

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	



Brunei Department of Civil Aviation
Brunei Darussalam
www.mtic.gov.bn/dca

Brunei Aviation Requirements

BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

Table of Contents

TABLE OF CONTENTS	2
INTRODUCTION	4
DEFINITIONS.....	5
LIST OF EXTERNAL DOCUMENTATIONS	7
CHAPTER 1 — GENERAL PROVISIONS.....	8
<i>APPLICABILITY.....</i>	<i>8</i>
<i>ATTRIBUTION OF AN AEROPLANE OPERATOR TO BRUNEI DARUSSALAM</i>	<i>8</i>
<i>ATTRIBUTION OF INTERNATIONAL FLIGHTS TO AN AEROPLANE OPERATOR.....</i>	<i>9</i>
<i>RECORD KEEPING</i>	<i>9</i>
CHAPTER 2 — MONITORING OF CO₂ EMISSIONS AND CORSIA ELIGIBLE FUELS	10
<i>APPLICABILITY.....</i>	<i>10</i>
<i>EMISSIONS MONITORING PLAN</i>	<i>10</i>
<i>MONITORING OF CO₂ EMISSIONS</i>	<i>11</i>
<i>2019-2020 PERIOD</i>	<i>11</i>
<i>2021- 2035 PERIOD</i>	<i>12</i>
<i>CALCULATION OF CO₂ EMISSIONS FROM AEROPLANE FUEL USE</i>	<i>13</i>
<i>MONITORING OF CORSIA ELIGIBLE FUEL CLAIMS.....</i>	<i>13</i>
CHAPTER 3: REPORTING OF CO₂ EMISSIONS AND CORSIA ELIGIBLE FUELS	15
<i>REPORTING OF CO₂ EMISSIONS</i>	<i>15</i>
<i>AEROPLANE OPERATOR’S EMISSIONS REPORT</i>	<i>15</i>
<i>TREATMENT OF CONFIDENTIAL INFORMATION.....</i>	<i>16</i>
<i>REPORTING OF CORSIA ELIGIBLE FUELS</i>	<i>16</i>
<i>BRUNEI DCA REPORTING TO ICAO.....</i>	<i>17</i>
CHAPTER 4: VERIFICATION OF CO₂ EMISSIONS AND CORSIA ELIGIBLE FUELS	18
<i>VERIFICATION OF AN EMISSIONS REPORT AND SUBMISSION OF RELEVANT REPORTS</i>	<i>18</i>
<i>REQUIREMENTS FOR A VERIFICATION BODY AND NATIONAL ACCREDITATION BODY</i>	<i>19</i>
<i>VERIFICATION OF CORSIA ELIGIBLE FUELS.....</i>	<i>19</i>
<i>DATA GAPS AND ERROR CORRECTION</i>	<i>19</i>
CHAPTER 5: CO₂ OFFSETTING REQUIREMENTS FROM INTERNATIONAL FLIGHTS AND EMISSIONS REDUCTIONS FROM THE USE OF CORSIA ELIGIBLE FUELS	22
<i>CALCULATION OF ANNUAL OFFSETTING REQUIREMENTS</i>	<i>22</i>
<i>ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2021 - 2023</i>	<i>23</i>
<i>ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2024 - 2032</i>	<i>23</i>
<i>ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2033 - 2035</i>	<i>24</i>
<i>CALCULATION OF EMISSIONS REDUCTIONS FROM THE USE OF CORSIA ELIGIBLE FUELS</i>	<i>24</i>
<i>CALCULATION OF TOTAL FINAL OFFSETTING REQUIREMENTS.....</i>	<i>25</i>
CHAPTER 6: CORSIA ELIGIBLE EMISSIONS UNITS	27
<i>CANCELLATION OF CORSIA ELIGIBLE EMISSIONS UNITS.....</i>	<i>27</i>
<i>REPORTING ON THE CANCELLATION OF CORSIA ELIGIBLE EMISSIONS UNIT</i>	<i>28</i>
<i>AEROPLANE OPERATOR’S EMISSIONS UNIT CANCELLATION REPORT</i>	<i>28</i>
<i>BRUNEI DARUSSALAM REPORTING TO ICAO.....</i>	<i>29</i>
APPENDIX 1: CONTENT OF AN EMISSIONS MONITORING PLAN.....	30
APPENDIX 2: FUEL USE MONITORING METHODS	37

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

APPENDIX 3: CONTENT OF AN EMISSIONS REPORT FROM AEROPLANE OPERATOR TO BRUNEI DCA
..... 44

APPENDIX 4: SUPPLEMENTARY INFORMATION TO AN AEROPLANE OPERATOR’S EMISSIONS REPORT IF EMISSIONS REDUCTIONS FROM THE USE OF EACH CORSIA ELIGIBLE FUEL BEING CLAIMED 47

APPENDIX 5: EMISSIONS REPORT FROM A STATE TO ICAO FOR 2019 AND 2020..... 50

APPENDIX 6: EMISSIONS REPORT FROM BRUNEI DCA TO ICAO ANNUALLY AFTER 2021 51

APPENDIX 7: CORSIA ELIGIBLE FUELS SUPPLEMENTARY INFORMATION TO THE EMISSIONS REPORT FROM BRUNEI DCA TO ICAO 52

APPENDIX 8: EMISSIONS UNIT CANCELLATION REPORT FROM AEROPLANE OPERATORS TO BRUNEI DCA 53

APPENDIX 9: CONTENT OF EMISSIONS UNIT CANCELLATION REPORT FROM BRUNEI DCA TO ICAO
..... 55

APPENDIX 10: REQUIREMENTS FOR CONDUCTING THE VERIFICATION 56

APPENDIX 11: REQUIREMENTS FOR A VERIFICATION BODY AND NATIONAL ACCREDITATION BODY
..... 65

BRUNEI DCA

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

INTRODUCTION

The Council, during its 214th session in June 2018, adopted the first edition of Annex 16, Volume IV to the Convention on International Civil Aviation, which contains Standards and Recommended Practices (SARPs) for the implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA). The applicability date of the first edition of Annex 16, Volume IV is 1 January 2019 whereas CORSA Offsetting requirements are applicable beginning 1 January 2021.

The Council, during its 228th Session in March 2023, adopted Amendment 1 to Annex 16, Volume IV which, to the extent it becomes effective, will become applicable on 1 January 2024 as the second edition of Annex 16, Volume IV.

The first version of this BAR (issued on 19 December 2018) drew upon Annex 16, Volume IV and the first edition of ICAO Doc 9501, *Environmental Technical Manual (ETM)*, Volume IV – *Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)*, and aimed at supporting CORSA implementation for the period 2019 – 2023.

The current version of this document draws upon the second edition of Annex 16, Volume IV and the third edition of ICAO Doc 9501, Volume IV, and aim at supporting CORSA implementation for the duration of the scheme.

The requirements presented herewith **cover:**

- i) CORSA's administrative requirements;
- ii) Monitoring, Reporting and Verification (MRV) requirements including Emissions Monitoring Plan and CO₂ emissions monitoring requirements;
- iii) Reporting of CO₂ emissions and Emissions Report;
- iv) Verification requirements;
- v) Offsetting requirements and emissions units.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

DEFINITIONS

Administrative partnership. Delegation of administering tasks in these Requirements from one State to another State(s).

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome pair. A group of two aerodromes composed of a departing aerodrome and an arrival aerodrome.

Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Aeroplane owner. Person(s), organization(s) or enterprise(s) identified either through Items 4a and 4b on the certificate of registration of an aeroplane (provided that the selected basis of registration be “ownership of aircraft”), or otherwise through Item 5 of the said certificate.

Air operator certificate (AOC). A certificate authorizing an operator to carry out specified commercial air transport operations.

Conversion process. A type of technology used to convert a feedstock into aviation fuel.

CORSA eligible fuel. A CORSA sustainable aviation fuel or a CORSA lower carbon aviation fuel, which an operator may use to reduce their offsetting requirements.

CORSA lower carbon aviation fuel. A fossil-based aviation fuel that meets the CORSA Sustainability Criteria under this Volume.

CORSA sustainable aviation fuel. A renewable or waste-derived aviation fuel that meets the CORSA Sustainability Criteria under these Requirements.

Feedstock. A type of unprocessed raw material used for the production of aviation fuel.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Fuel uplift. 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. 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).

Note. – Latitude and longitude coordinates of aerodromes can be obtained from the ICAO Location Indicators database.

National accreditation body. A body authorized by a State which attests that a verification body is competent to provide specific verification services.

New entrant. Any aeroplane operator that commences an aviation activity falling within the scope of this Volume on 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

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

operator.

Notifying State. 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.

Operator. The person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Pathway. A specific combination of feedstock and conversion process used for the production of aviation fuel.

Reporting period. A period which commences on 1 January and finishes 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. A group of two States composed of a departing State or its territories and an arrival State or its territories.

Verification of report. An independent, systematic and sufficiently documented evaluation process of an emissions report and, when required, a cancellation of eligible emissions units report.

Verification body. A legal entity that performs the verification of an Emissions Report and, when required, an Emissions Unit Cancellation Report, as an accredited independent third impartial party.

Verification team. A group of verifiers, or a single verifier that also qualifies as a team leader, belonging to a verification body conducting the verification of an Emissions Report and, when required, an Emissions Unit Cancellation Report. The team can be supported by technical experts.

Verification report. A document, drafted by the verification body, containing the verification statement opinion and required supporting information.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

LIST OF EXTERNAL DOCUMENTATIONS

TITLE / DOCUMENTATION	EXTERNAL ORGANIZATION	PUBLICATION DATE
IAF MD 6:2014 IAF Mandatory Document for the application of ISO 14065:2013	IAF	2014
ISO 14064-3:2019 Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements	ISO	2019
ISO/IEC 17029:2019 Conformity assessment – General principles and requirements for validation and verification bodies	ISO	2019
ISO 14065:2020 General principles & requirements for bodies validating and verifying environmental information	ISO	2020
ISO/IEC 17011:2017 Conformity assessment – Requirements for accreditation bodies accrediting conformity assessment bodies	ISO	2017
ISO 14066:2011 Greenhouse gases – Competence requirements for greenhouse gas validation team and verification teams	ISO	2011
ISO/IEC 17011:2004 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition	ISO	2004

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

CHAPTER 1 — GENERAL PROVISIONS

APPLICABILITY

- 1.1. This Chapter shall be applicable to each aeroplane operator attributed to BRUNEI DARUSSALAM according to the approach in 1.2.

ATTRIBUTION OF AN AEROPLANE OPERATOR TO BRUNEI DARUSSALAM

- 1.2. The aeroplane operator is considered attributed to Brunei Darussalam under this Requirement in the following cases:
- (a) **ICAO Designator:** Where the aeroplane operator has an International Civil Aviation Organization (ICAO) Designator, which is notified by Brunei Darussalam;
 - (b) **Air operator certificate:** Where the aeroplane operator does not possess an ICAO Designator, but has a valid air operator certificate (or equivalent) issued by Brunei Darussalam; or
 - (c) **Place of judicial registration:** Where the aeroplane operator does not possess an ICAO Designator or air operator certificate, but is registered as juridical person in Brunei Darussalam. This also applies where the aeroplane operator is a natural person having residence and registration in Brunei Darussalam.
- 1.3. If the aeroplane operator changes its ICAO Designator, AOC (or equivalent) or place of juridical registration, and is subsequently attributed to another State, but it is not establishing a new entity or a subsidiary, then this other State becomes the State to which the aeroplane operator fulfills its requirements under CORSIA at the start of the next compliance period.
- 1.4. BRUNEI DCA shall ensure the correct attribution of an aeroplane operator according to the approach in 1.2.
- 1.5. The aeroplane operator with a wholly owned subsidiary aeroplane operator that is legally registered in BRUNEI can be treated as a single consolidated aeroplane operator liable for compliance with these requirements, subject to the approval of BRUNEI DCA. Evidence shall be provided in the aeroplane operator's Emissions Monitoring Plan to demonstrate that the subsidiary aeroplane operator is wholly owned.
- 1.6. BRUNEI DCA shall use the CORSIA Central Registry (CCR) to submit to ICAO a list of aeroplane operators which are attributed to it by 30 April 2019, and annually by 30 November thereafter. BRUNEI DCA may submit updates to this list to ICAO on a more frequent basis.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

ATTRIBUTION OF INTERNATIONAL FLIGHTS TO AN AEROPLANE OPERATOR

- 1.7. The aeroplane operator shall identify international flights that are attributed to it according to the approach in 1.8.
- 1.8. A specific international flight shall be attributed to the aeroplane operator as follows:
- (a) **ICAO Designator:** When Item 7 (aircraft identification) of the flight plan contains the ICAO Designator, that flight shall be attributed to the aeroplane operator that has been assigned this Designator;
 - (b) **Registration marks:** When Item 7 (aircraft identification) of the flight plan contains the nationality or common mark, and registration mark of an aeroplane that is explicitly listed in an air operator certificate (or equivalent) issued by BRUNEI, that flight shall be attributed to the aeroplane operator that holds the air operator certificate (or equivalent); or
 - (c) **Other:** When the aeroplane operator of a flight has not been identified via (a) or (b), that flight shall be attributed to the aeroplane owner who shall then be considered the aeroplane operator.
- 1.9. Upon request by BRUNEI DCA, owners of aeroplanes registered in BRUNEI shall provide all information necessary to identify the actual aeroplane operator of a flight.
- 1.10. The aeroplane operator may delegate the administrative requirements of this Requirement to a third party contractor. The third party contractor may not also conduct verification services for the aeroplane operator as prescribed in Chapter 4 and 6. Liability for compliance shall remain with the aeroplane operator in all situations.

[Note - The role of the authority, administrative processes and details on forming bilateral agreements between states is not included here and is referred to in Annex 16, Volume IV.](#)

RECORD KEEPING

- 1.11. The aeroplane operator shall keep records relevant to demonstrating compliance with the requirements for a period of 10 years.
- 1.12. BRUNEI DCA shall keep records relevant to the aeroplane operator's CO₂ emissions per State pair for 2019 in order to calculate the aeroplane operator's offsetting requirements during the 2033-2035 compliance period in accordance with 5.9 – 5.11.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

CHAPTER 2 — MONITORING OF CO₂ EMISSIONS AND CORSA ELIGIBLE FUELS

APPLICABILITY

- 2.1. This Chapter shall be applicable to each aeroplane operator attributed to Brunei Darussalam that produces annual CO₂ emissions greater than 10 000 tonnes from the use of an aeroplane(s) with a maximum certificated take-off mass greater than 5 700 kg conducting international flights on or after 1 January 2019, with the exception of humanitarian, medical and firefighting flights.
- 2.2. This Chapter shall not be applicable to international flights preceding or following a humanitarian, medical or firefighting flight provided such flights were conducted with the same aeroplane, and were required to accomplish the related humanitarian, medical or firefighting activities or to reposition thereafter the aeroplane for its next activity. The aeroplane operator shall provide supporting evidence of such activities to the verification body or, upon request, to Brunei DCA.
- 2.3. This Chapter shall be applicable to a new entrant aeroplane operator attributed to BRUNEI from the year after it meets the requirements in 2.1 and 2.2.

EMISSIONS MONITORING PLAN

- 2.4. The aeroplane operator shall submit an Emissions Monitoring Plan to Brunei DCA by 28 February 2019.
- 2.5. The Emissions Monitoring Plan shall contain the information as defined in Appendix 1.
- 2.6. The aeroplane operator shall submit the Emissions Monitoring Plan to Brunei DCA by filling in and completing the Emissions Monitoring Plan template, that is available on: <https://www.icao.int/environmental-protection/CORSA/Pages/Templates.aspx>
- 2.7. Brunei DCA shall engage with the aeroplane operator to resolve any outstanding issues identified in an Emissions Monitoring Plan, and the aeroplane operator's Emissions Monitoring Plan shall be approved by Brunei DCA by 30 April 2019.
- 2.8. Brunei DCA shall decide on the level of aggregation (i.e., State pair or aerodrome pair) for which an aeroplane operator shall report the number of international flights and CO₂ emissions, and Brunei DCA shall inform the aeroplane operator on the level of aggregation during the approval process for the Emissions Monitoring Plan.
- 2.9. A new entrant aeroplane operator shall submit an Emissions Monitoring Plan to Brunei DCA within three months of falling within the scope of applicability of this Chapter.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 2.10. An aeroplane operator that falls within the scope of applicability of this Chapter after 1 January 2021 for the first time without qualifying as a new entrant shall submit an Emissions Monitoring Plan within three months of falling within the scope of applicability from international flights and Brunei DCA shall approve it within two months of receiving a complete Emissions Monitoring Plan. If the aeroplane operator falls within the scope of applicability of this Chapter near the end of year y , or does not realise that it has fallen into scope until the beginning of year $y + 1$, the aeroplane operator shall engage with Brunei DCA as soon as possible.
- 2.11. The aeroplane operator shall resubmit the Emissions Monitoring Plan for approval if a material change is made to the information contained within the Emissions Monitoring Plan.
- 2.12. The aeroplane operator shall inform BRUNEI DCA of changes that would affect BRUNEI DCA's oversight (e.g., change in corporate name or address), even if the changes do not fall within the definition of a material change.

MONITORING OF CO₂ EMISSIONS

- 2.13. The aeroplane operator shall monitor and record its fuel use from international flights in accordance with an eligible monitoring method.
- 2.14. An aeroplane operator's fuel use monitoring method shall be submitted for approval by Brunei DCA.
- 2.15. Following approval of the Emissions Monitoring Plan, the aeroplane operator shall use the same eligible monitoring method for the entire compliance period.

2019-2020 PERIOD

- 2.16. The aeroplane operator with annual CO₂ emissions from international flights under the applicability of this Chapter, greater than or equal to 500 000 tonnes shall use a Fuel Use Monitoring Method as described in Appendix 2.
- 2.17. The aeroplane operator with annual CO₂ emissions from international flights under the applicability of this Chapter, of less than 500 000 tonnes shall use either a Fuel Use Monitoring Method or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT).
- 2.18. If the aeroplane operator's annual CO₂ emissions from international flights increases above the threshold of 500 000 tonnes in 2019, Brunei DCA shall permit, at its discretion, the aeroplane operator to continue to use the chosen monitoring method during 2020.
- 2.19. If the aeroplane operator does not have an approved Emissions Monitoring Plan as of 1 January 2019, it shall monitor and record its CO₂ emissions in accordance with

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

the eligible monitoring method outlined in the Emissions Monitoring Plan that it will submit, or has submitted, to Brunei DCA.

- 2.20. If the aeroplane operator's Emissions Monitoring Plan is determined to be incomplete and/or inconsistent with the eligible Fuel Use Monitoring Method, then Brunei DCA shall, at its discretion, approve a different eligible Fuel Use Monitoring Method within the Emissions Monitoring Plan for a period lasting no later than 30 June 2019.
- 2.21. If the aeroplane operator does not have sufficient information to use a Fuel Use Monitoring Method, Brunei DCA shall, at its discretion, approve the use of the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) for a period lasting no later than 30 June 2019.

2021- 2035 PERIOD

- 2.22. The aeroplane operator with annual CO₂ emissions from international flights subject to offsetting requirements of greater than or equal to 50 000 tonnes, shall use a Fuel Use Monitoring Method as described in Appendix 2 for these flights. For international flights not subject to offsetting requirements the aeroplane operator shall use either a Fuel Use Monitoring Method, or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT).
- 2.23. The aeroplane operator, with annual CO₂ emissions from international flights subject to offsetting requirements of less than 50 000 tonnes, shall use either a Fuel Use Monitoring Method or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT).
- 2.24. If the aeroplane operator's annual CO₂ emissions from international flights subject to offsetting requirements increases above the threshold of 50 000 tonnes in a given year (y), and also in the following year (y+1), the aeroplane operator shall submit an updated Emissions Monitoring Plan by 30 September of year (y+2). The aeroplane operator shall change to a Fuel Use Monitoring Method, as described in Appendix 2, on 1 January of year (y+3).
- 2.25. If the aeroplane operator's annual CO₂ emissions from international flights subject to offsetting requirements decreases below the threshold of 50 000 tonnes in a given year (y), and also in the following 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 Emissions Monitoring Plan by 30 September of year (y+2).
- 2.26. The aeroplane operator that falls under the applicability of this Chapter after 1 January 2021 for the first time without qualifying as a new entrant may use either a Fuel Use Monitoring Method or the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), in the year when it falls under the applicability of this Chapter (year y). If the aeroplane operator does not have sufficient information to use a Fuel Use Monitoring Method, BRUNEI DCA shall, at its discretion, approve the use of the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) for a period lasting no

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

later than 30 June in the year after the aeroplane operator falls under the applicability of this Article (year y + 1).

CALCULATION OF CO₂ EMISSIONS FROM AEROPLANE FUEL USE

- 2.27. The aeroplane operator shall apply a fuel density value to calculate fuel mass where the amount of fuel uplift is determined in units of volume.
- 2.28. The aeroplane operator shall record the fuel density that is used for operational and safety reasons. Fuel density may be an actual or a standard value of 0.8 kg per litre. The aeroplane operator shall detail the procedure for informing the use of actual or standard density in the Emissions Monitoring Plan along with a reference to the relevant aeroplane operator documentation.
- 2.29. The aeroplane operator using a Fuel Use Monitoring Method shall determine the CO₂ emissions from international flights using the following equation:

$$CO_2 = \sum_f M_f * FCF_f$$

where:

- CO_2 = CO₂ 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 CO₂/kg fuel) for Jet-A fuel/Jet-A1 fuel, TS-1 fuel, or No. 3 Jet fuel and 3.10 (in kg CO₂/kg fuel) for AvGas or Jet-B fuel.

***Note** – For the purpose of calculating CO₂ emissions, the mass of fuel used includes all aviation fuels assuming that all fuels used are conventional fuels.*

MONITORING OF CORSA ELIGIBLE FUEL CLAIMS

- 2.30. The aeroplane operator that intends to claim for emissions reductions from the use of CORSA eligible fuels shall use a CORSA eligible fuel that meets the CORSA Sustainability Criteria as defined within the ICAO document entitled “CORSA Sustainability Criteria for CORSA Eligible Fuels” that is available on the ICAO CORSA website.
- 2.31. The aeroplane operator that intends to claim for emissions reductions from the use of CORSA eligible fuels shall only use CORSA eligible fuels from fuel producers that are certified by an approved Sustainability Certification Scheme included in the ICAO document entitled “CORSA Approved Sustainability Certification Schemes”, that is

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

available on the ICAO CORSIA website. Such certification schemes meet the requirements included in the ICAO document entitled “CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes”, that is available on the ICAO CORSIA website.

- 2.32. If the aeroplane operator cannot demonstrate the compliance of the CORSIA eligible fuel with the CORSIA Sustainability Criteria, then the fuel shall not be accounted for as CORSIA eligible fuel.

***Note 1** — The provisions of this Chapter consider that aviation fuel supply chains are not segregated at aerodromes, and that CORSIA eligible fuels will be typically co-mingled at various points in the fuel supply infrastructure (e.g., pipelines, storage terminals, aerodrome fuel storage systems). The CORSIA eligible fuels purchased by a particular aeroplane operator may not be physically used in its aeroplane, and it will not be feasible to determine the specific CORSIA eligible fuel content at the point of uplift in an aeroplane. Claims of emissions reductions from the use of CORSIA eligible fuels by an aeroplane operator are based on mass of CORSIA eligible fuels according to purchasing and blending records.*

***Note 2** — The emissions reductions from the use of a CORSIA eligible fuel are calculated in the context of the calculation of the CO₂ offsetting requirements in Chapter 5 of this document. These calculations use the approved life cycle emissions value (LS_{CEF}) for the CORSIA eligible fuel. Information on emissions reductions from using CORSIA eligible fuel is included in the aeroplane operator’s Emissions Report.*

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

CHAPTER 3: REPORTING OF CO₂ EMISSIONS AND CORSA ELIGIBLE FUELS

- 3.1 This Chapter shall be applicable to each aeroplane operator attributed to BRUNEI that produces annual CO₂ emissions greater than 10 000 tonnes from the use of an aeroplane(s) with a maximum certificated take-off mass greater than 5 700 kg conducting international flights on or after 1 January 2019, with the exception of humanitarian, medical and firefighting flights.
- 3.2 This Chapter shall not be applicable to international flights preceding or following a humanitarian, medical or firefighting flight provided such flights were conducted with the same aeroplane, and were required to accomplish the related humanitarian, medical or firefighting activities or to reposition thereafter the aeroplane for its next activity. The aeroplane operator shall provide supporting evidence of such activities to the verification body or, upon request, to BRUNEI DCA.
- 3.3 This Chapter shall be applicable to a new entrant aeroplane operator attributed to Brunei Darussalam from the year after it meets the requirements in 3.1 and 3.2.

REPORTING OF CO₂ EMISSIONS

CO₂ emissions occurred during Reporting periods of 2019 and 2020

- 3.4 The aeroplane operator shall submit to Brunei DCA a copy of the verified Emissions Report and a copy of the associated Verification Report by 31 May in the calendar year, which follows the reporting period.
- 3.5 When the aeroplane operator reports 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.

CO₂ emissions occurred during Reporting periods of 2021-2035

- 3.6 The aeroplane operator shall submit to Brunei DCA a copy of the verified Emissions Report and a copy of the associated Verification Report by 30 April in the calendar year, which follows the reporting period.

AEROPLANE OPERATOR'S EMISSIONS REPORT

- 3.7 The Emissions Report shall include information contained in Appendix 3.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 3.8 The aeroplane operator shall submit the Emissions Report to Brunei DCA by filling in and completing the Emissions Report template, that is available on: <https://www.icao.int/environmental-protection/CORSIA/Pages/Templates.aspx>
- 3.9 An aeroplane operator’s Emissions Report shall be submitted for approval by Brunei DCA.

TREATMENT OF CONFIDENTIAL INFORMATION

- 3.10 In specific circumstances where the aeroplane operator operates a very limited number of State pairs that are subject to offsetting requirements, and/or a very limited number of State pairs that are not subject to offsetting requirements, it may request in writing to BRUNEI DCA that such data not be published at the aeroplane operator level explaining the reasons why disclosure would harm its commercial interests. Based on this request, BRUNEI DCA shall determine whether this data is confidential.
- 3.11 In specific circumstances where aggregated State pair data may be attributed to an identified aeroplane operator as a result of a very limited number of aeroplane operators conducting flights on a State pair, that aeroplane operator may request in writing to BRUNEI DCA that such data not be published at State pair level, explaining the reasons why disclosure would harm their commercial interests. Based on this request, BRUNEI DCA shall determine whether this data is confidential.

REPORTING OF CORSA ELIGIBLE FUELS

- 3.12 The use of CORSA eligible fuel reported to Brunei DCA shall not include any fuels traded or sold to a third party.
- 3.13 The aeroplane operator which participates in other greenhouse gas reductions schemes shall notify BRUNEI DCA of such participation. This notification will include a declaration that CORSA eligible fuels reported under this Requirement have not also been claimed under another greenhouse gas reduction scheme.
- 3.14 The aeroplane operator may claim reduced emissions from using CORSA eligible fuel in its Emissions Report. In order to make such claim, the aeroplane operator must provide supplementary information as described in Appendix 4. This information must originate at the blend point, and include fuel information from both the neat (unblended) fuel producer and the fuel blender.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

- 3.15 The aeroplane operator can decide when to make a CORSIA eligible fuel claim within a given compliance period for all CORSIA eligible fuel received by a blender within that compliance period.
- 3.16 If the aeroplane operator purchases fuel from a supplier downstream from the fuel blender (e.g., from a distributor, another aeroplane operator, or an aerodrome-based fuel distributor), this fuel supplier shall provide all of the requisite documentation in order for the emissions reductions from the use of CORSIA eligible fuels to be claimed by the aeroplane operator.

BRUNEI DCA REPORTING TO ICAO

- 3.17 Brunei DCA shall use the CORSIA Central Registry (CCR) to report CO₂ emissions and, if applicable, CORSIA eligible fuels data to the International Civil Aviation Organization in accordance with the deadlines in 3.18, 3.19 and 3.20
- 3.18 BRUNEI DCA shall, report 2019 information as defined in Appendix 5, and Appendix 7, if applicable, to the International Civil Aviation Organization by 31 August 2020.
- 3.19 BRUNEI DCA shall report 2020 information as defined in Appendix 5, and Appendix 7, if applicable to the International Civil Aviation Organization by 31 August 2021.
- 3.20 Regarding the 2021-2035 period, BRUNEI DCA shall, by 31 July 2022, and by 31 July annually thereafter, report information as defined in Appendix 6 and Appendix 7, if applicable, to the International Civil Aviation Organization.
- 3.21 In cases where 3.10 and 3.11 apply, BRUNEI DCA shall determine whether this data is confidential, and also inform the International Civil Aviation Organization of any data deemed confidential in accordance with requirement 3.10 and 3.11 within the reports to be submitted in accordance with the deadlines in 3.18, 3.19 and 3.20.
- 3.22 All aeroplane operator data which is deemed confidential in accordance with 3.10 and 3.11 shall be aggregated without attribution to the specific aeroplane operator, and included within the ICAO document entitled “CORSIA Central Registry (CCR): Information and Data for Transparency” that is available on the ICAO CORSIA website.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

CHAPTER 4: VERIFICATION OF CO₂ EMISSIONS AND CORSA ELIGIBLE FUELS

- 4.1. This Chapter shall be applicable to each aeroplane operator attributed to BRUNEI that produces annual CO₂ emissions greater than 10 000 tonnes from the use of an aeroplane(s) with a maximum certificated take-off mass greater than 5 700 kg conducting international flights on or after 1 January 2019, with the exception of humanitarian, medical and firefighting flights.
- 4.2. This Chapter shall not be applicable to international flights preceding or following a humanitarian, medical or firefighting flight provided such flights were conducted with the same aeroplane, and were required to accomplish the related humanitarian, medical or firefighting activities or to reposition thereafter the aeroplane for its next activity. The aeroplane operator shall provide supporting evidence of such activities to the verification body or, upon request, to Brunei DCA.
- 4.3. This Chapter shall be applicable to a new entrant aeroplane operator attributed to BRUNEI from the year after it meets the requirements in 4.1 and 4.2.

VERIFICATION OF AN EMISSIONS REPORT AND SUBMISSION OF RELEVANT REPORTS

- 4.4. The aeroplane operator shall engage a verification body for the verification of its Emissions Report.
- 4.5. A verification body shall conduct the verification according to the relevant requirements in Appendix 10.
- 4.6. Following the verification of the Emissions Report by the verification body, the aeroplane operator and the verification body shall both independently submit, upon authorization by the aeroplane operator, a copy of the Emission Report and associated Verification Report to Brunei DCA, in accordance with the timeline in 3.4 and 3.6.
- 4.7. Brunei DCA shall perform an order of magnitude check of the Emissions Report.
- 4.8. To facilitate order of magnitude checks and ensure the completeness of reported data, and where necessary to support the implementation of the requirements in this Requirement, Brunei DCA shall share, upon agreement with another State's

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Administrating Authority, specific data and information contained in the aeroplane operator's Emissions Report for aeroplane operators performing flights to and from the requesting State.

- 4.9. Brunei DCA shall inform concerned aeroplane operators on the requests for data sharing. In the absence of an agreement between the two States, this information shall not be disclosed to third parties.
- 4.10. Brunei DCA shall provide the name of the verification body used to verify each Emissions Report upon a request for information disclosure.

REQUIREMENTS FOR A VERIFICATION BODY AND NATIONAL ACCREDITATION BODY

- 4.11. A verification body shall be accredited to ISO/IEC 17029:2019, ISO 14065:2020 and to the relevant requirements in Appendix 11 by a national accreditation body, in order to be eligible to verify the Emissions Report of the aeroplane operator.
- 4.12. A national accreditation body shall be working in accordance with ISO/IEC 17011:2017 and the relevant requirements in Appendix 11.
- 4.13. Brunei DCA shall use the CORSIA Central Registry (CCR) to submit to ICAO a list of verification bodies accredited in Brunei Darussalam by 30 April 2019, and annually by 30 November thereafter. Brunei DCA may submit updates to this list to ICAO on a more frequent basis.

Note: Requirement 4.13 is applicable only if Brunei Darussalam has National Accreditation Body (NAB).

VERIFICATION OF CORSIA ELIGIBLE FUELS

- 4.14. 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 CORSIA eligible fuels.
- 4.15. The aeroplane operator shall ensure that it, or its designated representative, has audit rights of the production records for the CORSIA eligible fuels that it purchases.

DATA GAPS AND ERROR CORRECTION

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 4.16. The aeroplane operator shall correct issues identified with the aeroplane operator’s data and information management system in a timely manner to mitigate ongoing data gaps and system weaknesses.
- 4.17. The aeroplane operator using a Fuel Use Monitoring Method shall fill a data gap by using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), provided that the data gaps during a compliance period do not exceed the following thresholds:
- (a) **For 2019 – 2020 period:** 5 per cent of international flights;
- (b) **For 2021 – 2035 period:** 5 per cent of international flights subject to offsetting requirements.
- 4.18. If the aeroplane operator realizes it has data gaps that exceed the threshold in 4.17, then the aeroplane operator shall engage with Brunei DCA to take remedial action to address this.
- 4.19. 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 BRUNEI DCA in their annual Emissions Report.
- 4.20. The aeroplane operator shall fill all data gaps and correct systematic errors and misstatements prior to the submission of the Emissions Report.
- 4.21. If the aeroplane operator does not provide its Emissions Report in accordance with the timeline in 3.4 and 3.6, Brunei DCA shall engage with the aeroplane operator to obtain the necessary information. If this proves unsuccessful, then Brunei DCA shall estimate the aeroplane operator’s annual emissions using the best available information and tools, such as the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT).
- 4.22. If an error in the aeroplane operator’s reported emissions is identified by Brunei DCA, the verification body, or the aeroplane operator after the reported CO₂ emissions have been submitted to ICAO, Brunei DCA shall update the reported CO₂ emissions to address the error. Brunei DCA 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.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

- 4.23. Brunei DCA shall report an error in the aeroplane operator's CO₂ emissions and the follow-up result of the related adjustment to ICAO.

BRUNEI DCA

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

CHAPTER 5: CO₂ OFFSETTING REQUIREMENTS FROM INTERNATIONAL FLIGHTS AND EMISSIONS REDUCTIONS FROM THE USE OF CORSA ELIGIBLE FUELS

- 5.1 This Chapter shall be applicable from 1 January 2021 to 31 December 2035 to each aeroplane operator attributed to Brunei Darussalam that produces annual CO₂ emissions greater than 10 000 tonnes from the use of an aeroplane(s) with a maximum certificated take-off mass greater than 5 700 kg conducting international flights between the States listed in the ICAO document entitled “CORSA States for Chapter 3 State Pairs” that is available on the ICAO CORSA website, with the exception of humanitarian, medical and firefighting flights.
- 5.2 This Chapter shall not be applicable to international flights preceding or following a humanitarian, medical or firefighting flight provided such flights were conducted with the same aeroplane, and were required to accomplish the related humanitarian, medical or firefighting activities or to reposition thereafter the aeroplane for its next activity. The aeroplane operator shall provide supporting evidence of such activities to the verification body or, upon request, to Brunei DCA.
- 5.3 This Chapter shall not be applicable to a new entrant aeroplane operator for three years starting in the year when it meets the requirements under this Chapter, or until its annual CO₂ emissions exceed 0.1 per cent of total CO₂ emissions from international flights in 2019, as contained in the ICAO document entitled “CORSA 2020 Emissions” that is available on the ICAO CORSA website, whichever occurs earlier. This Chapter shall then be applicable in the subsequent year.

CALCULATION OF ANNUAL OFFSETTING REQUIREMENTS

- 5.4 Brunei DCA shall calculate the amount of CO₂ emissions required to be offset by each aeroplane operator attributed to Brunei Darussalam in a given year, prior to consideration of the emissions reductions from the use of CORSA eligible fuels, as described in 5.6, 5.7, 5.8, 5.9, 5.10 and 5.11.
- 5.5 By 30 November of each year, Brunei DCA shall calculate the preceding year’s offsetting requirements of all aeroplane operators attributed to Brunei Darussalam,

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

and shall inform each aeroplane operator of its offsetting requirements in the preceding year.

ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2021 - 2023

5.6 Brunei DCA shall notify ICAO on the decision of Brunei Darussalam to calculate the offsetting requirements of all aeroplane operators attributed to Brunei Darussalam either based on the aeroplane operators' emissions covered by 5.1, 5.2 and 5.3 in each of the three years, or based on the aeroplane operators' emissions covered by 5.1, 5.2 and 5.3 in 2019.

5.7 Brunei DCA shall calculate the annual offsetting requirements of each aeroplane operator attributed to Brunei Darussalam as follows:

$$OR_y = OE * SGF_y$$

where:

- OR_y = Aeroplane operator's offsetting requirements in the given year y (in tonnes);
- OE = Aeroplane operator's CO₂ emissions covered by 5.1, 5.2 and 5.3 (in tonnes) depending upon the option selected by the Brunei Darussalam in accordance with 5.6; and
- SGF_y = Sector's Growth Factor for year y as contained in ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF)"

ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2024 - 2032

5.8 Brunei DCA shall calculate the annual offsetting requirements of each aeroplane operator attributed to Brunei Darussalam as follows:

$$OR_y = OE_y * SGF_y$$

where:

- OR_y = Aeroplane operator's offsetting requirements in the given year y (in tonnes);
- OE_y = Aeroplane operator's CO₂ emissions covered by 5.1, 5.2 and 5.3 in the given year y (in tonnes); and
- SGF_y = Sector's Growth Factor in the given year y as contained in ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF)"

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

ANNUAL OFFSETTING REQUIREMENTS FOR THE PERIOD 2033 - 2035

5.9 Brunei DCA shall calculate the annual offsetting requirements of each aeroplane operator attributed to Brunei Darussalam as follows:

$$OR_y = 85\% * (OE_y * SGF_y) + 15\% * (OE_y * OGF_y)$$

where:

- OR_y = Aeroplane operator's offsetting requirements in the given year y (in tonnes);
- OE_y = Aeroplane operator's CO₂ emissions covered by 5.1, 5.2 and 5.3 in the given year y (in tonnes);
- SGF_y = Sector's Growth Factor in the given year y as contained in ICAO document entitled "CORSA Annual Sector's Growth Factor (SGF)"; and
- OGF_y = Aeroplane operator's Growth Factor calculated in accordance with 5.10

5.10 Brunei DCA shall calculate, when applicable, the growth factor for each aeroplane operator attributed to Brunei Darussalam for a given year (OGF_y) in accordance with the CO₂ emissions from the verified Emissions Report submitted by each aeroplane operator, as follows:

$$OGF_y = \frac{(OE_y - OE_{B,y})}{OE_y}$$

where:

- OE_y = Total aeroplane operator's CO₂ emissions covered by 5.1, 5.2 and 5.3 in the given year y (in tonnes); and
- $OE_{B,y}$ = 85% of total annual aeroplane operator's CO₂ emissions in 2019 covered by 5.1, 5.2 and 5.3 in the given year y (in tonnes).

5.11 For the calculation in 5.10, when an aeroplane operator does not have CO₂ emissions covered by 5.1, 5.2 and 5.3 in 2019, and does not qualify as a new entrant, Brunei DCA shall use a value of 10,000 tonnes of CO₂ as the $OE_{B,y}$.

CALCULATION OF EMISSIONS REDUCTIONS FROM THE USE OF CORSA ELIGIBLE FUELS

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

5.12 An aeroplane operator attributed to Brunei Darussalam that intends to claim for emissions reductions from the use of CORSIA eligible fuels in a given year of a compliance period shall compute these emissions reductions as follows:

$$ER_y = FCF * \left[\sum_f MS_{f,y} * \left(1 - \frac{L_{CEF}}{LC} \right) \right]$$

where:

ER_y = Emissions reductions from the use of CORSIA eligible fuels in the given year y (in tonnes);

FCF = Fuel conversion factor, equal to 3.16 kg CO₂/kg fuel for Jet-A fuel / Jet-A1 fuel, TS-1 fuel, or No. 3 Jet fuel and 3.10 kg CO₂/kg fuel for AvGas or Jet-B fuel;

$MS_{f,y}$ = Total mass of a neat CORSIA eligible fuel claimed in the given year y (in tonnes), as described and reported in Field 12.b in Appendix 3;

L_{CEF} = Life cycle emissions value for a CORSIA eligible fuel (in gCO₂e/MJ); and

LC = Baseline life cycle emissions values for aviation fuel, equal to 89 gCO₂e/MJ for Jet-A fuel, Jet-A1 fuel, Jet-B fuel, TS-1 fuel, or No. 3 Jet Fuel and equal to 95 gCO₂e/MJ for AvGas

5.13 For the calculation in 5.12:

- a) If a Default Life Cycle Emissions value is used, then the aeroplane operator shall use the ICAO document entitled “CORSA Default Life Cycle Emissions Value for CORSIA Eligible Fuels” that is available on the ICAO CORSIA website;
- b) If an Actual Life Cycle Emissions value is used, then an approved Sustainability Certification Scheme shall ensure that the methodology, as defined in the ICAO document entitled “CORSA Methodology for Calculating Actual life Cycle Emissions Values” that is available on the ICAO CORSIA website, has been applied correctly.

CALCULATION OF TOTAL FINAL OFFSETTING REQUIREMENTS

5.14 Brunei DCA shall calculate the total final amount of CO₂ emissions required to be offset by each aeroplane operator attributed to Brunei Darussalam in a given compliance period, taking into consideration the emissions reductions from the use of CORSIA eligible fuels as follows:

$$FOR_c = (OR_{1,c} + OR_{2,c} + OR_{3,c}) - (ER_{1,c} + ER_{2,c} + ER_{3,c})$$

where:

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

FOR_c = Aeroplane operator's total final offsetting requirements in the given compliance period c (in tonnes);

$OR_{y,c}$ = Aeroplane operator's offsetting requirements in the given year y (where $y = 1, 2$ or 3) of the compliance period c calculated in accordance with 5.7 or 5.8 or 5.9 (in tonnes); and

$ER_{y,c}$ = Emissions reductions from the use of CORSIA eligible fuels in the given year y (where $y = 1, 2$ or 3) of the compliance period c calculated in accordance with 5.12 (in tonnes).

- 5.15 If the sum of the aeroplane operator's offsetting requirements in the three years of a given compliance period ($OR_{1,c} + OR_{2,c} + OR_{3,c}$) is less than 3,000 tonnes of CO₂, then the aeroplane operator has no offsetting requirements for the compliance period and the aeroplane operator may choose to voluntarily engage with Brunei DCA in order to offset such emissions.
- 5.16 Brunei DCA shall round the total final offsetting requirements of each aeroplane attributed to Brunei Darussalam up to the nearest tonne of CO₂.
- 5.17 Upon calculating the total final offsetting requirements for the compliance period in accordance with 5.14, Brunei DCA shall inform each aeroplane operator attributed to Brunei Darussalam of its total final offsetting requirements for the compliance period by 30 November of the calendar year that follows the last year of the compliance period.
- 5.18 If an aeroplane operator's total final offsetting requirements during a compliance period are negative, then Brunei DCA shall inform the aeroplane operator that it does not have any offsetting requirements for the compliance period. Brunei DCA shall not carry forward to subsequent compliance periods any negative offsetting requirements.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

CHAPTER 6: CORSIA ELIGIBLE EMISSIONS UNITS

- 6.1. This Chapter shall be applicable to each aeroplane operator attributed to Brunei Darussalam that is subject to offsetting requirements in accordance with Chapter 5;
- 6.2. For the purposes of this Chapter, “cancel” means the permanent removal and single use of a CORSIA Eligible Emissions Unit within a CORSIA Eligible Emissions Unit Programme designated registry such that the same emissions unit may not be used more than once. This is sometimes also referred to as “retirement”, “cancelled”, “cancelling” or “cancellation”.

CANCELLATION OF CORSIA ELIGIBLE EMISSIONS UNITS

- 6.3. Each aeroplane operator attributed to Brunei Darussalam shall meet its offsetting requirements in a given compliance period cancelling a quantity of CORSIA Eligible Emissions Units that is equal to its total final offsetting requirements as communicated by Brunei DCA according to 5.17.
- 6.4. For the purposes of 6.3, CORSIA Eligible Emissions Units are those that meet the CORSIA Emissions Units are those that meet the CORSIA Emissions Unit Eligibility Criteria contained in the ICAO document entitled “CORSIA Emissions Unit Eligibility Criteria” that is available on the ICAO CORSIA website.
- 6.5. For the purposes of 6.3, the aeroplane operator shall use CORSIA Eligible Emissions Units that have been approved by the ICAO Council and described in the ICAO document entitled “CORSIA Eligible Emissions Units” that is available on the ICAO CORSIA website.
- 6.6. In fulfillment of the provisions in 6.3, 6.4 and 6.5, the aeroplane operator shall:
- a) Cancel CORSIA Eligible Emissions Units within a registry designated by a CORSIA Eligible Emissions Unit Programme by 31 January of the second calendar year following the last year of the compliance period or 60 days after Brunei DCA informed the aeroplane operator of its total final offsetting requirements, whichever date comes later; and
 - b) Request each CORSIA Eligible Emissions Unit Programme registry to make visible on the registry’s public website, information on each of the aeroplane operator’s cancelled CORSIA Eligible Emissions Units for a given compliance

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

period, by 7 February of the second calendar year following the last year of the compliance period.

- 6.7. For the purposes of 6.6 b), the information for each cancelled CORSIA Eligible Emissions Unit shall include the consolidated identifying information in Field 5 in Appendix 8, except field 5.j, 5.k and 5.m.

REPORTING ON THE CANCELLATION OF CORSIA ELIGIBLE EMISSIONS UNIT

- 6.8. Each aeroplane operator attributed to Brunei Darussalam shall report to Brunei DCA the cancellation of CORSIA Eligible Units carried out in accordance with 6.3 to meet its total final offsetting requirements for a given compliance period.
- 6.9. In fulfilment of 6.8, the aeroplane operator shall submit to Brunei DCA a copy of the verified Emissions Unit Cancellation Report and a copy of the associated Verification Report by 30 April 2025 for the compliance period 2021 – 2023, and by 30 April every three years thereafter for subsequent compliance periods.

AEROPLANE OPERATOR'S EMISSIONS UNIT CANCELLATION REPORT

- 6.10. The aeroplane operator shall provide information on the cancellation of CORSIA Eligible Emissions Units, in accordance with 6.3, in the Emissions Unit Cancellation Report that shall contain the information in Appendix 8.
- 6.11. The aeroplane operator shall prepare its Emissions Unit Cancellation Report in the form prescribed by Brunei DCA.
- 6.12. The aeroplane operator shall submit its Emissions Unit Cancellation Report to Brunei DCA for approval.

VERIFICATION OF THE EMISSIONS UNITS CANCELLATION REPORT

- 6.13. The aeroplane operator shall engage a verification body for the verification of its Emissions Unit Cancellation Report prior to its submission to Brunei DCA in accordance with the timeline in 6.9.
- 6.14. A verification body shall be accredited in accordance with the requirements in Appendix 11 by a national accreditation body, which is working in accordance with the requirements in Appendix 11, in order to be eligible to verify the Emissions Unit Cancellation Report of an aeroplane operator.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 6.15. A verification body shall conduct the verification according to the relevant requirements in Appendix 10.
- 6.16. Following the verification of the Emissions Unit Cancellation Report by the verification body, the aeroplane operator and the verification body shall both independently submit to Brunei DCA, upon authorization by the aeroplane operator, a copy of the Emissions Unit Cancellation Report and the associated Verification Report in accordance with the timeline in 6.9.
- 6.17. Brunei DCA shall perform an order of magnitude check of all submitted Emissions Unit Cancellation Reports by 31 July 2025 for the compliance period 2021-2023, and by 31 July every three years thereafter for subsequent compliance periods.

BRUNEI DARUSSALAM REPORTING TO ICAO

- 6.18. Brunei DCA shall use the CORSIA Central Registry (CCR) to report to the International Civil Aviation Organization consolidated data on the cancellation of CORSIA Eligible Emissions Units from all aeroplane operators attributed to Brunei Darussalam.
- 6.19. Brunei DCA shall submit to the International Civil Aviation Organization the information in Appendix 9 by 31 July 2025 for the compliance period 2021-2023, and by 31 July every three years thereafter for subsequent compliance periods.
- 6.20. Following the submission to the International Civil Aviation Organization, Brunei DCA should publish the following information, as reported by each aeroplane operator attributed to Brunei Darussalam, for a given compliance period:
- a) Total final offsetting requirements for each aeroplane operator; and
 - b) Total quantity of emissions units cancelled by each aeroplane operator to reconcile its total final offsetting requirements.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 1: Content of an Emissions Monitoring Plan

1. INTRODUCTION

The Emissions Monitoring Plan of an aeroplane operator shall contain the information listed in Section 2 of this Appendix.

2. CONTENT OF EMISSIONS MONITORING PLANS

Note – The template of an Emissions Monitoring Plan (from aeroplane operator to State) is provided in Appendix 1 of the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

2.1. AEROPLANE OPERATOR IDENTIFICATION

2.1.1. Name and address of the aeroplane operator with legal responsibility.

2.1.2. Information for attributing the aeroplane operator to a State:

- (a) **ICAO Designator:** ICAO Designator(s) used for air traffic control purposes, as listed in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.
- (b) **Air operator certificate:** If the aeroplane operator does not have an ICAO Designator, then a copy of the air operator certificate.
- (c) **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.

2.1.3. 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(s) with international flights, and/or has a parent and or subsidiaries that are aeroplane operators with international flights.

2.1.4. If the aeroplane operator in a parent-subsidary relationship seeks to be considered a single aeroplane operator for purposes of this Requirement, then confirmation

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

shall be provided that the parent and subsidiary(ies) are attributed to Brunei DCA and that the subsidiary(ies) are wholly-owned by the parent.

- 2.1.5. Contact information for the person within the aeroplane operator’s company who is responsible for the Emissions Monitoring Plan.
- 2.1.6. Description of the aeroplane operator’s activities (e.g. scheduled/non-scheduled, passenger/cargo/executive, and geographic scope of operations).

2.2. FLEET AND OPERATIONS DATA

2.2.3 List of the aeroplane types and type of fuel (e.g. Jet-A, Jet-A1, TS-1, No. 3 Jet fuel 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 over time. The list shall include:

- (a) 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; and

***Note 1** – Aeroplane types are contained in Doc 8643 — Aircraft Type Designators.*

***Note 2** – The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify applicable aeroplane types.*

- (b) Type of fuel(s) used by the aeroplanes (e.g., Jet-A, Jet-A1, TS-1, No. 3 Jet fuel, Jet-B, AvGas).

***Note** – The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) does not need to specify the type of fuel used by aeroplanes.*

2.2.2 Information used for attributing international flights to the aeroplane operator:

- (a) **ICAO Designator:** List of the ICAO Designator(s) used in Item 7 of the aeroplane operator’s flight plans.
- (b) **Registration marks:** If the aeroplane operator does not have an ICAO Designator, then a list of the nationality or common mark, and registration

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

mark of aeroplanes that are explicitly stated in the air operator certificate (or equivalent) and used in Item 7 of the aeroplane operator’s flight plans.

2.2.3 Procedures on how changes in the aeroplane fleet and fuel used will be tracked, and subsequently integrated in the Emissions Monitoring Plan.

2.2.4 Procedures on how the specific flights of an aeroplane will be tracked to ensure completeness of monitoring.

2.2.5 Procedures for determining which aeroplane flights are subject to the Chapter 2, Chapter 3, or Chapter 4 requirements.

***Note** – The aeroplane operator using the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) could use the functionality of the CERT to identify international flights, as long as all flights (i.e., domestic and international) conducted during the reporting year are entered as input into the tool.*

2.2.6 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 CO₂ 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.*

2.2.7 Procedures for determining which international aeroplane flights are subject to CORSIA offsetting requirements.

***Note** – The aeroplane operator using the ICAO CORSIA CO₂ 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.*

2.2.8 Procedures for identifying domestic flights and/or humanitarian, medical or firefighting international flights that would not be subject to Chapter 2, Chapter 3, or Chapter 4 requirements.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

2.3. METHODS AND MEANS OF CALCULATING EMISSIONS FROM INTERNATIONAL FLIGHTS

2.3.1 Methods and means for establishing the average emissions during the 2019-2020 period.

2.3.1.1 If the aeroplane operator meets the eligibility criteria in 2.17 and chooses to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), then the following information shall be provided:

- (a) An estimate of CO₂ emissions for all international flights within the applicability of Chapter 2, Chapter 3, or Chapter 4 requirements for 2019 with supporting information on how the estimation was calculated.
- (b) The type of input method used in the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT):
 - Great Circle Distance input method; or
 - Block Time input method.

Note – Guidance on estimating CO₂ emissions for 2019 is provided in the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

2.3.1.2 If the aeroplane operator meets the eligibility criteria in 2.16 or chooses to use a Fuel Use Monitoring method as described in Appendix 2, then the following information shall be provided:

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

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- (b) 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;
- (c) 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
- (d) 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 Appendix 2.

2.3.1.3 If the aeroplane operator is in a parent-subsidary relationship and seeks to be considered as a single aeroplane operator for purposes of this Requirement, 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).

2.3.2 Methods and means for emissions monitoring and compliance on or after 1 January 2021

2.3.2.1 If the aeroplane operator has international flights, but these are not subject to offsetting requirements, then it shall confirm whether it plans to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) or the Fuel Use Monitoring Methods as described in Appendix 2.

2.3.2.2 If the aeroplane operator meets the eligibility criteria in 2.22, and it chooses to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), then the following information shall be provided:

- (a) An estimate of CO₂ emissions for all international flights 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 fuel use and CO₂ estimation was calculated.
- (b) The type of input method used in the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT):

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

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

2.3.2.3 If the aeroplane operator meets the eligibility criteria in 2.22, or chooses to use a Fuel Use Monitoring method as described in Appendix 2, then the following information shall be provided:

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

- Method A;
- Method B;
- Block-off / Block-on;
- Fuel Uplift; or
- Fuel Allocation with Block Hour.

(b) 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;

(c) 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

(d) 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 Appendix 2.

2.3.2.4 If the aeroplane operator is using a Fuel Use Monitoring Method, as defined in Appendix 2, it shall state whether it plans to use the ICAO CORSIA CERT for international flights 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 (i.e., Great Circle Distance input method, or Block Time input method).

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

2.4. DATA MANAGEMENT, DATA FLOW AND CONTROL

2.4.1 The aeroplane operator shall provide the following information:

- (a) Roles, responsibilities and procedures on data management;
- (b) Procedures to handle data gaps and erroneous data values, including:
 - (i) Secondary data reference sources which would be used as an alternative;
 - (ii) Alternative method in case the secondary data reference source is not available; and
 - (iii) 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.
- (c) Documentation and record keeping plan;
- (d) Assessment of the risks associated with the data management processes and means for addressing significant risks;
- (e) Procedures for making revisions to the Emissions Monitoring Plan and resubmitting relevant portions to Brunei DCA when there are material changes;
- (f) Procedures for providing notice in the Emissions Report of non-material changes that require the attention of Brunei DCA; and
- (g) A data flow diagram summarizing the systems used to record and store data associated with the monitoring and reporting of CO₂ emissions.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 2: Fuel Use Monitoring Methods

1. INTRODUCTION

***Note** – The procedures specified in this Appendix are concerned with the monitoring of fuel use by aeroplane operators. The methods proposed are representative of the most accurate established practices.*

Any equivalent procedures to those contained in this Appendix shall only be allowed after prior application to and approval by the Brunei DCA.

2. FUEL USE MONITORING METHODS

2.1. The aeroplane operator, with the exception of an aeroplane operator eligible to use the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT), shall choose from the following fuel use monitoring methods:

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

2.2. Method A

2.2.1. 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 used 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 flight under consideration (i.e., flight $n+1$) are complete (in tonnes);

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 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); and
- 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 1 – See 2.27 and 2.28 for requirements on fuel density values.

Note 2 – 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.

Note 3 – 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, 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 aeroplanes which are used for international flights. For the same reasons, fuel uplift data for all flights of those aeroplanes should be collected, before deciding which flights are international.

2.2.2. For short term leasing where the previous or subsequent flight(s) (or both) is performed by another aeroplane operator, then the necessary data shall be acquired from the third party. When this information is not available, the use of block-on or block-off data is allowed.

2.2.3. Where no fuel uplift for the flight or subsequent flight takes place, the amount of fuel contained in aeroplane tanks (T_N or T_{N+1}) shall be determined at block-off for the flight or subsequent flight. In exceptional cases the variable T_{N+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 " $T_{N+1} + U_{N+1}$ " 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.

2.3. Method B

2.3.1. 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:

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- F_N = Fuel used for the flight under consideration (i.e., flight N) determined using Method B (in tonnes);
- R_{N-1} = 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_N = 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); and
- U_N = Fuel uplift for the flight considered measured in volume and multiplied with a density value (in tonnes).

Note 1 – See 2.27 and 2.28 for requirements on fuel density values.

Note 2 – Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

Note 3 – 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 previous flight (i.e., flight $N-1$). This is in particular important when a 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.

2.3.2. For short term leasing where the previous or subsequent flight(s) (or both) is performed by another aeroplane operator, then the necessary data shall be acquired from the third party. When this information is not available, the use of block-on or block-off data is allowed.

2.3.3. Where an aeroplane does not perform a flight previous to the flight for which fuel consumption is being monitored (e.g., if the flight follows a major revision or maintenance), the aeroplane operator may substitute the quantity R_{N-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.

2.4. Block-off/Block-on

2.4.1. The aeroplane operator shall use the following formula to compute fuel use according to the Block-off / Block-on Method:

$$F_N = T_N - R_N$$

where:

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

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

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

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

2.5. Fuel Uplift

2.5.1. 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:

$$F_N = U_N$$

where:

F_N = Fuel used for the flight under consideration (= flight N) determined using fuel uplift (in tonnes); and

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

Note 1 – See 2.27 and 2.28 for requirements on fuel density values.

2.5.2. 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 (i.e., from flight N) proportionally to block hour:

$$F_N = U_N * \left[\frac{BH_N}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

$$F_{N+1} = U_N * \left[\frac{BH_{N+1}}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

$$F_{N+n} = U_N * \left[\frac{BH_{N+n}}{BH_N + BH_{N+1} + \dots + BH_{N+n}} \right]$$

where:

F_N = Fuel used for the flight under consideration (= flight N) determined using fuel uplift (in tonnes); and

F_{N+1} = Fuel used for the subsequent flight (i.e., flight $N+1$) determined using fuel uplift (in tonnes);

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Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- U_N = Fuel used for the follow-on flight (i.e., flight $N+n$) determined using fuel uplift (in tonnes);
 BH_N = Block hour for the flight under consideration (i.e., flight N) (in tonnes);
 BH_{N+1} = Block hour for the flight under consideration (i.e., flight N) (in hours);
 ...
 BH_{N+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.

2.6. Fuel Allocation with Block Hour

2.6.1 Computation of average fuel burn ratios

- 2.6.1.1 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 determined by using the Fuel Use Monitoring Method Fuel Uplift from international flights, divided by the sum of all actual block hours from international flights for a given year, according to the following formula:

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

where:

- $AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour);
 $U_{AO,AT,N}$ = Fuel uplifted for the international flight N for aeroplane operator (AO) and aeroplane type (AT) determined using the Fuel Use Monitoring Method Fuel Uplift (in tonnes); and
 $BH_{AO,AT,N}$ = Block hour for the international flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

- 2.6.1.2 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:

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

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

where:

- $AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour);
- $U_{AO,AT,N}$ = Fuel uplifted for the international flight N for aeroplane operator (AO) and aeroplane type (AT) measured in volume and multiplied with a specific density value (in tonnes); and
- $BH_{AO,AT,N}$ = Block hour for the international and domestic flight N for aeroplane operator (AO) and aeroplane type (AT) (in hours).

2.6.1.3 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.

[Note 1](#) – See 2.27 and 2.28 for requirements on fuel density values.

[Note 2](#) – Aeroplane types are contained in Doc 8643 – Aircraft Type Designators.

2.6.2 Computation of fuel use for individual flights

2.6.2.1 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_N = Fuel allocated to the international flight under consideration (i.e., flight N) using the Fuel Allocation Block Hour method (in tonnes)
- $AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour); and
- $BH_{AO,AT,N}$ = Block hour for the international flight under consideration (= flight N) for aeroplane operator (AO) and aeroplane type (AT) in hours.

[Note 1](#) – Fuel uplift is determined by the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

Note 2 – Average fuel burn ratio (AFBR) based on all flights for a reporting year and rounded to at least three decimal places.

BRUNEL DCA

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 3: Content of an Emissions Report from Aeroplane Operator to Brunei DCA

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Aeroplane operator information	1.a Name of aeroplane operator 1.b Address of aeroplane operator 1.c Contact information for the person within the aeroplane operator's company who is responsible for the Emissions Monitoring Plan 1.d Method and identifier used to attribute an aeroplane operator to Brunei Darussalam in accordance with 1.2 1.e State
Field 2	Reference details of aeroplane operator Emissions Monitoring Plan	2. Reference to the Emissions Monitoring Plan that is the basis for emissions monitoring that year <i>Note – BRUNEI DCA may require providing reference to updated Emissions Monitoring Plan, if applicable.</i>
Field 3	Information to identify the verification body and the national accreditation body	3.a Name and contact information of the verification body 3.b Name and contact information of the national accreditation body <i>Note – Verification Report to be a separate report from aeroplane operator's Emissions Report.</i>
Field 4	Reporting year	4.a Year during which emissions were monitored 4.b Date on which Emissions Report was compiled 4.c Version of the Emissions Report
Field 5	Fuel Use Monitoring Method	5.a Indicate whether the aeroplane operator used ICAO CORSIA CO ₂ Estimation and Reporting Tool (CERT) 5.b Indicate whether the aeroplane operator used the Fuel Allocation with Block Hour method during the reporting year
Field 6	Type and mass of fuel used(s)	6.a Total fuel mass per type of fuel: <ul style="list-style-type: none"> • Jet-A (in tonnes) • Jet A1 (in tonnes) • TS-1 (in tonnes)

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

		<ul style="list-style-type: none"> • No. 3 Jet fuel (in tonnes) • Jet-B (in tonnes) • AvGas (in tonnes) <p><i>Note 1. – Above totals to include CORSIA eligible fuels.</i></p> <p><i>Note 2. – The aeroplane operator using the ICAO CORSIA CERT, as described in Appendix 3, does not need to report Field 6.</i></p>
Field 7	Fuel density	7.a Specify whether standard and/or actual fuel density was used to determine the fuel uplift in the reporting year
Field 8	Total number of international flights during the reporting period	8.a Total number of international flights, subject to Chapter 2, Chapter 3 and Chapter 4 requirements, during the reporting period. <i>Note – Total (sum of values from Field 9)</i>
Field 9	Number of international flights per State pair or aerodrome pair	9.a Number of international flights, subject to Chapter 2, Chapter 3 and Chapter 4 requirements, per State pair (no rounding); or 9.b Number of international flights per aerodrome pair (no rounding).
Field 10	CO ₂ emissions per aerodrome pair or State pair	10.a CO ₂ emissions from international flights, subject to Chapter 2, Chapter 3 and Chapter 4 requirements, per State pair (in tonnes); or 10.b CO ₂ emissions from international flights, subject to Chapter 2, Chapter 3, or Chapter 4 requirements, per aerodrome pair (in tonnes).
Field 11	Scale of data gaps	11.a Per cent of data gaps (according to criteria defined in Part 4.17 and rounded to the nearest 0.1%) 11.b Reason for data gaps if per cent of data gaps exceeds the threshold defined in 4.17
Field 12	Aeroplane information	12.a List of aeroplane types 12.b Aeroplane identifiers used in flight plans' Item 7 during the year for all international flights. Where the identifier is based on an ICAO Designator, only the ICAO Designator is to be reported 12.c Information on leased aeroplanes 12.d Average fuel burn ratio (AFBR) for each aeroplane type under 10.a in line with Doc

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

		8643 – Aircraft Type Designator (in tonnes per hour to 3 decimal places) <i>Note – 12.d is only required if the aeroplane operator is using the Fuel Allocation with Block Hour method, as defined in Appendix 2.</i>
Field 13	Eligibility for and use of the ICAO CORSIA CO ₂ Estimation and Reporting Tool (CERT) as per Chapter 2	13.a Version of the ICAO CORSIA CERT used 13.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
Field 14 <i>Note – If emissions reductions from the use of CORSIA eligible fuel are claimed, see Appendix 4 for supplementary information that is to be provided with the aeroplane operator's Emissions Report.</i>	CORSIA eligible fuel claimed	14.a Fuel type (i.e., type of fuel, feedstock and conversion process) 14.b Total mass of the neat CORSIA eligible fuel claimed (in tonnes) per fuel type
	Emissions information (per fuel type)	14.c Approved Life Cycle Emissions values 14.d Emissions reductions claimed from a CORSIA eligible fuel
	Emissions reductions (total)	14.e Total emissions reductions claimed from the use of all CORSIA eligible fuels (in tonnes) <i>Note – During the 2019-2020 period, fields 14.a to 14.e are not required as the applicability of CORSIA offsetting requirements starts on 1 January 2021 i.e., there are no offsetting requirements and no emissions reductions from the use of CORSIA eligible fuels during the 2019-2020 period.</i>
Field 15	Total CO ₂ emissions	15.a Total CO ₂ emissions (based on total mass of fuel in tonnes from Field 5 and reported in tonnes) 15.b Total CO ₂ emissions from flights subject to offsetting requirements (in tonnes) 15.c Total CO ₂ emissions from international flights, subject to Chapter 2, Chapter 3, and Chapter 4 requirements and that are not subject to offsetting requirements (in tonnes) <i>Note – During the 2019-2020 period, only fields 13.a is required as the applicability of CORSIA offsetting requirements starts on 1 January 2021 i.e., there are no State pairs subject to offsetting requirements during the 2019-2020 period.</i>

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 4: Supplementary Information to an Aeroplane Operator’s Emissions Report if Emissions Reductions from the Use of Each CORSA Eligible Fuel Being Claimed

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Aeroplane operator information and reporting information	1.a Name of aeroplane operator 1.b Address of aeroplane operator 1.c Reporting year
Field 2	Purchase date of the neat CORSA eligible fuel	
Field 3	Identification of the producer of the neat CORSA eligible fuel	3.a Name of producer of the neat CORSA eligible fuel 3.b Address of the producer of the neat CORSA eligible fuel
Field 4	Fuel Production	4.a Production date of the neat CORSA eligible fuel 4.b Production location of the neat CORSA eligible fuel 4.c Batch identification number of each batch of neat CORSA eligible fuel 4.d Mass of each batch of neat CORSA eligible fuel produced
Field 5	Fuel type	5.a Type of fuel (i.e., Jet-A, Jet-A1, TS-1, No. 3 Jet fuel, Jet-B, AvGas) 5.b Feedstock used to create the neat CORSA eligible fuel 5.c Conversion process used to create the neat CORSA eligible fuel
Field 6	Fuel Purchased	6.a Proportion of neat CORSA eligible fuel batch purchased (rounded to the nearest %) <i>Note – If less than an entire batch of CORSA eligible fuel is purchased.</i> 6.b Total mass of each batch of neat CORSA eligible fuel purchased (in tonnes) 6.c Mass of neat CORSA eligible fuel purchased (in tonnes) <i>Note – Field 5.c is equal to the total for all</i>

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

		<i>batches of CORSIA eligible fuels reported in Field 5.b.</i>
Field 7	Evidence that fuel satisfies the CORSIA Sustainability Criteria	i.e., valid sustainability certification document
Field 8	Life cycle emissions values of the CORSIA eligible fuel	<p>8.a Default or Actual Life Cycle Emissions Value (L_{CEF}) for given CORSIA eligible fuel f, which is equal to the sum of 8.b and 8.c (in gCO_2e/MJ rounded to the nearest whole number)</p> <p>8.b Default or Actual Core Life Cycle Assessment (LCA) value for given CORSIA eligible fuel f (in gCO_2e/MJ rounded to the nearest whole number)</p> <p>8.c Default Induced Land Use Change (ILUC) value for given CORSIA eligible fuel f (in gCO_2e/MJ rounded to the nearest whole number)</p>
Field 9	Intermediate purchaser	<p>9.a Name of the intermediate purchaser</p> <p>9.b Address of the intermediate purchaser</p> <p><i>Note – This information would be included in the event that the aeroplane operator claiming emissions reductions from the use of CORSIA eligible fuels was not the original purchaser of the fuel from the producer (e.g., 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.</i></p>
Field 10	Party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender	<p>10.a Name of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender</p> <p>10.b Address of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender</p>
Field 11	Fuel Blender	<p>11.a Name of the party responsible for blending neat CORSIA eligible fuel with aviation fuel</p> <p>11.b Address of the party responsible for blending neat CORSIA eligible fuel with aviation fuel</p>
Field 12	Location where neat CORSIA eligible fuel is blended with aviation fuel	
Field 13	Date the neat CORSIA eligible fuel was received by blender	

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Field 14	Mass of neat CORSIA eligible fuel received (in tonnes)	<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 received by the blender (i.e. due to sale to intermediate purchaser).</i>
Field 15	Blend ratio of neat CORSIA eligible fuel and aviation fuel (rounded to the nearest %)	
Field 16	Documentation demonstrating that the batch or batches of neat CORSIA eligible fuel were blended into aviation fuel (e.g., the subsequent Certificate of Analysis of the blended fuel)	
Field 17	Mass of neat CORSIA eligible fuel claimed (in tonnes)	<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>

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

Appendix 5: Emissions Report from a State to ICAO for 2019 and 2020

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Total annual CO ₂ emissions on each State pair aggregated for all aeroplane operators attributed to the State (in tonnes).	<i>Note.— Include emissions from CORSIA eligible fuels, calculated using fuel conversion factor(s) from corresponding aviation fuels, in accordance with 2.29</i>

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

Appendix 6: Emissions Report from Brunei DCA to ICAO Annually after 2021

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Total annual CO ₂ emissions on each State pair aggregated for all aeroplane operators attributed to the State	<p>1.a Total annual CO₂ emissions on each State pair subject to offsetting requirements aggregated for all aeroplane operators attributed to the State (in tonnes)</p> <p>1.b Total annual CO₂ emissions on each State pair not subject to offsetting requirements, aggregated for all aeroplane operators attributed to the State (in tonnes)</p>
Field 2	Total annual CO ₂ emissions for each aeroplane operator attributed to the State	<p>2.a Total annual CO₂ emissions for each aeroplane operator attributed to the State (in tonnes)</p> <p>2.b Indicate whether the ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) is used</p>
Field 3	Total aggregated annual CO ₂ emissions for all State pairs subject to offsetting requirements for each aeroplane operator attributed to the State (in tonnes)	
Field 4	Total aggregated annual CO ₂ emissions for all State pairs not subject to offsetting requirements for each aeroplane operator attributed to the State (in tonnes)	

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 7: CORSIA Eligible Fuels Supplementary Information to the Emissions Report from Brunei DCA to ICAO

Field #	Data Field	Details	Notes
Field 1	Production	1.a Production year of CORSIA eligible fuel claimed 1.b Producer of CORSIA eligible fuel 1.c Production location of the neat CORSIA eligible fuel	
Field 2	Batch of CORSIA eligible fuel	2.a Batch number(s) of each CORSIA eligible fuel claimed 2.b Total mass of each batch of CORSIA eligible fuel claimed (in tonnes)	
Field 3	CORSIA eligible fuel claimed	3.a Fuel types (i.e., type of fuel, feedstock and conversion process) 3.b Total mass of the neat CORSIA eligible fuel (in tonnes) per fuel type being claimed by all the aeroplane operators attributed to the State 3.c Default or Actual Life Cycle Emissions Value (L_{CEF}) for given CORSIA eligible fuel	<i>This would provide a total mass for each fuel type being claimed by all aeroplane operators attributed to the State</i>
Field 4	Emissions information (per fuel type)	4. Total emissions reductions claimed from the use of a CORSIA eligible fuel (in tonnes)	
Field 5	Emissions reductions (total)	5. Total emissions reductions claimed by all aeroplane operators attributed to the State from the use of all CORSIA eligible fuel use (in tonnes)	

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

Appendix 8: Emissions Unit Cancellation Report from Aeroplane Operators to Brunei DCA

Field #	Data Field	Details
Field 1	Aeroplane operator information	1.a Name of aeroplane operator 1.b Address of aeroplane operator 1.c Contact-information for the person within the aeroplane operator's company who is responsible for the Emissions Unit Cancellation Report 1.d Unique identifier by which an aeroplane operator is attributed to a State, in accordance with Part II, Chapter 1, 1.2.4 1.e State
Field 2	Compliance period years reported	2. Year(s) in the reported compliance period for which offsetting requirements are reconciled in this report
Field 3	Aeroplane operator's total final offsetting requirements	3. Aeroplane operator's total final offsetting requirements (in tonnes), as informed by the State
Field 4	Total quantity of emissions units cancelled	4. Total quantity of emissions units cancelled to reconcile the total final offsetting requirements in Field 3
Field 5	Consolidated identifying information for cancelled emissions units	For each batch of cancelled emissions units (<i>batch</i> defined as a contiguous quantity of serialized emissions units), identify the following: 5.a Quantity of emissions units cancelled; 5.b Start of serial numbers; 5.c End of serial numbers; 5.d Date of cancellation; 5.e CORSIA Eligible Emissions Unit Programme; 5.f Unit type; 5.g Host country; 5.h Methodology;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

		<p>5.i Demonstration of unit date eligibility;</p> <p>5.j Programme-designated registry name;</p> <p>5.k Unique identifier for registry account to which the batch was cancelled;</p> <p>5.l Aeroplane operator in whose name the unit was cancelled; and</p> <p>5.m The unique identifier for the registry account from which the cancellation was initiated.</p>
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BRUNEL DCA

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 9: Content of Emissions Unit Cancellation Report from Brunei DCA to ICAO

<i>Field #</i>	<i>Data Field</i>	<i>Details</i>
Field 1	Aeroplane operators attributed to the State	1.a Aeroplane operators attributed to the Brunei Darussalam with offsetting requirements in the reported compliance period
Field 2	Compliance period years reported	2. Year(s) in the reported compliance period for which offsetting requirements are reconciled in this report
Field 3	Total final offsetting requirements	3. Total aggregated aeroplane operators' final offsetting requirements (in tonnes), as informed by the State
Field 4	Total quantity of emissions units cancelled	4. Total aggregated quantity of emissions units cancelled to reconcile the total final offsetting requirements in Field 3
Field 5	Consolidated identifying information for cancelled emissions units	<p>For each batch of cancelled emissions units (<i>batch</i> defined as a contiguous quantity of serialized emissions units), identify the following:</p> <ul style="list-style-type: none"> 5.a Quantity of emissions units cancelled; 5.b Start of serial numbers; 5.c End of serial numbers; 5.d Date of cancellation; 5.e Eligible emissions unit programme; 5.f Unit type; 5.g Host country; 5.h Methodology; 5.i Demonstration of unit date eligibility; 5.j Programme-designated registry name; 5.k Unique identifier for registry account to which the batch was cancelled; 5.l Aeroplane operator in whose name the unit was cancelled; and 5.m The unique identifier for the registry account from which the cancellation was initiated.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 10: Requirements for conducting the verification

1. INTRODUCTION

Note – The procedures specified in this Appendix are concerned with the verification requirements in Chapter 4 and Chapter 6 of this Requirement.

2. VERIFICATION OF EMISSIONS REPORT AND EMISSIONS UNIT CANCELLATION REPORT

The verification team shall conduct the verification according to ISO 14064-3:2019, and the following additional requirements.

2.1. Type of engagement (ISO 14064-3:2019 section 5.1.2)

The engagement type shall be verification. The “agreed-upon procedure” engagement type is not applicable to CORSA.

2.2. Level of assurance (ISO 14064-3:2019 section 5.1.3)

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

2.3. Objectives (ISO 14064-3:2019 section 5.1.4)

2.3.1. When conducting the verification of an Emissions Report, the verification team shall perform sufficient procedures to conclude whether:

- a) the greenhouse gas statement is materially fair and an accurate representation of emissions over the period of the Emissions Report and is supported by sufficient and appropriate evidence;
- b) the aeroplane operator has monitored, quantified and reported its emissions over the period of the Emissions Report in accordance with this Requirement and the approved Emissions Monitoring Plan;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	
Version	02	

- c) the aeroplane operator has correctly applied the method of flight attribution documented in the approved Emissions Monitoring Plan and in accordance with 1.8, to ensure a correct attribution of leased aeroplane and international flights operated by other aeroplane operators under the same corporate structure;
- d) the stated amount of emissions reductions from the use of CORSIA eligible fuels is materially fair and an accurate representation of emissions reductions over the reporting period, and is supported by sufficient and appropriate internal and external evidence;
- e) the claimed batches of CORSIA eligible fuels have not also been claimed by the aeroplane operator under any other voluntary or mandatory schemes it has participated in (where the emissions reductions from CORSIA eligible fuels may be claimed), during the current compliance period, as well as the compliance period immediately preceding it; and
- f) the aeroplane operator has monitored, calculated and reported its emissions reductions associated from the use of CORSIA eligible fuels over the period of the reporting period in accordance with this Requirement.

2.3.2. When conducting the verification of an Emissions Report, the verification team shall perform sufficient procedures to conclude whether:

- a) the aeroplane operator has accurately reported cancellation of its CORSIA Eligible Emissions Units in accordance with this Requirement;
- b) the stated number of cancelled CORSIA Eligible Emissions Units is sufficient for meeting the aeroplane operator's total final offsetting requirements associated with the relevant compliance period, after accounting for any claimed emissions reductions from the use of CORSIA eligible fuels, and the aeroplane operator can demonstrate sole right of use to such cancelled CORSIA Eligible Emissions Units; and

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- c) the eligible emissions units cancelled by the aeroplane operator to meet its offsetting requirements under this Requirement have not been used by the aeroplane operator to offset any other emissions.

2.4. Scope (ISO 14064-3:2019 section 5.1.6)

2.4.1. 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 CORSIA eligible fuels claim(s) where applicable. This includes:

- a) CO₂ emissions from aeroplane fuel monitoring methods, calculated in accordance with Chapter 2; and
- b) Emissions reductions from the use of CORSIA eligible fuel(s).

2.4.2. The scope of the verification of the CORSIA eligible fuel claim(s) in the Emissions Report shall include the following:

- a) Any internal aeroplane operator procedures for CORSIA eligible fuels, including aeroplane operator controls to ensure the claimed CORSIA eligible fuels satisfies the CORSIA Sustainability Criteria;
- b) Checks for double claiming are limited to the specific aeroplane operator. Any findings outside of this scope are not relevant for the verification opinion, however they should still be included in the Verification Report for further consideration by the State;
- c) Assessment of verification risk with appropriate changes to the verification plan; and
- d) Assessment of whether there is sufficient access to relevant internal and external information to obtain sufficient confidence in each CORSIA eligible fuel claim. Where evidence of the sustainability or the size of the CORSIA eligible fuels claim is considered either inappropriate or insufficient, further information should be sought

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

directly from the fuel producer with direct access facilitated through the aeroplane operator.

2.4.3. When conducting the verification of an Emissions Unit Cancellation Report, the scope of the verification shall reflect the period of time and information covered by the report and the verification team shall confirm that the cancelled eligible emissions units used to meet the aeroplane operator's offsetting requirements under this Regulation have not been used to offset any other emissions.

2.5. Materiality (ISO 14064-3:2019 section 5.1.7)

2.5.1. When conducting the verification of an Emissions Report, the verification body shall apply the following materiality thresholds:

- a) of 2 percent for aeroplane operators with annual emissions on international flights subject to Chapter 2, Chapter 3, and Chapter 4 requirements above 500 000 tonnes; and
- b) of 5 percent for aeroplane operators with annual emissions on international flights subject to Chapter 2, Chapter 3, or Chapter 4 requirements equal or less than 500 000 tonnes of CO₂.

2.5.2. When conducting the verification of an Emissions Report, the over and understatements in 1.5.1 shall be allowed to balance out in both cases.

2.6. Assessment of GHG data and information (ISO 14064-3:2019 section 6.1.3)

2.6.1. The verification team shall confirm that the Emissions Report data has been collected in accordance with the approved Emissions Monitoring Plan and monitoring requirements specified in this Requirement.

2.6.2. In accordance with the Emissions Report evidence-gathering 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

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

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. The verification team shall cross-check whether the emissions reported are reasonable in comparison to other fuel-related data of the aeroplane operator.

2.6.3. Depending on the outcome of Emissions Report data testing and assessment, the risk assessment, verification and evidence-gathering plans shall be amended, where necessary.

2.7. Circumstances requiring a site or facility visit (ISO 14064-3:2019 section 6.1.4.2)

A member of the verification team shall conduct a site visit if the risk assessment and evidence-gathering plan require a site visit to reduce the verification risk to an acceptable level. Site visits can only be waived upon approval by Brunei DCA.

2.8. Validation or verification plan (ISO 14064-3:2019 section 6.1.5)

2.8.1. The verification team shall prepare the verification plan on the basis of the strategic analysis and risk assessments. 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 risk assessment, and the requirement to deliver a verification opinion with reasonable assurance, when determining sample size.

2.8.2. The verification plan shall include the following:

- a) Verification team members, roles and responsibilities and qualifications; and
- b) Any external resources required.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

2.9. Evidence-gathering plan (ISO 14064-3:2019 section 6.1.6)

2.9.1. The Emissions Report evidence-gathering plan shall include the following:

- a) Number and type of records and evidence to be examined;
- b) Methodology used to determine a representative sample; and
- c) Justification for the selected methodology.

2.9.2. When conducting the verification of an Emissions Unit Cancellation Report, the verification team shall not rely on sampling.

2.10. General (ISO 14064-3:2019 section 6.3.2.1)

When conducting the verification of an Emissions Report or an Emissions Unit Cancellation Report, the verification team shall choose between two types of verification opinion statements, either 'verified as satisfactory' or 'verified as unsatisfactory'. If the report includes non-material misstatements and / or non-material non-conformities, the report shall be 'verified as satisfactory with comments', specifying the misstatements and non-conformities. If the report contains material misstatements and / or material non-conformities, or if the scope of the verification is too limited or the verification team is not able to obtain sufficient confidence in the data, then the report shall be 'verified as unsatisfactory'.

2.11. Verification Report (ISO 14064-3:2019 section 6.3.3)

2.11.1. The verification team shall submit a copy of the Verification Report to the aeroplane operator. Upon authorization by the aeroplane operator, the verification team shall forward a copy of the Verification Report together with the Emissions Report, the Emissions Unit Cancellation Report, or both, to the State. The Verification Report shall include:

- a) names of the verification body and verification team members;
- b) time allocation (including any revisions and dates);
- c) scope of the verification;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- d) main results of impartiality and avoidance of conflict of interest assessment;
- e) criteria against which the Emissions Report was verified;
- f) criteria against which the Emissions Unit Cancellation Report was verified;
- g) criteria against which the Emissions Unit Cancellation Report was verified;
- h) main results of the strategic analysis and risk assessment;
- i) description of verification activities undertaken, where each was undertaken (on-site vs off-site) and results of checks made on the CO₂ emissions information system and controls;
- j) description of data sampling and testing conducted, including records or evidence sampled, sample size, and sampling method(s) used;
- k) the results of all data sampling and testing, including cross-checks, and in the case of the Fuel Allocation with Block Hour method, an assessment on the accuracy of the aeroplane operator's specific average fuel burn ratio per ICAO aircraft type designator used;
- l) compliance with the Emissions Monitoring Plan;
- m) any non-compliances of the Emissions Monitoring Plan with this Requirement;
- n) non-conformities and misstatements identified (including a description of how these have been resolved);
- o) conclusions on data quality and materiality;
- p) conclusions on the verification of the Emissions Report;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- q) conclusions on the verification of the Emissions Unit Cancellation Report;
- r) justifications for the verification opinion made by the verification team;
- s) results of the independent review and the name of the independent reviewer; and
- t) concluding verification opinion.

2.11.2. When conducting the verification of an Emissions Unit Cancellation Report, only 2.11.1 (a), (b), (c), (d), (f), (g), (h), (n), (q), (r), (s) and (t) shall be applicable.

2.11.3. When conducting the verification of an Emissions Report, only 2.11.1 (a), (b), (c), (d), (e), (g), (h), (i), (j), (k), (l), (m), (n), (o), (p), (r), (s) and (t) shall be applicable.

2.11.4. The verification team shall provide a conclusion on each of the verification objectives listed in 2.3, as applicable, in the concluding verification opinion.

2.12. Independent review (ISO 14064-3:2019 section 8)

The independent review shall be performed to ensure that the verification process has been conducted in accordance with ISO 14065:2020, ISO 14064-3:2019 and this Requirement, and that the evidence gathered is appropriate and sufficient to enable the verification team to issue a Verification Report with reasonable assurance.

2.13. Facts discovered after the verification/validation (ISO 14064-3:2019 section 10)

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 2.13.1. On request of the Brunei DCA, the verification body shall disclose the internal verification documentation on a confidential basis to the Brunei DCA.
- 2.13.2. Where issues that may render a previously issued verification opinion invalid or inaccurate are brought to the attention of verification body, then it shall notify the Brunei DCA.

BRUNEI DCA

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

Appendix 11: Requirements for a verification body and national accreditation body

1. INTRODUCTION

Note – The procedures specified in this Appendix are concerned with the verification requirements in Chapter 4 and Chapter 6 of this Requirement.

2. VERIFICATION BODY

2.1 The verification body shall be accredited to ISO/IEC 17029:2019 and ISO 14065:2020, 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 this Requirement:

- a) *Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA); and*
- b) *The International Accreditation Forum (IAF) document entitled, “IAF Mandatory Document for the Application of ISO 14065:2013 (IAF MD 6:2014).*

2.2 Management of impartiality (ISO 14065:2020 section 5.3)

2.2.1. If the team leader undertakes six annual verifications for one aeroplane operator, then the team leader 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 this Requirement.

2.2.2. 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.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- 2.2.3. The verification body, and any part of the same part of the same legal entity, shall not be a body that trades emissions units, the owner of a body that trades emissions units or owned by a body that trades emissions units.
- 2.2.4. 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.
- 2.2.5. 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 Report (including monitoring of fuel use and calculation of CO₂ emissions) and the Emissions Unit Cancellation Report.
- 2.2.6. To enable an assessment of impartiality and independence by the national accreditation body, the verification body shall document how it related to other parts of the same legal entity.

2.3 Competencies of personnel (ISO 14065:2020 section 7.2)

- 2.3.1. Personnel who have provided consultancy in relation to any greenhouse gas statement of the aeroplane operator shall not perform verification activities, under this Requirement, for that aeroplane operator for a period of three consecutive years from the date the consultancy was provided.
- 2.3.2. The verification body shall:
- a) Identify and select competent team personnel for each engagement;
 - b) Ensure appropriate verification team composition for the engagement; and
 - c) Ensure the verification team, at a minimum, includes a team leader who is responsible for the engagement planning and management of the team.

2.4 Management process for the competence of personnel (ISO 14065:2020 section 7.3)

- 2.4.1. The verification body shall establish, implement and document a method for evaluating the competence of the verification team personnel against the

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

competence requirements outlined in ISO 14065:2013, ISO 14066:2020 and paragraphs 2.3.2, 2.5.2 and 2.6 of this Appendix.

- 2.4.2. The verification body shall maintain records to demonstrate the competency of the verification team and personnel in accordance with paragraph 2.3.2 of this Appendix.

2.5 Management process for the competence of personnel (ISO 14065:2020 section 7.3.5)

2.5.1. The verification body shall:

- a) ensure continued competence of all personnel conducting verification activities, including continual professional development and training for verifiers to maintain and/or develop competencies; and
- b) conduct regular evaluation of the competence assessment process to ensure that it continues to be relevant for this Requirement.

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

- a) the requirements as outlined in this Requirement, the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Off
- b) the verification requirements as outlined in this Requirement, and Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), including material threshold, verification criteria, verification scope and objectives and the Verification Report preparation and submission requirements.

2.6 Management process for the competence of personnel (ISO 14065:2020 section 7.3.7)

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

- a) general technical processes in the field of civil aviation;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- b) aviation fuels and their characteristics, including CORSIA eligible fuel;
- c) fuel related processes including flight planning and fuel calculation;
- d) relevant aviation sector trends or situations that may impact the CO₂ emissions estimate;
- e) CO₂ emissions quantification methodologies as outlined in this Regulation, including assessment of Emissions Monitoring Plans;
- f) 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;
- g) greenhouse gas information and data management systems and controls, including quality management systems and quality assurance / quality control techniques;
- h) aviation related IT systems such as flight planning software or operational management systems;
- i) knowledge of approved CORSIA Sustainability Certification Schemes relevant for CORSIA eligible fuels under this Requirement, including certification scopes; and
- j) basic knowledge of greenhouse gas markets and emissions units programme registries.

2.6.2 Evidence of the above competencies shall include proof of relevant professional experience, complemented by appropriate training and education credentials.

2.6.3 When conducting the verification of an Emissions Report, 2.6.1 (a) to (i) shall be applicable.

2.6.4 When conducting the verification of an Emissions Unit Cancellation Report, only 2.6.1 (g) and (j) shall be applicable.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

2.7 Management process for the competence of personnel (ISO 14065:2020 section 7.3.7)

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

2.7.2 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.

2.8 Pre-engagement (ISO 14065:2020 section 9.2)

2.8.1 In the pre-engagement process step, the verification body shall require the aeroplane operator to provide the following information relevant for the period of the contractual engagement between the verification body and the aeroplane operator:

- a) number and type of aeroplane;
- b) number of international flights;
- c) applicable Fuel Use Monitoring Method(s) as described in Appendix 2;
- d) information on the complexity of the implemented data flow, procedures and control activities;
- e) compliance period for which emissions units have been or will be cancelled;
- f) total quantity of emissions units that have been or will be cancelled for the indicated compliance period; and
- g) information on CORSIA Eligible Emission Unit Programme(s) used to source the emissions units, including name of the programme(s), programme-designated registries, eligible unit dates and activity and/or unit types.

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

2.8.2 When conducting the verification of an Emissions Report, 2.8.1 (a) to (d) shall be applicable. When conducting the verification of an Emissions Unit Cancellation Report, 2.8.1 (e) to (g) shall be applicable.

2.9 Engagement (ISO 14065:2020 section 9.3)

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

- a) scope of verification, verification objectives, level of assurance, materiality threshold and relevant verification standards (ISO/IEC 17029, ISO 14065, ISO 14064-3, this Regulation and the Environmental Technical Manual, Volume IV);
- b) flexibility to change time allocation if this proves necessary because of findings during the verification;
- c) requirement of the aeroplane operator to accept the audit as a potential witness audit by national accreditation body's assessor, potentially accompanied by peer review assessors or other observers;
- d) 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 Brunei DCA.
- e) requirement of the verification body to communicate any suspected intentional misstatement or noncompliance by the aeroplane operator to Brunei DCA as soon as practicable (ISO 14064-3:2019 section 5.4.3); and
- f) liability coverage.

2.10 Records (ISO 14065:2020 section 9.11)

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

- a) client's Emissions Monitoring Plan, Emissions Report and Emissions Unit Cancellation Report where applicable;

Document	BAR 16 – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)	
Version	02	

- b) Verification Report and related internal documentation;
- c) Requests for clarification, all misstatements and nonconformities arising from the verification and the conclusions reached, communication with the responsible party on all misstatements (ISO 14064-3:2019 section 5.4.4);
- d) Identification of team members and criteria for selection of team; and
- e) 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.

2.11 Confidentiality (ISO 14065:2020 section 10.4)

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 Brunei DCA. The mechanism for authorizing this consent shall be specified in the contract between the verification body and aeroplane operator.

3. NATIONAL ACCREDITATION BODY

A national accreditation body shall be working in accordance with ISO/IEC 17011:2017 and the following requirements.

3.1 ACCREDITATION CYCLE (ISO 17011:2017 section 7.9.3)

An on-site assessment serving surveillance purposes of the national accreditation body shall consist of an office assessment and a representative witness assessment, where the office assessment emphasizes the documented procedures of the verification body, and the witness assessment provides for an observation of the verification body carrying out verification activities.