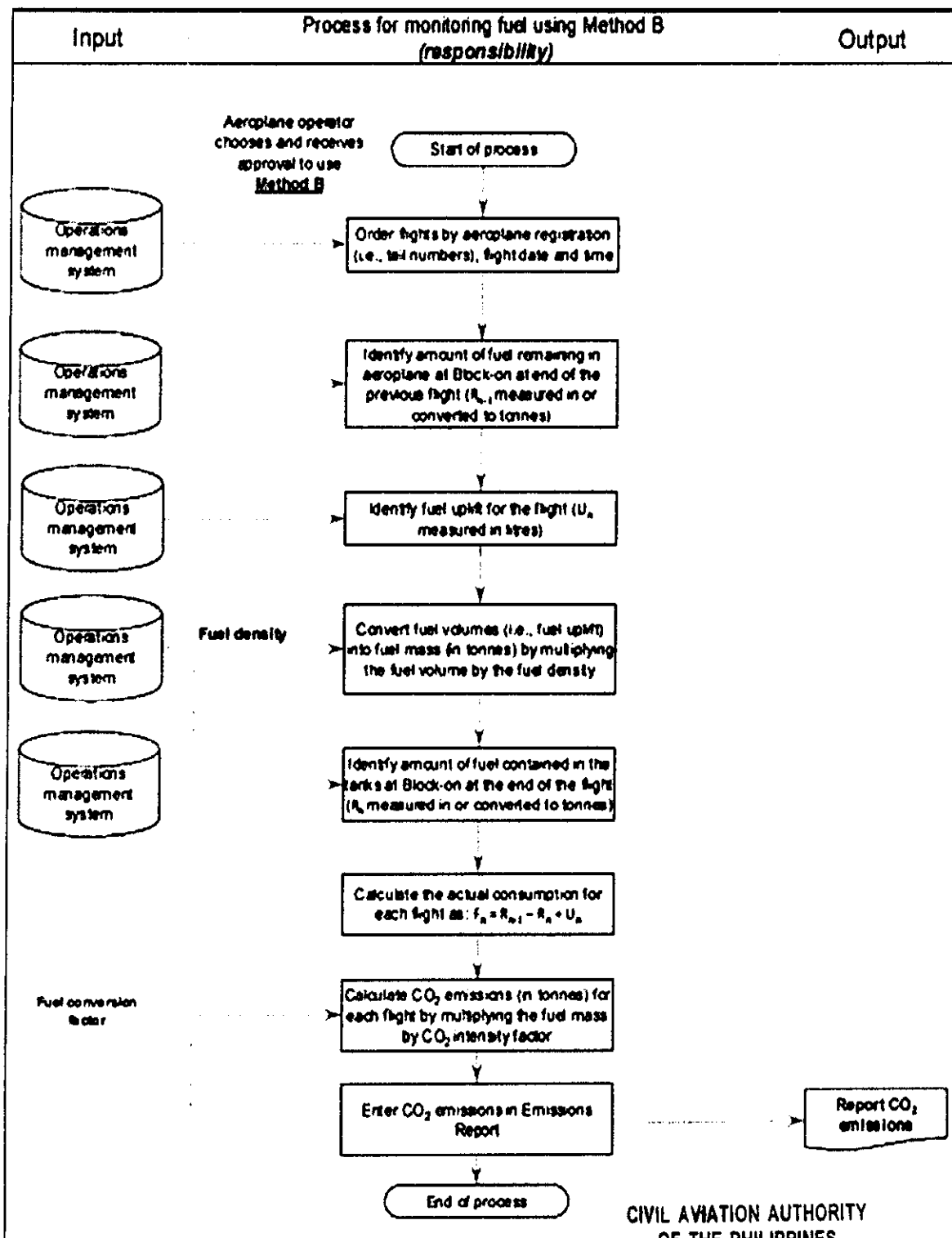
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(b) Method B

The process for monitoring fuel use by flight using Method B shall be as follows:



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- (i) The aeroplane operator shall use the following formula to compute fuel use according to Method B:

$$F_N = R_{N-1} - R_N + U_N$$

Where:

F<sub>N</sub> = Fuel consumed for the flight under consideration (i.e., flight N) determined using Method B (in tonnes);

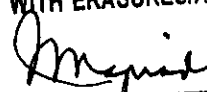
R<sub>N-1</sub> = Amount of fuel remaining in aeroplane tanks at the end of the previous flight (i.e., flight N-1) at Block-on before the flight under consideration, (in tonnes);

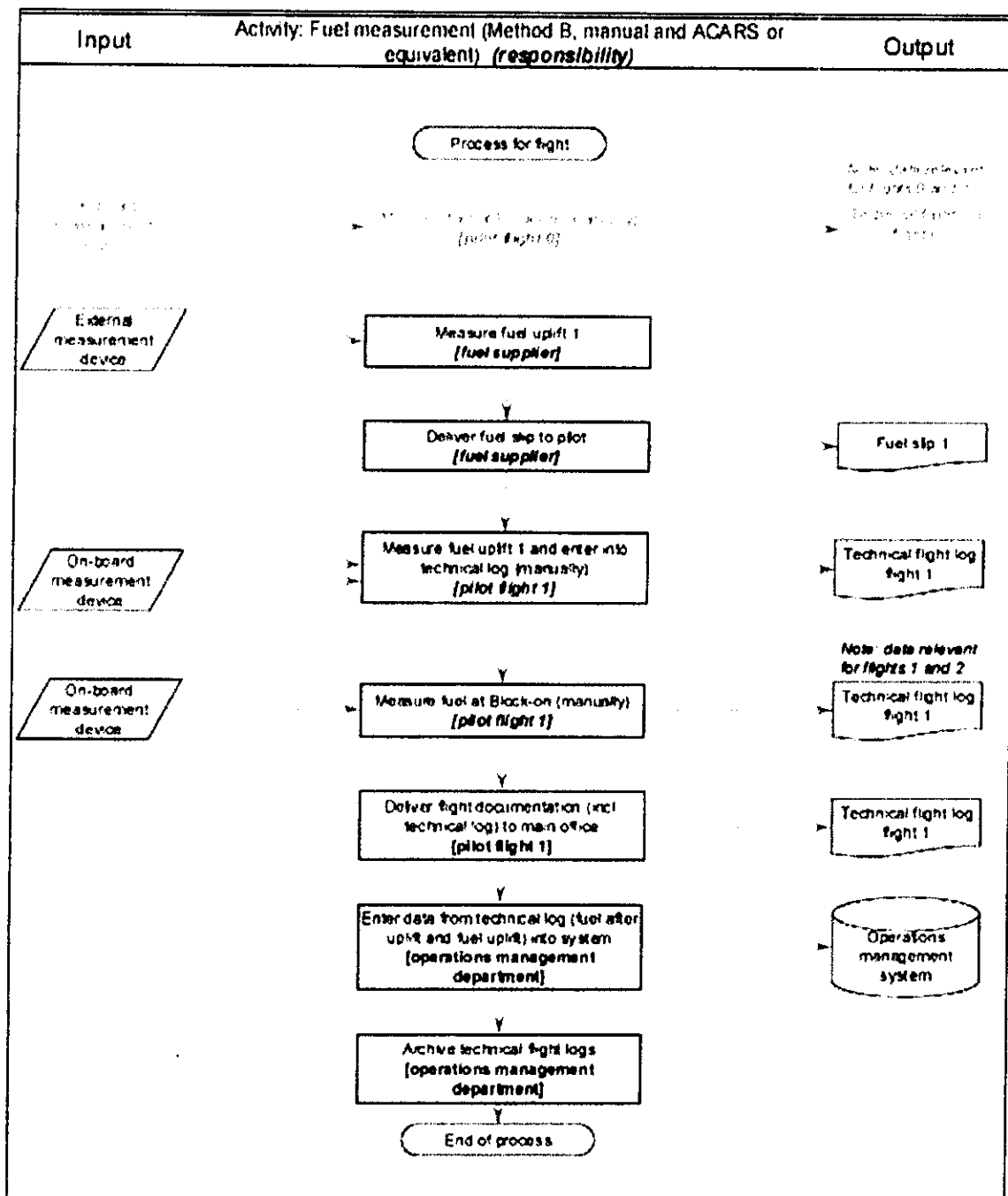
R<sub>N</sub> = Amount of fuel remaining in aeroplane tanks at the end of the flight under consideration (i.e., flight N) at Block-on after the flight, (in tonnes);

U<sub>N</sub> = Fuel uplift for the flight considered measured in volume and multiplied with a density value (in tonnes).

Note: Requirements on fuel density values are prescribed in THE MC. Fuel uplift is determined by the measurements by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight. The process diagram for collecting the required data to implement Method B is illustrated as follows:

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Note — For ensuring completeness of the data, it is important to note that not only data generated during the flight under consideration such as, flight N is needed, but also data generated from the previous flight such as , flight N-1. This is in particular important when a

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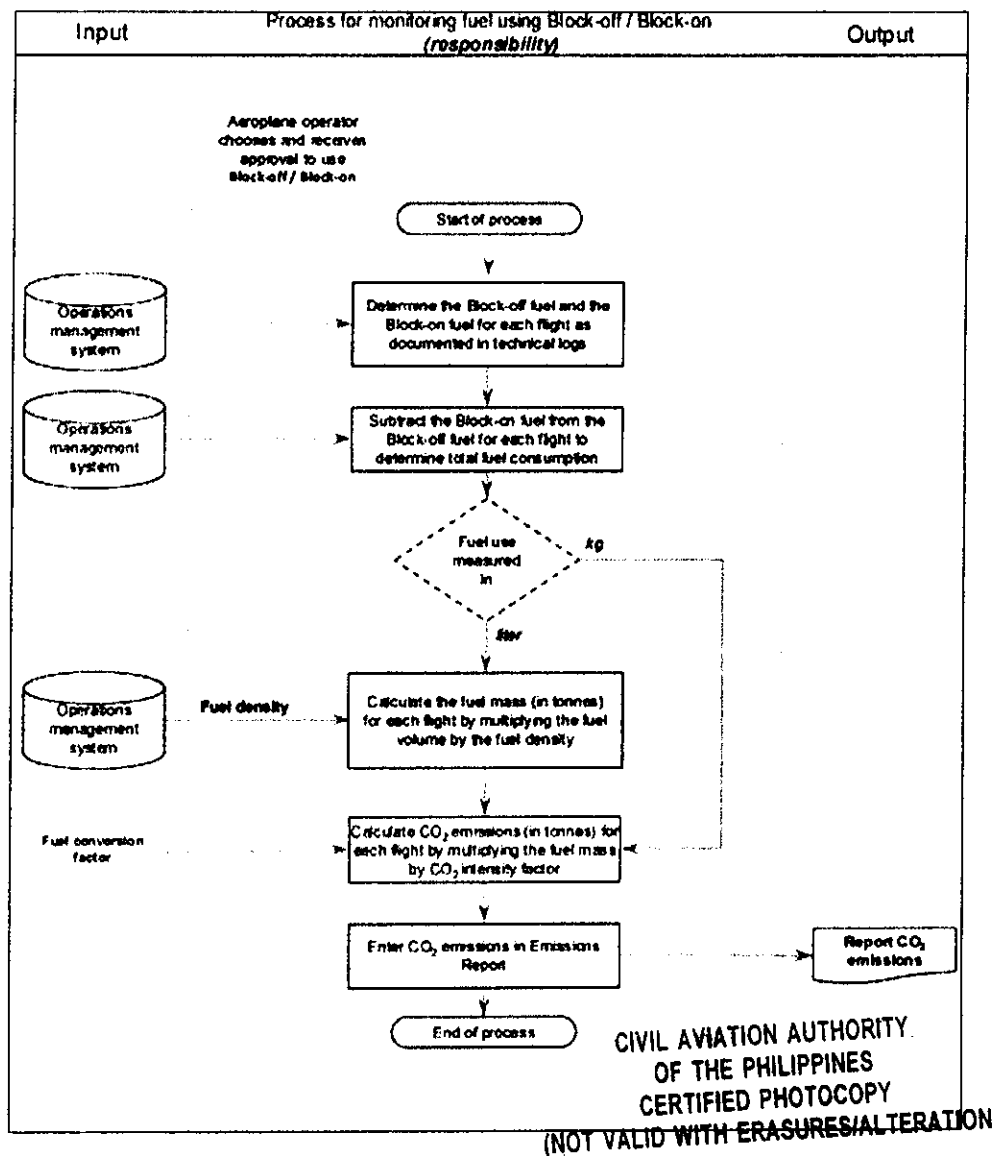
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domestic flight is followed by an international, or vice versa. For avoiding data gaps it is therefore recommended that, the amount of fuel remaining in the tank after the flight or the amount of fuel in the tank after fuel uplift is always recorded on flights of aeroplane which are used for international flights. For the same reasons, fuel uplift data for all flights of those aeroplane should be collected, before deciding which flights are international.

- (ii) The aeroplane operator performing on an ad-hoc basis, flights attributed to another aeroplane operator, shall provide to the latter the fuel measurement values according to the Block-off / Block-on method.
- (iii) Where an aeroplane does not perform a flight previous to the flight for which fuel consumption is being monitored such as if the flight follows a major revision or maintenance, the aeroplane operator may substitute the quantity RN-1 with the Amount of fuel remaining in aeroplane tanks at the end of the previous activity of the aeroplane, as recorded by technical logs.



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(c) Block-off/Block-on

The process for monitoring fuel use by flight using Method Block-off/ Block-on shall be as follows:

- (i) The aeroplane operator shall use the following formula to compute fuel use according to the Block-off / Block-on Method:

$$FN = TN - RN$$

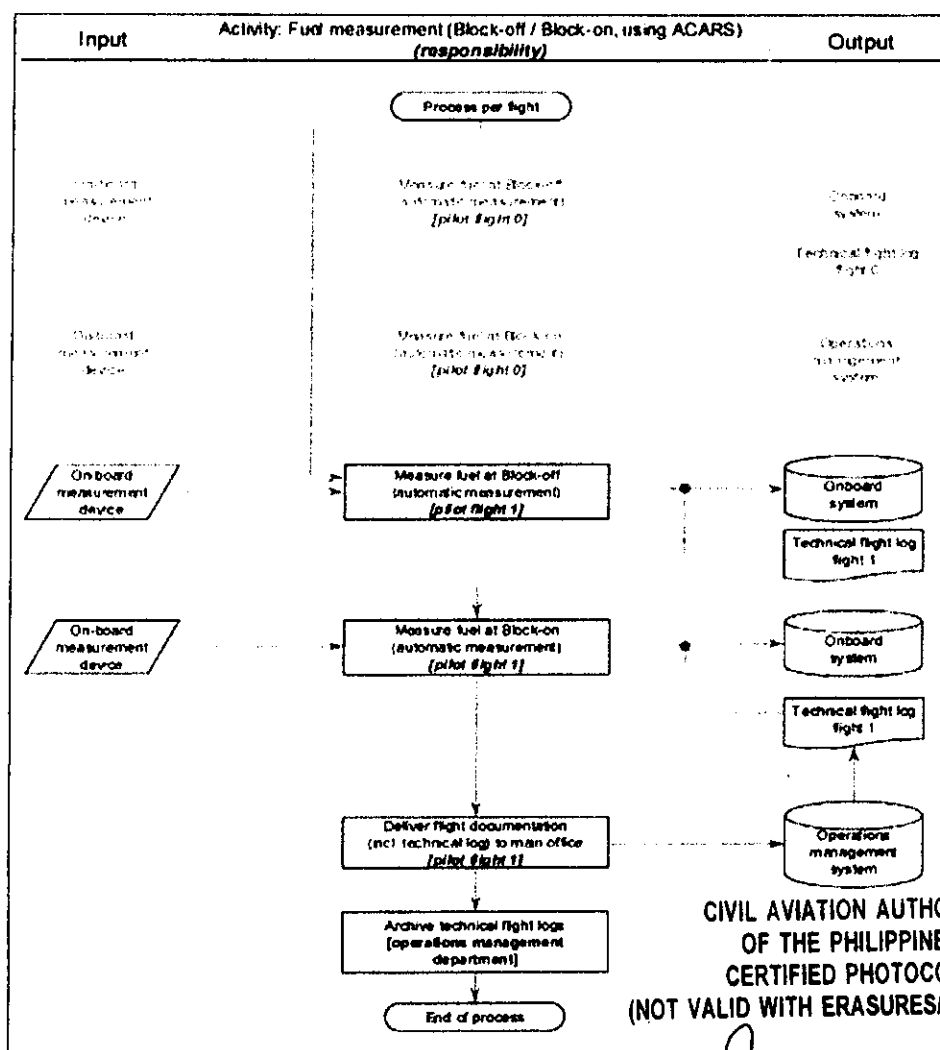
where:

FN = Fuel consumed for the flight under consideration (=flight N) determined using Block-off / Block-on Method (in tonnes);

TN = Amount of fuel contained in aeroplane tanks at Block-off for the flight under consideration i.e., flight N (in tonnes);

RN = Amount of fuel remaining in aeroplane tanks at Block-on of the flight under consideration i.e., flight N (in tonnes).

Note — The process for collecting the required data to implement Method Block-off/ Block-on shall be as follows:

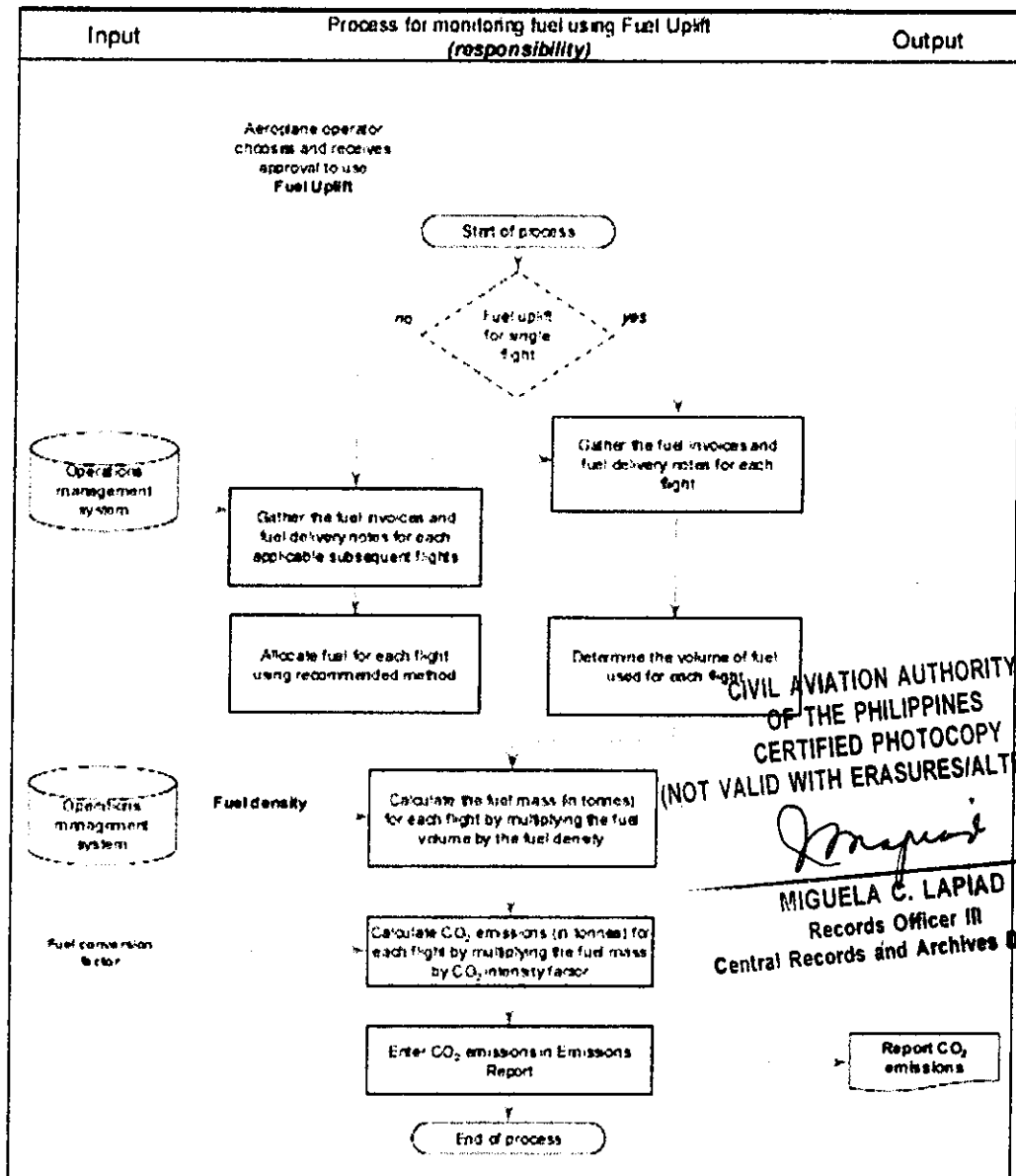


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(d) Fuel Uplift

The process for monitoring fuel using Fuel Uplift shall be as follows:



- (i) For flights with a fuel uplift unless the subsequent flight has no uplift, the aeroplane operator shall use the following formula to compute fuel use according to the Fuel Uplift Method:

$$FN = UN$$

Where:

FN = Fuel consumed for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes);

UN = Fuel uplift for the flight considered, measured in volume and multiplied with a density value (in tonnes).

Note: Requirements on fuel density values are prescribed in AC OF THE MC

For flight(s) without a fuel uplift (i.e., flight N+1, ..., flight N+n), the aeroplane operator shall use the following formula to allocate fuel use from the prior fuel uplift such as from flight N proportionally to block hour:

$$F_N = U_N \times \frac{BH_N}{BH_N + BH_{N+1} + \dots + BH_{N+n}}$$

$$F_{N+1} = U_N \times \frac{BH_{N+1}}{BH_N + BH_{N+1} + \dots + BH_{N+n}}$$

$$F_{N+n} = U_N \times \frac{BH_{N+n}}{BH_N + BH_{N+1} + \dots + BH_{N+n}}$$

Where:

FN = Fuel consumed for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes);

FN+1 = Fuel consumed for the subsequent flight (i.e., flight N+1) determined using fuel uplift (in tonnes);

...

FN+n = Fuel consumed for the follow-on flight (i.e., flight N+n) determined using fuel uplift (in tonnes);

UN = Fuel uplift for the flight under consideration (i.e., flight N) (in tonnes);

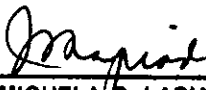
BHN = Block hour for the flight under consideration (i.e., flight N) (in hours);

BHN+1 = Block hour for the subsequent flight (i.e., flight N+1) (in hours).

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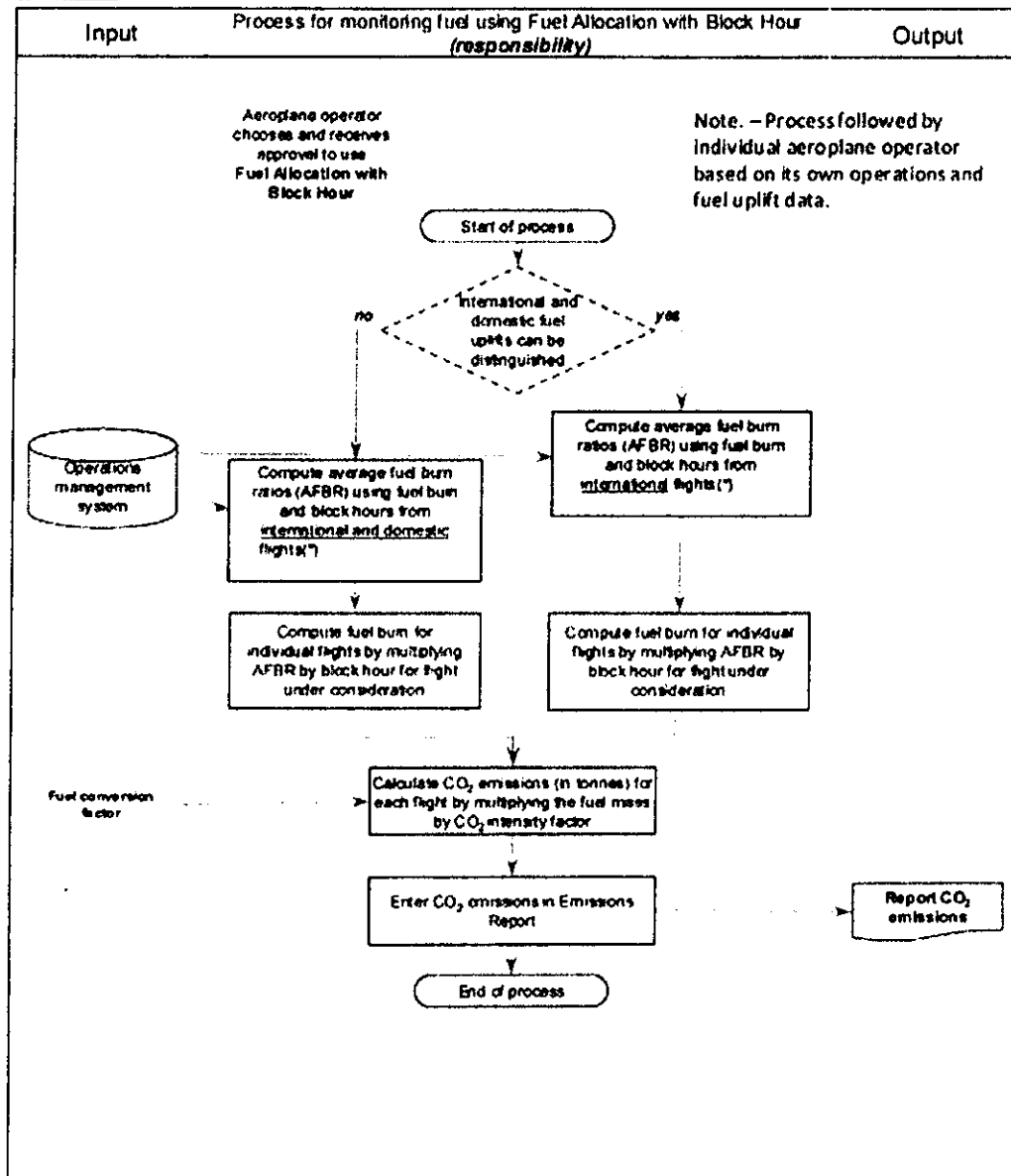
BHN+n = Block hour for the follow-on flight (i.e., flight N+n) (in hours). Note. — Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

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(e) Fuel Allocation with Block Hour

The process for monitoring fuel using Fuel Allocation with Block Hour shall be as follows:



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(i) Computation of average fuel burn ratios:

(aa) For an aeroplane operator which can clearly distinguish between international and domestic fuel uplifts, the aeroplane operator shall compute, for each aeroplane type, the average fuel burn ratios by summing up all actual fuel uplifts from international flights, divided by the sum of all actual block hours from international flights for a given year, according to the following formula:

$$AFBR_{AO,AT} = \frac{\sum L_N U_{AO,AT,N}}{\sum L_N BH_{AO,AT,N}}$$

where:

AFBR<sub>AO, AT</sub> = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour).

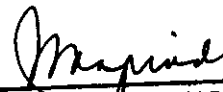
U<sub>AO, AT, N</sub> = Fuel uplifted for the international flight N for aeroplane operator (AO) and aeroplane type(AT) determined using monitoring method Fuel Uplift (in tonnes).

BH<sub>AO, AT, N</sub> = Block hour for the international flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

(bb) For an aeroplane operator which cannot clearly distinguish between international and domestic fuel uplifts, the aeroplane operator shall compute, for each aeroplane type, the average fuel burn ratios by summing up all actual fuel uplifts from international and domestic flights divided by the sum of all actual block hours from these flights for a given year, according to the following formula:

$$AFBR_{AO,AT} = \frac{\sum L_N U_{AO,AT,N}}{\sum L_N BH_{AO,AT,N}}$$

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where:

AFBR<sub>AO, AT</sub> = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour).

U<sub>AO, AT, N</sub> = Fuel uplifted for the international or a domestic flight N for aeroplane operator (AO) and aeroplane type (AT) measured in volume and multiplied with a specific density value (in tonnes).  
BH<sub>AO, AT, N</sub> = Block hour for the international and domestic flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

(cc) An aeroplane operator specific average fuel burn ratios shall be calculated on a yearly basis by using the yearly data from the actual reporting year. The average fuel burn ratios shall be reported, for each aeroplane type, in the aeroplane operator's Emissions Report.

THE MC provides for requirements on fuel density values. Aeroplane types are contained in the Technical Guidance Material on ICAO Aircraft Type Designators available on the CAAP'S WEBSITE.

(ii) Computation of fuel use for individual flights:

(aa) The aeroplane operator shall compute the fuel consumption for each international flight by multiplying the aeroplane operator specific average fuel burn ratios with the flight's block hour according to the following formula:

$$F_N = AFBR_{AO, AT} * BH_{AO, AT, N}$$

Where:

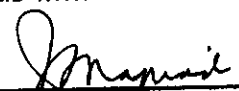
F<sub>N</sub> = Fuel allocated to the international flight under consideration (i.e., flight N) using the Fuel Allocation Block Hour method (in tonnes);

AFBR<sub>AO, AT</sub> = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour);

BH<sub>AO, AT, N</sub> = Block hour for the international flight under consideration (=flight N) for aeroplane operator (AO) and aeroplane type (AT) (in hours).

Note— Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight. The Verification Report of the external verification body includes an assessment of the aeroplane operator specific average fuel burn ratio per ICAO aircraft type designator used. Average fuel burn ratio (AFBR) based on all flights for a reporting year and rounded to at least three decimal places.

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(bb) Verification body shall cross-check whether the emissions reported are reasonable in comparison to other fuel related data of the aeroplane operator.

## **5. CO<sub>2</sub> Emissions Estimation and Reporting Methods Tool (CERT)**

Note: The procedures specified in this section are concerned with the estimation of CO<sub>2</sub> emissions by an aeroplane operator for the purposes of monitoring CO<sub>2</sub> emissions and filling data gaps. The methods and tools proposed are representative of most accurate established practices.

The ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) can be obtained from the ICAO document entitled: "ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool" for use in a given year. The CERT can be found on the ICAO CORSIA website.

1) Use of the ICAO CORSIA CO<sub>2</sub> Estimation & Reporting Tool (CERT) for complying with monitoring and reporting requirements

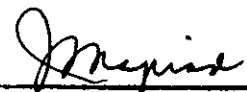
Note: The ICAO CORSIA CERT is developed for and made available to aeroplane operators to support the monitoring and reporting of their CO<sub>2</sub> emissions. The CERT supports aeroplane operators in fulfilling their monitoring and reporting requirements by populating the standardized Emissions Monitoring Plan and Emissions Report templates provided in the Technical Guidance Material available on the Authority website. This support includes:

- a) assessing its eligibility to use the CERT, as defined in Appendix 3, in support of their Emissions Monitoring Plan such CO<sub>2</sub> emissions threshold requirements;
- b) assessing whether or not it is within the applicability scope of THE MC MRV requirements; and
- c) filling any CO<sub>2</sub> emissions data gaps.

The ICAO CORSIA CERT is available to CAAP to support order of magnitude checks and fill any CO<sub>2</sub> emissions data gaps as described in THE MC

- (a) The aeroplane operator shall use the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) according to the eligibility criteria as described in THE MC and upon approval by CAAP
- (b) The aeroplane operator shall use either the (1) Block Time input method or (2) the Great Circle Distance input method to enter the necessary information into the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT).
- (c) The aeroplane operator approved to use the Block Time input method shall

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collect the following data and shall enter it into the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) to estimate its CO<sub>2</sub> emissions during the compliance year;

- (i) ICAO aircraft type-model designator;
  - (ii) Origin aerodrome ICAO Designator;
  - (iii) Destination aerodrome ICAO Designator;
  - (iv) Block time (in hours);
  - (v) Number of flights;
  - (vi) Date (optional);
  - (vii) Flight ID (optional).
- (d) The aeroplane operator approved to use the Great Circle Distance input method shall collect the following data and shall enter it into the ICAO CORSIA CO<sub>2</sub> Estimation & Reporting Tool (CERT) to estimate its CO<sub>2</sub> emissions during the compliance year;
- (i) ICAO aircraft model - type designator
  - (ii) Origin aerodrome
  - (iii) Destination aerodrome
  - (iv) Number of flights
  - (v) Date (optional)
  - (vi) Flight ID (optional)

Note 1. — The ICAO Aircraft Type - Model Designators are contained in the ICAO Aircraft Type Designators TGM available on the CAAP'S website.

Note 2. — The origin aerodrome and destination aerodrome designators are contained in the ICAO Manual on Location Indicators TGM available on the CAAP's website.

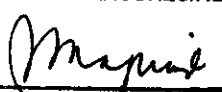
Note 3. — The ICAO CORSIA CERT will automatically compute Great Circle Distance based on the origin aerodrome and destination aerodrome.

## 2. Collection of data to develop and maintain the ICAO CO<sub>2</sub> estimation module used within the CORSIA CERT

a) CAAP should contribute to improving the ICAO CO<sub>2</sub> estimation module used within the CORSIA CERT by collecting flight level fuel burn data from aeroplane operators who are willing to share this information. Aeroplane operator data should include:

- i) Date and time (in Universal Time Coordinated)
- ii) ICAO aircraft type - model designator;
- iii) Origin aerodrome ICAO Designator;
- iv) Destination aerodrome ICAO Designator;
- v) Block hour (in hours to 2 decimal places);

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- vi) Fuel used (in tonnes to at least 1 decimal place) based on a Fuel Use Monitoring Method as described in THE MC;
- vii) Type of Fuel Use Monitoring Method used;
- viii) Aircraft maximum certificated take-off mass (in kg); and
- ix) Flight Great Circle Distance (in km)

b)CAAP should share data with ICAO for continuous improvement of the ICAO CO<sub>2</sub> estimation module used within the CORSIA CERT. CAAP shares data, then this will include:

- i) Date and time (in Universal Time Coordinated);
- ii) Generic code to de-identify aeroplane operator information and allow integration of information;
- iii) ICAO Aircraft Type - Model Designator;
- iv) Flight Great Circle Distance (in km);
- v) Block hour (in hours to 2 decimal places);
- vi) Fuel used (in tonnes to at least 1 decimal place based on a fuel use monitoring method as described in THE MC; and
- vii) Type of Fuel Use Monitoring Method used.

c)CAAP shall anonymize the aeroplane operator data shared with ICAO under paragraph (b), if data is shared in accordance with paragraph (b).

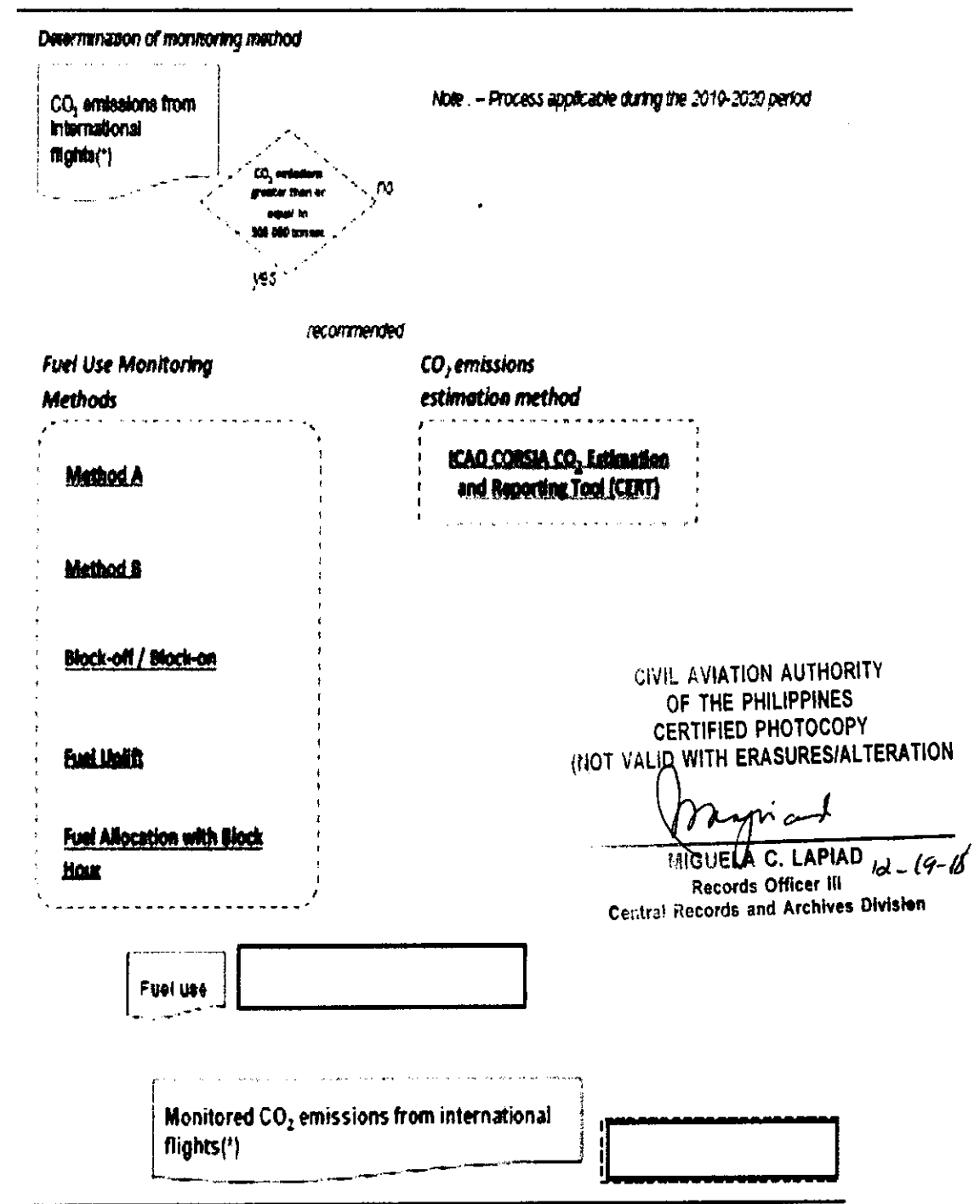
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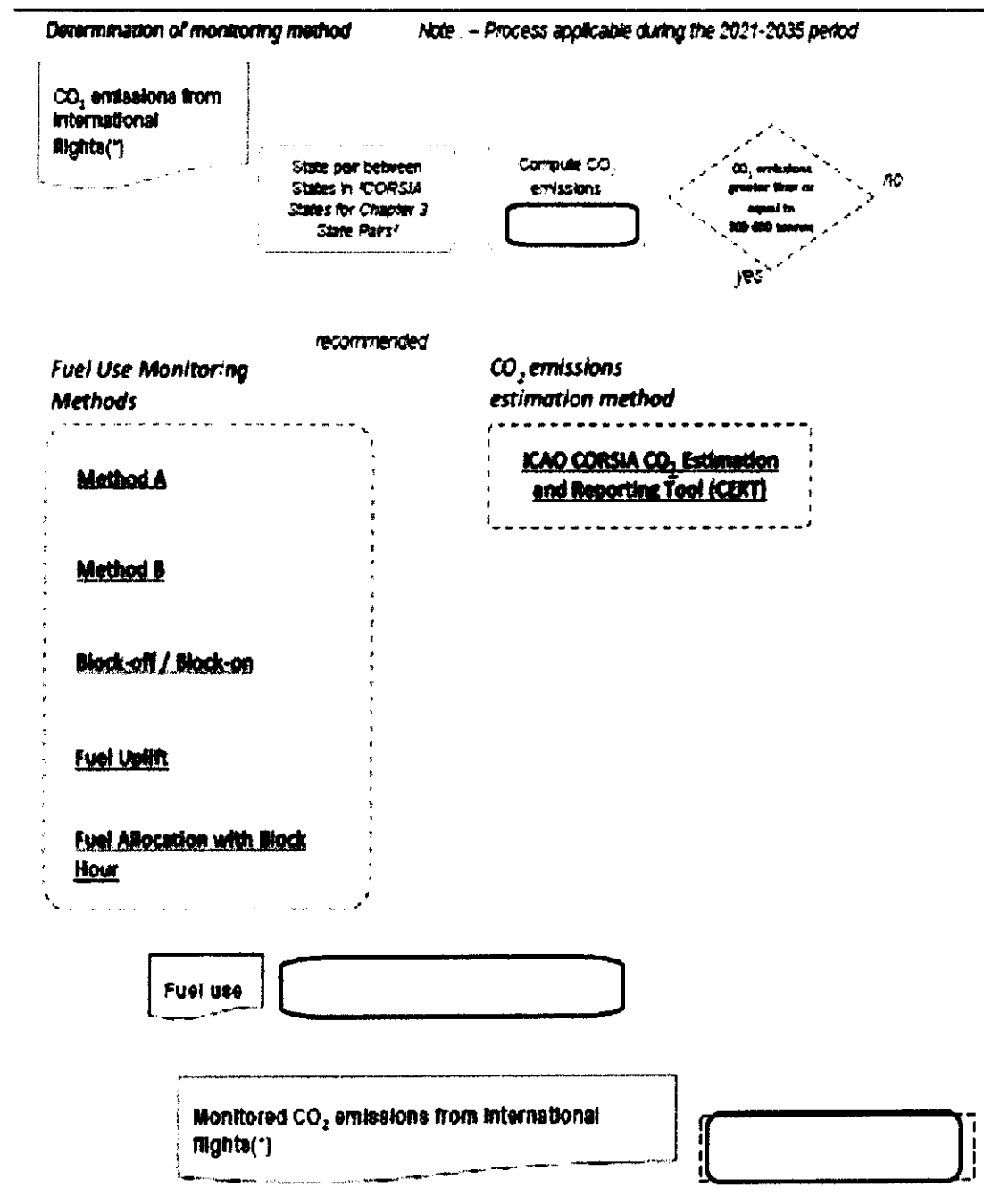
**6. Determination of eligible Fuel Use Monitoring Methods during the 2019-2020 compliance period**

The following process on the eligibility of Fuel Use Monitoring Methods shall be applicable during the 2019-2020 period:



# **7. Determination of eligible Fuel Use Monitoring Methods during the 2021-2035 compliance period**

The following process on the eligibility of Fuel Use Monitoring Methods will be applicable during the 2021-2035 period:



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## **8. Emissions Monitoring Plans**

The Emissions Monitoring Plan of an aeroplane operator shall contain the information listed in paragraph (1).

*Note: The template of an Emissions Monitoring Plan (from aeroplane operator to CAAP) is provided in the Technical Guidance Material available on CAAP's website.*

### **1. Identification of the Aeroplane Operator**

a) Name and address of the aeroplane operator with legal responsibility.

b) Information for attributing the aeroplane operator to the Philippines:

**1. ICAO Designator:** ICAO Designator(s) used for air traffic control purposes, as listed in the Technical Guidance Material on *ICAO Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services*

**2. Air operator certificate:** If the aeroplane operator does not have an ICAO Designator, then a copy of the air operator certificate.

**3. Place of juridical registration:** If the aeroplane operator does not have an ICAO Designator or an air operator certificate, then the aeroplane operator's place of juridical registration.

c) Details of ownership structure relative to any other aeroplane operators with international flights, including identification of whether the aeroplane operator is a parent company to other aeroplane operators with international flights, a subsidiary of another aeroplane operator with international flights, and has a parent and or subsidiaries that are aeroplane operators with international flights

d) If the aeroplane operator in a parent-subsidiary relationship seeks to be considered a single aeroplane operator for purposes of this Subpart, then confirmation shall be provided that the parent and subsidiary(ies) are attributed to the Philippines' and that the subsidiary(ies) are wholly-owned by the parent.

e) Contact information for the person within the aeroplane operator's company who is responsible for the Emissions Monitoring Plan.

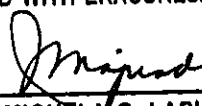
f) Description of the aeroplane operator's activities such as, scheduled/non- scheduled, passenger/cargo/executive, and geographic scope of operations).

### **2. Fleet and operations data**

a) The Aeroplane Operator shall list all the aeroplane types and type of fuel such as, Jet-A, Jet-A1, Jet-B, AvGas used in aeroplanes operated for international flights at the time of submission of the Emissions Monitoring Plan, recognizing that there may be changes

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over time. The list shall include:

i)Aeroplane types with a maximum certificated take-off mass of 5 700 kg or greater and the number of aeroplane per type, including owned and leased aeroplanes;

Note: Aeroplane types are contained in the Aircraft Type Designators Document available on the CAAP's website. The aeroplane operator using the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify applicable aeroplane types

ii)Type of fuel(s) used by the aeroplanes such as Jet-A, Jet- A1, Jet-B, AvGas;

Note: The aeroplane operator using the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) does not need to specify the type of petroleum-based fuel used by aeroplanes.

b)The information to be used for attributing international flights to the aeroplane operator shall be:

1.ICAO Designator: List of the ICAO Designator(s) used in Item 7 of the aeroplane operator's flight plans;

2.Registration marks: If the aeroplane operator does not have an ICAO Designator, then a list of the nationality or common mark, and registration mark of aeroplanes that are explicitly stated in the air operator certificate or equivalent and used in Item 7 of the Operator's flight plans;

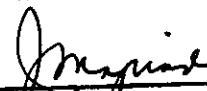
c)Emissions Monitoring Plan code: If the aeroplane operator does not have an ICAO Designator or an air operator certificate, then the aeroplane operator shall propose an alternative means for flight attribution based on what it reports in Item 7 of the Operator's flight plans such specific code, list of marks/tail registrations. Procedures on how changes in the aeroplane fleet and fuel used will be tracked, and subsequently integrated in the Emissions Monitoring Plan;

d)Procedures on how the specific flights of an aeroplane will be tracked to ensure completeness of monitoring;

e)Procedures for determining which aeroplane flights meet the definition of "international" flights., and are subject to the requirements of THE MC;

Note. — The aeroplane operator using the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify international flights as long as all flights such as domestic and international conducted during the reporting year are entered as input into the tool.

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f) List of States to where the aeroplane operator operates international flights, , at the time of initial submission of the Emissions Monitoring Plan:

Note. — The aeroplane operator using the estimation functionality of the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) to assess its eligibility to use the CERT could use the output of the tool (i.e., list of States) as input to the Emissions Monitoring Plan submission.

g) Procedures for determining which international aeroplane flights are subject to offsetting requirements;

Note. — The aeroplane operator using the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify flights subject to offsetting requirements in a given year of compliance as long as the aeroplane operator uses the correct version (i.e., year of compliance) of the CERT

h) Procedures for identifying domestic flights and humanitarian, medical or firefighting international flights, that would not be subject to the requirements of THE MC

### 3.Methods and means of calculating emissions from international flights:

#### a) For the methods and means for establishing the average Emissions during the 2019-2020 Period-

i)If the aeroplane operator meets the eligibility criteria in the MC and chooses to use the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) as described in these Standards, then the following information shall be provided:


(aa) an estimate of CO<sub>2</sub> emissions for all international flights, as defined in THE MC, for 2019 with supporting information on how the estimation was calculated;

(bb) the type of input method used in the ICAO CORSIA CO<sub>2</sub> Estimation & Reporting Tool (CERT); either the Great Circle Distance input method or the Block Time input method.

Note. – Guidance on estimating CO<sub>2</sub> emissions for 2019 is provided in the TGM on Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) available on CAAP's website.

ii)If the aeroplane operator meets the eligibility criteria in the MC or chooses to use a fuel use monitoring method as described in these standards, then the following information shall be provided:

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(aa) The Fuel Use Monitoring Method that will be used:

- a. Method A;
- b. Method B;
- c. Block-off/Block-on;
- d. Fuel Uplift; or
- e. Fuel Allocation with Block Hour.

(bb) if different Fuel Use Monitoring Methods are to be used for different aeroplane types, then the aeroplane operator shall specify which method applies to which aeroplane type;

(cc) Information on the procedures for determining and recording fuel density values standard or actual as used for operational and safety reasons and a reference to the relevant aeroplane operator documentation; and

(dd) The systems and procedures to monitor fuel consumption in both owned and leased aeroplane. If the aeroplane operator has chosen the Fuel Allocation with Block Hour method, information shall be provided on the systems and procedures used to establish the average fuel burn ratios as described in these Standards.

iii) If the aeroplane operator is in a parent-subsidary relationship and seeks to be considered as a single aeroplane operator for purposes of THE MC, then it shall provide the procedures that will be used for maintaining records of fuel used and emissions monitored during the 2019-2020 period of the various corporate entities. This shall be used to establish individual average emissions during the 2019-2020 period for the parent and subsidiary or subsidiaries.

**b) For the methods and means for Emissions Monitoring and Compliance on or after 1 January 2021-**

i) If the aeroplane operator has international flights, as defined in THE MC, but these are not subject to offsetting requirements, then it shall confirm whether it plans to use the ICAO CORSIA CERT or the Fuel Use Monitoring Methods as described in these Standards.

ii) If the aeroplane operator meets the eligibility criteria as settled in THE MC, and it chooses to use the ICAO CORSIA CERT as described in these Standards, then the following information shall be provided:

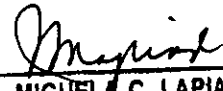
(aa) An estimate of CO<sub>2</sub> emissions for all international flights, as defined in THE MC subject to offsetting requirements, for the year before the emissions monitoring is to occur (for example, an estimate of such emissions for 2020 for monitoring in 2021), as well as information on how the estimation was calculated;

(bb) The type of input method used in the ICAO CORSIA CERT:

- Great Circle Distance input method; or
- Block Time input method.

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iii) If the aeroplane operator meets the eligibility criteria as settled in THE MC or chooses to use a Fuel Use Monitoring Method, then the following information shall be provided:

(aa) The Fuel Use Monitoring Method that will be used are Method A; Method B; Block-off/Block-on; Fuel Uplift or Fuel Allocation with Block Hour,

(bb) if different Fuel Use Monitoring Methods are to be used for different aeroplane types, then the aeroplane operator shall specify which method applies to which aeroplane type;

(cc) Information on the procedures for determining and recording fuel density values, standard or actual, as used for operational and safety reasons and a reference to the relevant aeroplane operator documentation; and

(dd) The systems and procedures to monitor fuel consumption in both owned and leased aeroplane. If the aeroplane operator has chosen the Fuel Allocation with Block Hour method, information shall be provided on the systems and procedures used to establish the average fuel burn ratios as described in these Standards.

iv) If the aeroplane operator is using a Fuel Use Monitoring Method, it shall state whether it plans to use the ICAO CORSIA CERT for international flights, as defined in THE MC, that are subject to emissions monitoring but not offsetting requirements. If so, the aeroplane operators shall also state which input method into the ICAO CORSIA CERT is being used such as Great Circle Distance Input Method, or Block Time Input Method.

#### **4. Data management, data flow and control**

a) The aeroplane operator shall provide the following information:

(i) roles, responsibilities and procedures on data management;

(ii) procedures to handle data gaps and erroneous data values, including:

(aa) Secondary data reference sources which would be used as an alternative;

(bb) Alternative method in case the secondary data reference source is not available; and

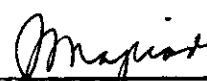
(cc) For those aeroplane operators using a Fuel Use Monitoring Method, information on systems and procedures for identifying data gaps and for assessing whether the 5 per cent threshold for significant data gaps has been reached.

(iii) documentation and record keeping plan;

(iv) assessment of the risks associated with the data management processes and means for addressing significant risks;

(v) procedures for making revisions to the Emissions Monitoring Plan and submitting relevant portions to CAAP when there are material changes;

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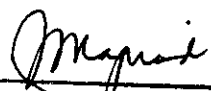
(vi) procedures for providing notice in the Emissions Report of non- material changes that require the attention of CAAP;

(vii) a data flow diagram summarizing the systems used to record and store data associated with the monitoring and reporting of CO<sub>2</sub> emission

#### **9. Fuel density**

Guidance material on the use of standard fuel density is provided on the CAAP's website.

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## **10. Emissions Report**

Note.- the procedures specified in the standard are concerned with the reporting requirements under THE MC

1). Unless otherwise stated, fuel use shall be reported to the nearest tonne;


2). The content of an Emissions Report from an aeroplane operator to CAAP shall contain the information listed in paragraphs (a) and (b);

Note: The template of an Emissions Report (from aeroplane operator to CAAP) is provided in the Technical Guidance Material available on the Authority website.

### **a) Content of aeroplane operator Emissions Report**

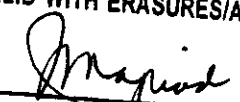
<u>Field #</u>	<u>Data Field</u>	<u>Details</u>
<u>Field 1</u>	<u>Aeroplane operator information</u>	<u>1.a Name of aeroplane operator</u> <u>1.b Detailed contact information of aeroplane operator</u> <u>1.c Name of a point of contact</u> <u>1.d Method and identifier used to attribute an aeroplane operator to the State in accordance with THE MC</u> <u>1.e State</u>
<u>Field 2</u>	<u>Reference details of aeroplane operator Emissions Monitoring Plan</u>	<u>2 Reference to the Emissions Monitoring Plan that is the basis for emissions monitoring that year</u>  <u>Note. – CAAP may require providing reference to updated Emissions Monitoring Plan, if applicable.</u>
<u>Field 3</u>	<u>Information to identify the verification body and Verification Report</u>	<u>3.a Name and contact information of the verification body</u>  <u>3.b Verification Report to be a separate report from aeroplane operator's Emissions Report</u>
<u>Field 4</u>	<u>Reporting year</u>	<u>4. Year during which emissions were monitored</u>

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<u>Field 5</u>	<u>Type and mass of fuel(s) used</u>	<u>5.a Total fuel mass per type of fuel:</u> <ul style="list-style-type: none"> <li>• <u>Jet-A (in tonnes)</u></li> <li>• <u>Jet-A1 (in tonnes)</u></li> <li>• <u>Jet-B (in tonnes)</u></li> <li>• <u>AvGas (in tonnes)</u></li> </ul> <p><u>Note 1. – Above totals to include sustainable aviation fuels.</u></p> <p><u>Note 2.- The aeroplane operator using the ICAO CORSIA CERT, does not need to report Field 5.</u></p>
<u>Field 6</u>	<u>Total number of international flights during the reporting period</u>	<u>6.a Total number of international flights, as defined in THE MC during the reporting period</u> <p><u>Note. - Total (sum of values from Field 7)</u></p>
<u>Field 7</u>	<u>Number of international flights per State pair or aerodrome pair</u>	<u>7.a Number of international flights, per State pair (no rounding), or;</u> <u>7.b Number of international flights, per aerodrome pair (no rounding).</u>
<u>Field 8</u>	<u>CO2 emissions per aerodrome pair or State pair</u>	<u>8.a CO2 emissions from international flights, per State pair (in tonnes); or</u> <u>8.b CO2 emissions from international flights, per aerodrome pair (in tonnes).</u>
<u>Field 9</u>	<u>Scale of data gaps</u>	<u>9.a Per cent of data gaps (according to criteria defined in THE MC and rounded to the nearest 0.1%)</u> <u>9.b Reason for data gaps if per cent of data gaps exceeds the threshold defined in THE MC</u>
<u>Field 10</u>	<u>Aeroplane information</u>	<u>10.a List of aeroplanetypes</u> <u>10.b Aeroplane identifiers used in flight plans' Item 7 during the year for all international flights.. Where</u>

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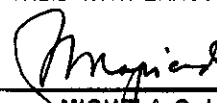
  
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		<p><u>the identifier is based on an ICAO Designator, only the ICAO Designator is to be reported</u></p> <p><u>10.c Information on leased aeroplanes</u></p> <p><u>10.d Average fuel burn ratio (AFBR) for each aeroplane type under 10.a in line with ICAO Aircraft Type Designator Doc. 8643 (in tonnes per hour to 3 decimal places)</u></p> <p><u>Note: - 10.d is only required if the aeroplane operator is using the Fuel Allocation with Block Hour method.</u></p>
<u>Field 11</u>	<u>Eligibility for and use of the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) as per MC</u>	<p><u>11.a Version of the ICAO CORSIA CERT used</u></p> <p><u>11.b Scope of use of the ICAO CORSIA CERT i.e., on all flights or only on the international flights, not subject to offsetting requirements.</u></p>
<p><u>Field 12</u></p> <p><u>Note.- If emissions reductions from the use of sustainable aviation fuel are claimed, see paragraph (b) for supplementary information that is to be provided with the aeroplane operator's Emissions Report.</u></p>	<u>Sustainable aviation fuel Claimed</u>	<p><u>12.a Fuel type (i.e., type of fuel, feedstock and conversion process)</u></p> <p><u>12.b Total mass of the neat sustainable aviation fuel claimed (in tonnes) per fuel type</u></p>
	<u>Emissions Information (per fuel type)</u>	<p><u>12.c Approved Life Cycle Emissions values</u></p> <p><u>12.d Emission reductions claimed from a sustainable aviation fuel (as calculated in accordance with equations as per this regulation and reported in tonnes)</u></p>
	<u>Emissions Reductions (total)</u>	<p><u>12.e Total emissions reductions claimed from the use of all sustainable aviation fuels (in tonnes)</u></p> <p><u>Note. - During the 2019-2020 period, fields 12.a to 12.e are not required.</u></p>

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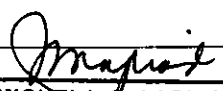
		<u>required as the applicability of offsetting requirements starts on 1 January 2021, there are no offsetting requirements and no emissions reductions from the use of sustainable alternative fuels during the 2019-2020 period.</u>
<u>Field 13</u>	<u>Total CO<sub>2</sub> emissions</u>	<u>13.a Total CO<sub>2</sub> emissions (based on total mass of fuel in tonnes from Field 5 and reported in tonnes)</u>  <u>13.b Total CO<sub>2</sub> emissions from flights subject to offsetting requirements (in tonnes)</u>  <u>13.c Total CO<sub>2</sub> emissions from international flights, and that are not subject to offsetting requirements, (in tonnes)</u>  <u>Note. – During the 2019-2020 period, only fields 13.a is required as the applicability of offsetting requirements starts on 1 January 2021 i.e., there are no State pairs subject to offsetting requirements during the 2019-2020 period.</u>

Note.- CAAP may expand on this list to include additional or more detailed data from aeroplane operators registered

b) Supplementary information to an aeroplane operator's Emissions Report if emissions reductions from the use of each sustainable aviation fuel is being calculated

Note.- The template of a sustainable aviation fuels supplementary information to the Emissions Report (from aeroplane operator to CAAP) is provided in the TGM available on the CAAP's website.

<u>Field #</u>	<u>Data Field</u>	<u>Details</u>
<u>Field 1</u>	<u>Purchase date of the sustainable aviation fuel</u>	CIVIL AVIATION AUTHORITY OF THE PHILIPPINES CERTIFIED PHOTOCOPY (NOT VALID WITH ERASURES/ALTERATION)

  
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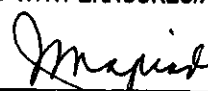
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<u>Field 2</u>	<u>Identification of the producer of the sustainable aviation Fuel</u>	<u>2.a Name of producer of the sustainable aviation fuel</u>  <u>2.b Contact information of the producer of the sustainable aviation fuel</u>
<u>Field 3</u>	<u>Fuel Production</u>	<u>3.a Production date of the sustainable aviation fuel</u>  <u>3.b Production location of the neat sustainable aviation fuel</u>  <u>3.c Batch number of each batch of sustainable aviation fuel</u>  <u>3.d Mass of each batch of sustainable aviation fuel produced</u>
<u>Field 4</u>	<u>Fuel type</u>	<u>4.a Type of fuel such as Jet-A, Jet-A1, Jet-B, AvGas</u>  <u>4.b Feedstock used to create the sustainable aviation fuel</u>  <u>4.c Conversion process used to create the sustainable aviation fuel</u>
<u>Field 5</u>	<u>Fuel Purchased</u>	<u>5.a Proportion of neat sustainable aviation fuel batch purchased ,rounded to the nearest %</u>  <u>Note. - If less than an entire batch of sustainable aviation fuel is purchased.</u>  <u>5.b Total mass of each batch of sustainable aviation fuel purchased (in tonnes)</u>  <u>5.c Mass of neat sustainable aviation fuel purchased (in tonnes)</u>  <u>Note. — Field 5.c is equal to the total for all batches of sustainable aviation fuels reported in Field 5.b.</u>

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<u>Field 6</u>	<u>Evidence that fuel satisfies the CORSIA Sustainability Criteria</u>	<u>i.e., valid sustainability certification document</u>
<u>Field 7</u>	<u>Life cycle emissions values of the sustainable aviation fuel</u>	<u>7.a Default or Actual Life Cycle Emissions Value (LSf) value for given sustainable aviation fuel f, which is equal to the sum of 7.b and 7.c (in gCO<sub>2</sub>e/MJ rounded to the nearest whole number)</u>  <u>7.b Default or Actual Core Life Cycle Assessment (LCA) value for given sustainable aviation fuel f (in gCO<sub>2</sub>e/MJ rounded to the nearest whole number)</u>  <u>7.c Default Induced Land Use Change (ILUC) value for given sustainable aviation fuel f (in gCO<sub>2</sub>e/MJ rounded to the nearest whole number)</u>
	<u>Intermediate purchaser</u>	<u>8.a Name of Intermediate Purchaser</u> <u>8.b Contact information of the intermediate purchaser</u>  <u>Note. — This information would be included in the event that the aeroplane operator claiming emissions reductions from the use of sustainable aviation fuels was not the original purchaser of the fuel from the Producer such as the aeroplane operator purchased fuel from a broker or a distributor. In those cases, this information is needed to demonstrate the complete chain of custody from production to blend point.</u>
<u>Field 9</u>	<u>Party responsible for shipping of the neat sustainable aviation fuel to the fuel blender</u>	<u>9.a Name of party responsible for shipping of the neat sustainable aviation fuel to the fuel blender</u> <u>9.b Contact information of party responsible for shipping of the neat sustainable aviation fuel to the fuel Blender</u>

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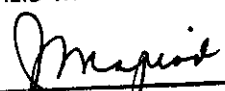
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<u>Field 10</u>	<u>Fuel Blender</u>	<u>10.a Name of the party responsible for blending neat sustainable aviation fuel with conventional aviation fuel</u>  <u>10.b Contact information of the party responsible for blending neat sustainable aviation fuel with conventional aviation fuel</u>
<u>Field 11</u>	<u>Location where neat sustainable aviation fuel is blended with conventional aviation fuel</u>	
<u>Field 12</u>	<u>Date the neat sustainable aviation fuel was received by blender</u>	
<u>Field 13</u>	<u>Mass of neat sustainable aviation fuel received (in tonnes)</u>	<i>Note. - This number may differ from the number in Field 5.c in cases where only a portion of a batch or batches are claimed by the aeroplane operator.</i>
<u>Field 14</u>	<u>Blend ratio of sustainable aviation fuel and conventional aviation fuel (rounded to the nearest %)</u>	
<u>Field 15</u>	<u>Documentation demonstrating that the batch or batches of sustainable aviation fuel were blended into conventional aviation fuel (e.g., the subsequent Certificate of Analysis of the blended fuel)</u>	

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<u>Field 16</u>	<u>Mass of neat sustainable aviation fuel claimed (in tonnes)</u>	
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3). The content of an Emissions Report from CAAP to ICAO shall contain the information listed in paragraphs (a) to (d):

- a) The list of aeroplane operators attributed to the Philippines' and the verification bodies accredited in the Philippines' shall contain the following information:

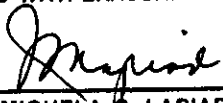
<u>Field #</u>	<u>Data Field</u>	<u>Details</u>
<u>Field 1</u>	<u>List of aeroplane operators attributed to the Philippines</u>	<u>1.a Name and contact information of aeroplane operator</u>  <u>1.b Aeroplane operator Code</u>  <u>1.c Method and identifier used to attribute aeroplane operator to the Philippines in accordance with THE MC</u>
<u>Field 2</u>	<u>List of verification bodies accredited in the State (for a given year of compliance)</u>	<u>2.a State</u> <u>2.b Name of verification body</u>

*Note. – Information on the following fields can be found in the ICAO document entitled; "CORSIA Central Registry (CCR): Information and Data for Transparency" that is available from the ICAO CORSIA website:*

- *List of aeroplane operator attributed to the State; and*
- *List of verification bodies accredited in each State.*

- b) The Emissions Report from CAAP to ICAO for 2019 and 2020 shall contain the following information:

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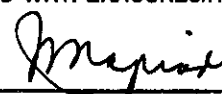
  
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<u>Field #</u>	<u>Data Field</u>	<u>Details</u>
<u>Field 1</u>	<u>Total annual CO<sub>2</sub> emissions per State pair aggregated for all aeroplane operators attributed to the Philippines (in tonnes)</u>	<u>Note. – Include emissions from sustainable aviation fuels, calculated using fuel conversion factor(s) from corresponding conventional aviation fuels, in accordance with this regulation</u>

- c) The Emissions Report from CAAP to ICAO annually after 2021 shall contain the following information:

<u>Field #</u>	<u>Data Field</u>	<u>Details</u>
<u>Field 1</u>	<u>Total annual CO<sub>2</sub> Emissions on each State pair aggregated for all aeroplane operators attributed to the Philippines</u>	<u>1.a Total annual CO<sub>2</sub> emissions on each State pair subject to offsetting requirements, aggregated for all aeroplane operators attributed to the Philippines (in tonnes)</u> <u>1.b Total annual CO<sub>2</sub> emissions on each State pair not subject to offsetting requirements, aggregated for all aeroplane operators attributed to the Philippines (in tonnes)</u>
<u>Field 2</u>	<u>Total annual CO<sub>2</sub> emissions for each aeroplane operator attributed to the Philippines</u>	<u>2.a Total annual CO<sub>2</sub> emissions for each aeroplane operator attributed to the Philippines (in tonnes)</u> <u>2.b Indicate whether the ICAO CORSIA CERT, is used</u>
<u>Field 3</u>	<u>Total aggregated annual CO<sub>2</sub> emissions for all State pairs subject to Offsetting requirements, as defined in AC OF MC, for each aeroplane operator attributed to the Philippines (in tonnes)</u>	

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<u>Field 4</u>	<u>Total aggregated annual CO<sub>2</sub> emissions for all State pairs not subject to offsetting requirements, as defined in AC of MC for each aeroplane operator attributed to the Philippines (in tonnes)</u>	
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Note 1. – Information on the following fields can be found in the ICAO document entitled: “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available from the ICAO CORSIA website:


- a) Total average CO<sub>2</sub> emissions for 2019 and 2020 aggregated for all aeroplane operators on each State pair;
- b) Total annual CO<sub>2</sub> emissions aggregated for all aeroplane operators on each State pair, (with identification of State pairs subject to offsetting requirements such as this regulation in a given year) (Field 1); and
- c) For each aeroplane operator:
  - Aeroplane operator name;
  - State in which aeroplane operator is attributed;
  - Reporting year;
  - Total annual CO<sub>2</sub> emissions (Field 2);
  - Total aggregated annual CO<sub>2</sub> emissions for all State pairs subject to offsetting requirements, and
  - Total aggregated annual CO<sub>2</sub> emissions for all State pairs not subject to offsetting requirements.

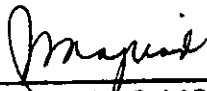
Note 2. – Where CO<sub>2</sub> emissions are based on the ICAO CORSIA CERT, this will be indicated.

Note 3. – All data recognized as confidential in accordance with THE MC shall be aggregated and published by ICAO without attribution to a specific aeroplane operator. All data recognized as confidential in accordance with THE MC shall be aggregated and published by ICAO without attribution to specific State pair, but with distinction between State pairs subject to offsetting requirements, and those not subject to offsetting requirements.

d) The Sustainable aviation fuels supplemental information to the Emissions Report from CAAP to ICAO contain the following information:

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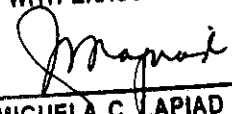
  
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<u>Field #</u>	<u>Data Field</u>	<u>Details</u>	<u>Notes</u>
<u>Field 1</u>	<u>Production</u>	<u>1.a Production year of sustainable aviation fuel claimed</u>  <u>1.b Producer of sustainable aviation fuel</u>	
<u>Field 2</u>	<u>Batch of Fuel of Sustainable Aviation Fuel</u>	<u>2.a Batch number(s) of each sustainable aviation fuel claimed</u>  <u>2.b Total mass of each batch of sustainable aviation fuel claimed (in tonnes)</u>	
<u>Field 3</u>	<u>Sustainable Aviation Fuel Claimed</u>	<u>3.a Fuel types (i.e., type of fuel, feedstock and conversion process)</u> <u>3.b Total mass of the neat sustainable aviation fuel (in tonnes) per fuel type being claimed by all the aeroplane operators attributed to the Philippines</u>	<u>This would provide a total mass for each fuel type being claimed by all aeroplane operators attributed To the Philippines</u>
<u>Field 4</u>	<u>Emissions Information (per fuel type)</u>	<u>4. Total emissions reductions claimed from the use of a sustainable aviation fuel (in tonnes)</u>	
<u>Field 5</u>	<u>Emissions Reductions (total)</u>	<u>5. Total emission reductions claimed by all aeroplane operators attributed to the Philippines from the use of all sustainable aviation fuel use (in tonnes)</u>	CIVIL AVIATION AUTHORITY OF THE PHILIPPINES CERTIFIED PHOTOCOPY (NOT VALID WITH ERASURES/ALTERATION  MIGUELA C. LAPIAD/2-19-18 Records Officer III Central Records and Archives Division

Note. – In order to avoid double claiming of sustainable aviation fuels, information on the following fields can be found in the ICAO document entitled; “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available from the ICAO CORSIA website:

- a) Production year of the sustainable aviation fuel claimed;
- b) Producer of the sustainable aviation fuel claimed;
- c) Type of fuel, feedstock and conversion process for each sustainable aviation fuel claimed;
- d) Batch number(s) of each sustainable aviation fuel claimed; and
- e) e) Total mass of each batch of sustainable aviation fuel claimed.

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## **11.Verification**

Note — The procedures specified in this standard are concerned with the verification requirements in THE MC.

### **1)VERIFICATION BODY**

**a)The verification body shall be accredited to ISO 14065:2013**, and meet the following additional requirements in order to be eligible to verify the Emissions Report, and the Emissions Unit Cancellation Report where applicable, of an aeroplane operator:

Note — The following documents should be used as normative references that provide guidance for the application of THE MC:

- a)Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA);
- b)The International Accreditation Forum (IAF) document entitled, "IAF Mandatory Document for the Application of ISO 14065:2013 (IAF MD 6:2014)"; and
- c)The International Organization for Standardization (ISO) document entitled, "ISO 14066:2011 Greenhouse gases – Competence requirements for greenhouse gas validation team and verification teams".

### **b)Avoidance of conflict of interest (ISO 14065:2013 section 5.4.2)**

i)If the leader of the verification team undertakes six annual verifications for one aeroplane operator, then the leader of the verification team shall take a three consecutive year break from providing verification services to that same aeroplane operator. The six-year maximum period includes any greenhouse gas verifications performed for the aeroplane operator prior to it requiring verification services under THE MC;

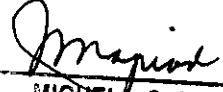
ii)The verification body, and any part of the same legal entity, shall not be an aeroplane operator, the owner of an aeroplane operator or owned by an aeroplane operator;

iii)The verification body shall also be independent from bodies that trade emission units;

iv)The relationship between the verification body and the aeroplane operator shall not be based on common ownership, common governance, common management or personnel, shared resources, common finances and common contracts or marketing;

v)The verification body shall not take over any delegated activities from the aeroplane operator with regard to the preparation of the Emissions Monitoring Plan, the Emissions

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Report (including monitoring of fuel use and calculation of CO<sub>2</sub> emissions) and the Emissions Unit Cancellation Report where applicable;

vi) To enable an assessment of impartiality and independence by the national accreditation body, the verification body shall document how it relates to other parts of the same legal entity.

**c) Management and personnel (ISO 14065:2013 section 6.1)**

i) The verification body shall establish, implement and document a method for evaluating the competence of the verification team personnel against the competence requirements outlined in ISO 14065:2013, ISO 14066:2011 and paragraphs (d), (e) and (f).

ii) The verification body shall maintain records to demonstrate the competency of the verification team and personnel in accordance with paragraph (d).

**d) Competencies of personnel (ISO 14065:2013 section 6.2)**

The verification body shall:

- (aa) identify and select competent team personnel for each engagement;
- (bb) ensure appropriate verification team composition for the aviation engagement;
- (cc) ensure the verification team, at a minimum, includes a team who is responsible for the engagement planning and management of the team;
- (dd) ensure continued competence of all personnel conducting verification activities, including continual professional development and training for verifiers to maintain and/or develop competencies; and
- (ee) conduct regular evaluations of the competence assessment process to ensure that it continues to be relevant for THE MC

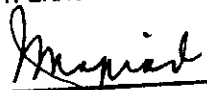
**e) Validation or verification team knowledge (ISO 14065:2013 section 6.3.2)**

The verification team as a whole, and the independent reviewer, shall demonstrate knowledge of:

(aa) the requirements as outlined in THE MC the Assembly Resolution A39-3, the *Environmental Technical Manual* (Doc 9501), Volume IV – *Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*, and any public ICAO explanatory material;

(bb) the verification requirements as outlined in this standard, and *Environmental Technical Manual* (Doc 9501), Volume IV – *Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*, including materiality threshold, verification criteria, verification scope and objectives and the Verification Report preparation and submission requirements;

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(cc) the eligibility criteria for technical exemptions, scope of applicability, State pair phase-in rules, and State pair coverage as outlined in this standard and the Assembly Resolution A39-3;

(dd) the monitoring requirements as outlined in THE MC; and the national requirements in addition to the provisions set out in this MC.

(ii) Where applicable, when conducting the verification of an Emissions Unit Cancellation Report, only (e) (i) (aa), (bb) and (ee) shall be applicable.

**f) Validation or verification team technical expertise (ISO 14065:2013 section 6.3.3)**

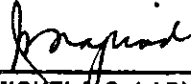
(i) The verification team as a whole, and the independent reviewer, shall demonstrate knowledge in the following technical competencies:

- (aa) general technical processes in the field of civil aviation;
- (bb) aviation fuels and their characteristics, including sustainable aviation fuel;
- (cc) fuel related processes including flight planning and fuel calculation;
- (dd) relevant aviation sector trends or situations that may impact the CO<sub>2</sub> emissions estimate;
- (ee) CO<sub>2</sub> emissions quantification methodologies as outlined in this standard, including assessment of Emissions Monitoring Plans;
- (ff) fuel use monitoring and measurement devices and related procedures for monitoring of fuel use related to greenhouse gas emissions, including procedures and practices for operation, maintenance and calibration of such measurement devices;
- (gg) greenhouse gas information and data management systems and controls, including quality management systems and quality assurance / quality control techniques;
- (hh) aviation related IT systems such as flight planning software or operational management systems;
- (II) knowledge of approved CORSIA Sustainability Certification Schemes relevant for sustainable aviation fuels under THE MC, including certification scopes;
- (jj) Evidence of the above competencies shall include previous, direct professional experience in a technical capacity within the aviation sector, complemented by appropriate training and education credentials; and
- (kk) When conducting the verification of an Emissions Unit Cancellation Report, only (f) (i) (gg) shall be applicable.

**g) Validation or verification team data information auditing (ISO 14065:2013 section 6.3.4)**

(i) The verification team as a whole shall demonstrate detailed knowledge of ISO 14064-3:2006, including demonstrated ability to develop a risk-based verification approach, perform verification procedures including assessing data and information systems and

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controls, collect sufficient and appropriate evidence and draw conclusions based on that evidence.

(ii) Evidence of data and information auditing expertise and competencies shall include previous professional experience in auditing and assurance activities, complemented by appropriate training and education credentials.

**h) Use of contracted validators and verifiers (ISO 14065:2013 section 6.4)**

The verification body shall document roles and responsibilities of the verification personnel, including contracted persons involved in the verification activity.

**i) Outsourcing (ISO 14065:2013 section 6.6)**

(i) The verification body shall not outsource the final decision on the verification and the issuance of the verification statement.

(ii) The independent review shall only be outsourced as long as the outsourced service is appropriate, competent, and covered by the accreditation.

**(j) Confidentiality (ISO 14065:2013 section 7.3)**

The verification body shall ensure it has the express consent of the aeroplane operator prior to submission of the Verified Emissions Report, the Emissions Unit Cancellation Report where applicable, and the Verification Report to the Director. The mechanism for authorizing this consent shall be specified in the contract between the verification body and aeroplane operator.

**(k) Records (ISO 14065:2013 section 7.5)**

The verification body shall keep records on the verification process for a minimum of ten years, including:

(i) client's Emissions Monitoring Plan, Emissions Report and Emissions Unit Cancellation Report where applicable;

(ii) Verification Report and related internal documentation;

(iii) identification of team members and criteria for selection of team; and

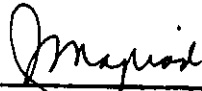
(iv) working papers with data and information reviewed by the team in order to allow for an independent party to assess the quality of the verification activities and conformance with verification requirements.

**(l) Agreement (ISO 14065:2013 section 8.2.3)**

The contract between verification body and aeroplane operator shall specify the conditions for verification by stating:

(i) the scope of verification, verification objectives, level of assurance, materiality

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threshold and relevant verification standards (ISO 14065, ISO 14064-3, THE MC and the Environment Technical Manual);

(ii) amount of time allocated for verification;

(iii) flexibility to change time allocation if this proves necessary because of findings during the verification;

(iv) conditions which have to be fulfilled to conduct the verification such as access to all relevant documentation, personnel and premises;

(v) requirement of the aeroplane operator to accept the audit as a potential witness audit by national accreditation body's assessors;

(vi) requirement of the aeroplane operator to authorize the release of the Emissions Report, the Emissions Unit Cancellation Report, where applicable, and the Verification Report by the verification body to CAAP; and

(vii) liability coverage.

## **2) VERIFICATION OF EMISSIONS REPORT AND WHERE APPLICABLE THE EMISSIONS UNIT CANCELLATION REPORT**

The verification team shall conduct the verification according to ISO 14064-3:2006, and the following additional requirements:

### **(a) Level of assurance (ISO 14064-3:2006 section 4.3.1)**

A reasonable level of assurance shall be required for all verifications under this standard.

### **(b) Objectives (ISO 14064-3:2006 section 4.3.2)**

(i) When conducting the verification of an Emissions Report, the verification body shall perform sufficient procedures to conclude whether:

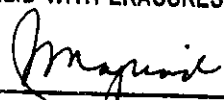
(aa) the greenhouse gas assertion is materially fair and an accurate representation of emissions over the period of the Emissions Report and is supported by sufficient and appropriate evidence;

(bb) the aeroplane operator has monitored, quantified and reported its emissions over the period of the Emissions Report in accordance with THE MC and the approved Emissions Monitoring Plan;

(cc) the aeroplane operator has correctly applied the method of flight attribution documented in the approved Emissions Monitoring Plan and in accordance with THE MC, to ensure a correct attribution of leased aeroplane and international flights, operated by other aeroplane operators under the same corporate structure;

(dd) the stated amount of emission reductions from the HES of

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sustainable aviation fuels is materially fair and an accurate representation of emission reductions over the reporting period, and is supported by sufficient and appropriate internal and external evidence;

(ee) the claimed batches of sustainable aviation fuels have not also been claimed by the aeroplane operator under any other voluntary or mandatory schemes it has participated in (where the emission reductions from sustainable aviation fuels may be claimed), during the current compliance period, as well as the compliance period immediately preceding it; and

(ff) the aeroplane operator has monitored, calculated and reported its emission reductions associated from the use of sustainable aviation fuels over the period of the reporting period in accordance with this standard.

(ii) When conducting the verification of an Emissions Unit Cancellation Report: *Reserved*

**(c) Scope (ISO 14064-3:2006 section 4.3.4)**

(i) When conducting the verification of an Emissions Report, the scope of the verification shall reflect the period of time and information covered by the Report and the sustainable aviation fuels claim(s) where applicable. This includes:

(aa) CO<sub>2</sub> emissions from aeroplane fuel monitoring methods, calculated in accordance with THE MC; and

(bb) Emissions reductions from the use of sustainable aviation fuel(s).

(ii) The verification boundary associated with the review of the sustainable aviation fuel claim(s) in the Emissions Report shall include the following:

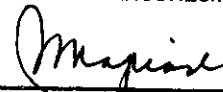
(aa) Any internal aeroplane operator procedures for sustainable aviation fuels, including aeroplane operator controls to ensure the claimed sustainable aviation fuels satisfies the CORSIA Sustainability Criteria;

(bb) Checks for double claiming are limited to the specific aeroplane operator. Any findings outside of this scope are not relevant for the verification statement, however they should still be included in the Verification Report for further consideration by CAAP;

(cc) Assessment of verification risk with appropriate changes to the verification plan; and

(dd) Assessment of whether there is sufficient access to relevant internal and external information to obtain sufficient confidence in each sustainable aviation fuel

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claim. Where evidence of the sustainability or the size of the sustainable aviation fuels claim is considered either inappropriate or insufficient, further information should be sought directly from the fuel producer with direct access facilitated through the aeroplane operator.

(iii) When conducting the verification of an Emissions Unit Cancellation Report,

**(d) Materiality (ISO 14064-3:2006 section 4.3.5)**

(i) When conducting the verification of an Emissions Report, the verification body shall apply the following materiality thresholds:

(aa) of 2 per cent for aeroplane operators with annual emissions on international flights, as defined in THE MC above 500 000 tonnes; and

(bb) of 5 per cent for aeroplane operators with annual emissions on international flights, as defined in THE MC equal or less than 500 000 tonnes of CO<sub>2</sub>.

(ii) When conducting the verification of an Emissions Report, the over and understatements in (i) shall be allowed to balance out in both cases.

**(e) General (ISO 14064-3:2006 section 4.4.1)**

Prior to the development of the verification approach, the verification body shall assess the risk of misstatements and non-conformities and their likelihood of a material effect on the basis of a strategic analysis of the aeroplane operator's greenhouse gas emissions information<sup>1</sup>. Depending on the information obtained during the verification, the verification body shall revise the risk assessment and modify or repeat the verification activities to be performed.

**(f) Validation or verification (ISO 14064-3:2006 section 4.4.2)**

(i) The verification team shall prepare the verification plan on the basis of the strategic analysis and assessment of risks. The verification plan shall include a description of the verification activities for each variable that has a potential impact on the reported emissions. The verification team shall consider the assessment of risk, and the requirement to deliver a verification opinion with reasonable assurance, when determining sample size.

(ii) The verification plan shall include the following:


(aa) verification team members, roles, responsibilities and qualifications;

(bb) any external resources required;

(cc) schedule of verification activities; and

(dd) sampling plan, including the processes, controls and information to be verified and details of the risk assessment conducted to identify these.

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**(g) Sampling plan (ISO 14064-3:2006 section 4.4.3)**

(i) The Emissions Report sampling plan shall include the following:

- (aa) number and type of records and evidence to be examined;
- (bb) methodology used to determine a representative sample; and
- (cc) justification for the selected methodology.

(ii) When conducting the verification of an Emissions Unit Cancellation Report, the verification body shall not rely on sampling.

**(h) Assessment of GHG data and information (ISO 14064-3:2006 section 4.6)**

(i) The verification team shall confirm that the Emissions Report data has been collected in accordance with the approved Emissions Monitoring Plan and monitoring requirements.

(ii) In accordance with the Emissions Report sampling plan, the verification body shall carry out substantive data testing consisting of analytical procedures and data verification to assess the plausibility and completeness of data. The verification team shall, as a minimum, assess the plausibility of fluctuations and trends over time or between comparable data items as well as identify and assess immediate outliers, unexpected data, anomalies, and data gaps.

(iii) Depending on the outcome of Emissions Report data testing and assessment, the assessment of risk, verification and sampling plans shall be amended, where necessary.

**(i) Evaluation of the GHG assertion (ISO 14064-3:2006 section 4.8)**

(i) The verification body shall use an independent reviewer not involved in the verification activities to assess the internal verification documentation, and the Verification Report, prior to its submission to the aeroplane operator and CAAP


(ii) The scope of the independent review includes the complete verification process and shall be recorded in the internal verification documentation.

(iii) The independent review shall be performed to ensure that the verification process has been conducted in accordance with ISO 14065:2013, ISO 14064-3:2006 and this standard, and that the evidence gathered is appropriate and sufficient to enable the verification body to issue a Verification Report with reasonable assurance.

**(j) Validation and Verification statement (ISO 14064-3:2006 section 4.9)**

(i) The verification body shall submit a copy of the Verification Report to the aeroplane operator. Upon authorization by the aeroplane operator, the verification body shall forward a copy of the Verification Report together with the Emissions Report, where applicable, to the Civil Aviation Authority.

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Emissions Unit Cancellation Report, or both, to CAAP.

The Verification Report shall include:

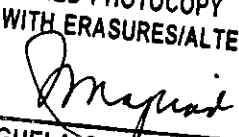
- (aa) names of the verification body and verification team members
- (bb) time allocation (including any revisions and dates);
- (cc) scope of the verification;
- (dd) main results of impartiality and avoidance of conflict of interest assessment;
- (ee) criteria against which the Emissions Report was verified;
- (ff) aeroplane operator information and data used by the verification body to cross-check data and carry out other verification activities;
- (gg) main results of the strategic analysis and assessment of risk;
- (hh) description of verification activities undertaken, where each was undertaken (on-site vs off-site) and results of checks made on the O2 emissions information system and controls;
- (ii) description of data sampling and testing conducted, including records or evidence sampled, sample size, and sampling method(s) used;
- (jj) the results of all data sampling and testing, including cross-checks;
- (kk) compliance with the Emissions Monitoring Plan;
- (ll) any non-compliances of the Emissions Monitoring Plan with this standard;
- (mm) non-conformities and misstatements identified (including a description of how these have been resolved);
- (nn) conclusions on data quality and materiality;
- (oo) conclusions on the verification of the Emissions Report;
- (pp) where applicable, conclusions on the verification of the Emissions Unit Cancellation Report;
- (qq) justifications for the verification opinion made by the verification body;
- (rr) results of the independent review and the name of the independent reviewer; and
- (ss) concluding verification statement.

(ii) Conducting the verification of an Emissions Unit Cancellation Report, (Reserved)

(iii) The verification body shall provide a conclusion on each of the verification objectives listed in (a), as applicable, in the concluding verification statement.

(iv) When conducting the verification of an Emissions Report or an Emissions Unit Cancellation Report, the verification body shall choose between two types of verification opinion statements, either 'verified as satisfactory' or 'verified as not satisfactory'. If the Report includes non-material misstatements and non-material non-conformities, the Report shall be 'verified as satisfactory with comments', specifying the misstatements and

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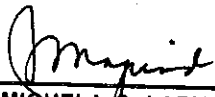
non-conformities. If the Report contains material misstatements and material non-conformities, or if the scope of the verification is too limited or the verification body is not able to obtain sufficient confidence in the data, then the Report shall be 'verified as not satisfactory'.

**(K) Validation or verification records (ISO 14064-3:2006 section 4.10)**

On request of CAAP, the verification body shall disclose the internal verification documentation on a confidential basis to CAAP where issues that may render a previously issued Verification Statement invalid or inaccurate are brought to the attention of the verification body, then it shall notify to CAAP.

  
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