Part 301
Aviation Environmental Protection

This part of Jordanian Civil Aviation Regulations is hereby issued under the authority and provisions of article 12-B of the Civil Aviation Law No. (41) dated 2007, as amended.

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Chief Commissioner/CEO
Civil Aviation Regulatory Commission

Record of Revisions

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Contents

Subpart A
Aviation Environmental Regulation

301.1 Applicability.

(a) This Part applies to airport operators, aircraft operators, entities tenants and individuals who undertake activities on airport property.

(b) The aviation environmental issues referred to in this Part are issues that relate to aircraft noise, aircraft emissions and land use planning on and surrounding airports.

301.3 Definitions.

With respect to this Aviation Environmental Regulation, the following definitions shall apply:

"**Aircraft operator**" means the natural or juridical person operating and directing an aircraft, and putting it to use either personally or through his employees, agents or subsidiaries, and its crew members shall be under his instructions and commands, whether he is an owner, lessee or in possession thereof".

"**Airport operator**" means the party responsible to operate the airport and holds an Airport Operating Certificate.

"**Carbon sink**" means a natural or man-made feature that achieves a net reduction in atmospheric carbon dioxide.

"**CARC**" means the Civil Aviation Regulatory Commission CARC.

"**Emissions**" means gases and particles emitted as a result of fossil fuel combustion.

"**Environment**" has the same meaning as "environment" as defined in Environmental Protection Law, No. 52 of 2006*, - "*The surroundings which include the living and nonliving beings, the materials contained, and what surrounds it, such as air, water, soil, and interactions of any of them, as well as the establishments built by the human being."

"**Hazardous Waste**" has the same meaning as "hazardous and harmful waste" defined in Regulations No. 24 of 2005: Management, Transportation and Handling of Harmful and Hazardous Substances issued by virtue of Sub-paragraph 7 of Paragraph A of Article 23 of the Environmental Protection Law, No. 52 of 2006.

"**Movement**" means an aircraft take off and related taxiing or other motion, or an aircraft landing and related taxiing or other motion.

"**Multiple departure**" applies only to flying training organizations and means either an agreed number of take-offs or "touch-and-goes" by an individual aircraft during a notified flight, (such agreement being between the airport operator and the aircraft operator), or the actual number of recorded departures during the notified flight.

"**Quarantine waste**" means organic waste generated on a flight arriving in Jordan from another country, and includes vegetable, fruit, meat, food, beverage and similar wastes and any materials that may be in contact with these wastes such as cutlery.

"**Solid Waste**" has the same meaning as "solid waste" defined in Regulation No. 27 of 2005: Management of Solid Waste Regulations, issued by virtue of sub-paragraph 7 of Paragraph A of Article 23 of the Environmental Protection Law, No. 52 of 2006.

"**Tenant**" means any organization – other than the relevant airport operator – who carries out any form of activities at the airport under a contract with the airport operator.

301.5 General Provisions.

(a) CARC shall supervise all aspects of this Part related to aviation environmental issues and its implementation. Non-aviation environmental issues shall be supervised by relevant government authorities. CARC shall establish aviation environmental standards, procedures and requirements in accordance with international obligations, national laws and applicable regulations and required good practice sufficient to ensure proper aviation sector environmental practices and standards are applied and maintained. CARC shall inspect and enforce the requirements of this Part with respect to aviation environmental issues.

(b) CARC shall ensure that appropriate staff with environmental management expertise exists to coordinate the implementation of this Part and shall promptly communicate the name of the individual responsible for environmental management to each airport operator.

(c) Within 6 months of the enactment of this Part, each airport operator shall identify and, as necessary, train appropriate staff to ensure sufficient environmental management capacity to coordinate the implementation of this Part at the airport operator level and shall promptly communicate the name of the individual responsible for environmental management to CARC.

(d) Airport operators shall adhere to the requirements of this Part as they apply to the airports for which they are responsible. Airport operators shall also ensure that all entities and individuals who undertake operations or other activities on their behalf meet the environmental standards, procedures and requirements set out in this Part. Where more than one entity has a responsibility for airport operations, each such entity shall meet the requirements set out in this Part.

(e) Aircraft operators shall meet aircraft performance standards set out in this Part, or referred to by this Part.

(f) Entities and individuals that undertake activities on airport property shall undertake the actions necessary to comply with the requirements of this Part. Tenants shall be responsible for ensuring that any of their sub-contractors or other employees comply with the requirements of this Part.

(g) All reports, charts, maps and other documents required to be provided to CARC by this Part, shall be in both electronic and hard copy formats.

301.7 Application of Standards and Requirements.

(a) Nothing in this Part shall be understood or construed to prevent the application of any other requirement that may be required by any other government entity according to applicable laws.

(b) In Special Economic Zones or similar government entities, the laws and by-laws of the Special Economic Zones or similar zones shall be applicable to non-aviation environmental issues. Where no specific Special Economic Zone or

similar entity regulation relating to non-aviation environmental issues exists, the laws and by-laws of the Ministry of Environment shall apply.

301.9 Reserved.

301.11 Airport Noise.

(a) Preparation of Noise Contours.

(1) Airport operators shall prepare noise contour maps for the airports for which they are responsible in accordance with JCAR Part 150 within 6 months of the effective date of this Part. Airport operators shall submit noise contour maps to CARC within 1 week of their completion.

(2) Airport operators shall validate noise contour maps at least bi-annually at the expense of the airport operator, or as required by CARC at the expense of CARC.

(3) Validation of the noise contour maps shall be through:

(i) A revision of the aircraft fleet mix that was used to construct noise contours; or

(ii) A new run of the noise model if the aircraft fleet mix does not fall within the criteria established for the previous noise contour development; or

(iii) On-site measurement of noise levels.

(4) CARC shall review noise contour maps submitted to it and shall approve them within 20 working days provided they meet the requirements for preparation of noise contour maps set out in JCAR Part 150.

(b) Noise Reduction and Management Measures.

Where a noise contour map referred to in JCAR 301.11 (a) identifies a non-compatible land use with respect to JCAR Part 150 Appendix A Table 1, CARC shall immediately order the airport operator to:

(1) Specify and implement operational procedures to reduce noise levels in specific areas to become compatible with the existing land use as specified in JCAR 301.11 (c), and

(2) Prepare, in consultation with the appropriate authorities, a Noise Reduction and Management Plan to be implemented in the case where the operational procedures to reduce noise were ineffective in reaching compatible noise levels as specified in JCAR 301.11 (d) (4).

(c) Operational Procedures To Reduce Noise.

(1) Where the airport operator receives an order from CARC to specify and implement operational procedures to reduce noise at the airport, the airport operator shall consider the following, in consultation with the concerned parties, among other things that may be specified by CARC:

(i) Selection of runways to reduce noise in adjacent communities.

(ii) Delayed engine start up.

(iii) Use of ground power units in place of auxiliary power units.

(iv) Application of continuous descent approach procedures.

(v) Use of low power/low drag procedure.

(vi) Minimizing flap angles.
(vii) Reduced use of reverse thrust.
(viii) Taxiing with fewer engines running.
(ix) Joining the instrument landing slope from a higher angle.
(x) Enforced shut down of engines while on the apron/ramp.
(xi) Requirements for aircraft to maintain airspace allotted for take off and landing.
(xii) Imposing curfews.

(2) The airport operator shall specify, and forward to CARC, operational measures within 30 working days of an order being issued by CARC under this Section after consulting with all relevant airport operational units.

(3) CARC shall give its determination on the specified operational measures within 20 working days of receipt of the measures.

(4) The airport operator shall implement operational procedures to reduce noise at the airport within 20 working days of the date of issuance of an approval by CARC.

(d) Noise Reduction and Management Plan

(1) Where the airport operator receives an order to prepare a Noise Reduction and Management Plan under this Section, and/or where operational conditions prescribed in JCAR 301.11 (b) exist, the airport operator shall develop a Noise Reduction and Management Plan to reduce noise levels in the non-compatible area to levels that fall within the criteria specified in JCAR Part 150 Appendix A Table 1.

(2) The Noise Reduction and Management Plan shall include the following:

(i) Operational measures in accordance with those approved by CARC or, if these have not been approved at the time the Noise Reduction and Management Plan is submitted to CARC they shall be added as soon as they have been approved.

(ii) Identification of properties and buildings in the area(s) of non-compatible land use identified by the noise contour maps together with specification of measures to be undertaken by the airport operator to reduce airport noise in buildings in these areas. The measures to be specified shall include, as appropriate and among other measures that may be considered appropriate:

(A) installation of windows and doors designed to reduce noise.
(B) installation of noise insulation.
(C) construction of berms on airport property.
(D) installation of noise barriers.

(iii) Identification of the sites that will be used for aircraft noise monitoring.

(iv) The identification of a schedule of noise charges that shall be paid by aircraft operators for each aircraft movement at the airport.

(iv) A schedule for terminating within 3 years following commencement of the implementation of the Noise Reduction and Management Plan,

the use of the airport by aircraft that do not meet Stage 3 noise certification standards as specified by JCAR Part CS (adopted EASA CS-36), or subsequent noise certification standards for quieter aircraft that may be adopted by CARC.

(v) Specified restrictions in the use of the airport by aircraft in the event that other measures to reduce noise in communities adjacent to the airport do not reduce noise levels to within the thresholds specified in JCAR Part 150 Appendix A Table 1.

(vii) An implementation and financing plan in accordance with 301.29 of this Part that shall achieve implementation of all measures in this part within 3 years of approval of the plan by CARC except for 301.11 (d) (2) (v), which shall be implemented as necessary after the third year following approval of the Noise Reduction and Management Plan to achieve noise levels to within the thresholds specified in JCAR Part 150 Appendix A Table 1.

(3) The airport operator shall submit the Noise Reduction and Management Plan to CARC within 6 months of receiving an order under this Section.

(4) CARC shall give its determination on the specified operational measures within 20 working days of receipt of the Noise Reduction and Management Plan.

(5) Where an updated noise contour map prepared after the implementation of operational procedures identified in this Section identifies a continuing level of noise that exceeds JCAR Part 150 Appendix A Table 1, CARC shall within 20 working days of receipt of the updated noise contour map, order the airport operator to implement the measures of the Noise Reduction and Management Plan.

(6) CARC shall monitor the implementation of the Noise Reduction and Monitoring Plan and may order the airport operator to take additional measures to reduce noise.

(7) As of 1 April 2010, the cost of implementing the Noise Reduction and Management Plan shall be met by Noise Reduction Plan penalties set out in JCAR 301.29.

(8) The implementation of 301.11 (d) (2) (ii) and (iii) of the Noise Reduction and Management Plan shall be through the appropriate local authorities.

(e) Noise Monitoring.

As of 1 April 2010 the airport operator shall install noise monitoring equipment to monitor noise levels at the airport to determine non-compliance with operational measure set to reduce noise.

301.13 Aircraft Engine Emissions.

(a) Operation of Aircraft.

For the purpose of this Section, all civil aviation aircraft using Jordanian airports shall meet the requirements of JCAR Part 21, JCAR Part CS (adopted EASA CS-34) and JCAR Part 91.

(b) Operational Procedures to Minimize Aircraft Engine Emissions.

(1) Within 6 months of the implementation of this Part, the airport operator shall submit to CARC operational procedures to reduce aircraft engine emissions at airports. The following procedures shall be considered in addition to others that the airport operator may specify:

(i) Delayed engine start up.

(ii) Use of ground power units in place of auxiliary power units.

(iii) Use of low power/low drag procedure.

(iv) Taxiing with minimum engines running.

(v) Shutting down of engines immediately upon arrival at the ramp or apron.

(2) CARC shall give its determination on the specified operational procedures within 20 working days of receipt of the measures.

(3) The airport operator shall require aircraft operators to implement the operational procedures to reduce aircraft emissions at the airport within 10 working days of the date of issuance of an approval by CARC.

(c) Supplemental Voluntary Measures.

As of 1 April 2009, the airport operator shall negotiate supplemental agreements with airline companies that use Jordanian airports to provide for the achievement of further reductions in aircraft engine emissions by the airline companies. These agreements shall be implemented voluntarily by airline companies and shall achieve reduced aircraft take-off weight, reduced fuel use and/or greater fuel efficiency among other measures that might also be achieved to reduce emissions. Commitments shall be documented using formats provided by the International Civil Aviation Organization (ICAO).

(d) Emissions Monitoring,

As of 1 April 2010 the airport operator shall install emissions monitoring equipment to monitor emissions at the airport to determine non-compliance with operational measure set to reduce emissions in cooperation with the concerned authority.

301.15 Airport Operations.

(a) General.

The airport operator shall undertake airport operations in compliance with the requirements of this Part and in compliance with the environmental requirements of relevant government authorities. The airport operator shall include the clauses provided in Appendix 1 to this Part as part of its contracts and agreements with all parties who undertake activities on property within the jurisdiction of the airport operator.

(b) Quarantine Waste Management.

(1) Within 2 years from the enactment of this Part, unless required earlier by local authorities, the airport operator shall ensure the availability of technology and trained expertise to treat quarantine waste and shall designate the technology for the treatment of quarantine waste and shall

communicate the designation to aircraft operators and their agents together with the responsibilities of aircraft operators and their agents to treat quarantine waste.

(2) Within 20 working days of notification by the airport operator of the availability of designated technology, aircraft operators or their agents shall ensure that quarantine waste off-loaded in Jordan is:
   (i) Separately collected and transported from aircraft; and
   (ii) Appropriately treated to kill any organisms that may be contained in the quarantine waste.

(3) The airport operator shall ensure that all quarantine waste management activities are carried out in accordance with local and national health and safety requirements.

(4) Following treatment of quarantine waste, it may be disposed of with non-hazardous solid waste.

(c) Non-Hazardous Solid Waste Management.

The airport operator and all parties operating at the airport:

(1) Shall manage their non-hazardous solid waste in accordance with the requirements of the Ministry of Environment Bylaw "Solid Waste Management", or the requirements of relevant authorities, as applicable, through an established Non-Hazardous Solid Waste Management Plan.

(2) Shall not dispose of solid waste except in containers that are designed for solid waste management and for which the airport operator, service provider or commercial entity, as appropriate, has made waste collection and disposal arrangements and which comply with international or national requirements which relate to recycling of non-hazardous solid waste.

(3) Shall not discard solid waste into a solid waste container that is too small for the waste or which is too full to properly accommodate the waste.

(4) Shall not place liquids in a container designed or intended for solid waste.

(d) Hazardous Wastes.

The airport operator and all parties operating at the airport shall prepare a Management Plan that identifies actions to address hazardous waste at the airport. The plan shall be in accordance with the requirements of the Ministry of Environment Regulation on Hazardous Waste Management and Handling, 2000, or the requirements of relevant authorities, as applicable, and JS 431: 1985 Storage - General Precautionary Requirements for Storage of Hazardous Substances, issued by Jordan Institution for Standards and Metrology.

(e) Dangerous Goods.

The airport operator and all parties operating at the airport shall manage their Dangerous Goods in accordance with the requirements of JCAR Part 139, JCAR Part OPS 1 and the ICAO Document 9284. Aircraft operators who are

International Air Transport Association (IATA) members shall also be required to comply with the requirements of IATA, noting that precedence is given to JCARs, ICAO, then IATA requirements in descending order.

(f) Spills Management.

(1) Planning

(i) The airport operator and all parties operating at the airport and who store, transport or use dangerous goods, hazardous materials or who generate any hazardous waste shall prepare a Hazardous Materials Spills Management Plan that identifies actions to address spills of hazardous goods or hazardous waste in accordance with the Ministry of the Environment Regulation on Environmental Protection from Pollution in Emergency Cases, Regulation on Hazardous Waste Management and Handling, 2000 and JS 431: 1985 Storage - General Precautionary Requirements for Storage of Hazardous Substances, issued by Jordan Institution for Standards and Metrology, as well as ICAO Document 9284 requirements.

(ii) The Hazardous Materials Spills Management Plan for each service provider and commercial entity operating at the airport shall specify actions to be taken at their own facilities as well as at notification of appropriate officials with civil defense and airport operations.

(iii) The Hazardous Materials Spills Management Plan of the airport operator shall address the actions at facilities it operates itself, as well as the range of requirements in this Part.

(iv) The Hazardous Materials Spills Management Plan shall include the minimum quantities of spills that must reported to CARC.

(v) The airport operator and all parties operating at the airport shall submit their Hazardous Materials Spills Management Plans to CARC, within 3 months of establishment of the party that uses or generates the hazardous waste for airport operators and parties already established on the airport, and prior to the establishment of the party for new entities. CARC shall approve them when it is satisfied that the Hazardous Materials Spills Management Plan will provide an effective response to a hazardous materials spill, and shall advise the concerned party of its decision within 20 working days of receipt of the Hazardous Material Spills Management Plans.

(vi) The airport operator shall ensure that the approved Hazardous Material Spills Management Plans are distributed to all relevant parties.

(vii) The airport operator shall designate staff members contactable 24 hours per day who shall have responsibility for taking action in respect to spills of hazardous goods or hazardous waste, and shall communicate details regarding contacting these staff members to all parties operating at the airport.

(2) Implementation.

(i) The operator of the facility in which the spill occurred shall be responsible for the containment and clean-up of the spill and for actions to address the spill and its consequences within the facility it operates.

(ii) The operator of the facility in which a spill has occurred shall immediately contact the civil defense authorities, as appropriate, and the airport operator to report the spill.

(iii) The airport operator, in consultation with the appropriate government authority, shall be responsible for determining whether the spill poses a threat to other facilities, to people outside the facility in which the spill occurred, or to the environment, and shall undertake all communication and coordination measures necessary to protect people, property and the environment from the consequences of the spill.

(iv) The airport operator and all parties operating at the airport shall immediately implement their Hazardous Materials Spills Management Plan in the event of a spill of a hazardous good or a hazardous waste.

(v) All parties operating at the airport must immediately contact the airport staff member mentioned in section 301.15 (f) (1) (vii) above, in the event of a spill of a hazardous good or a hazardous waste for which they are responsible.

(3) Enforcement.

(i) CARC may order the airport operator or the responsible party as appropriate for causing the spill to take additional actions to address spills or the clean-up of spills.

(ii) The additional actions required shall be at the expense of the party causing the spill.

(g) Surface Water and Wastewater.

(1) The airport operator shall ensure that surface waters are separately collected and stored on airport for non-potable usage. Surplus shall, in any case, be discharged separately from sewage and other wastewater.

(2) The airport operator shall ensure that wastewater generated on the airport property is managed through a system that ensures it is treated prior to discharge in accordance with standards prepared by Jordanian Institution for Standards and Metrology and applicable regulatory standards.

(3) The airport operator shall ensure that de-icing operations are conducted in areas that permit de-icing fluids to be collected for treatment, as necessary to ensure the protection of the environment.

(4) The airport operator and all parties operating at the airport shall ensure that no hazardous goods or hazardous waste, including oil, fuel or chemical substance, is discarded into the surface water management system or into the wastewater management system.

(h) Atmospheric Emissions.

The airport operator and all parties operating at the airport shall not discharge gases or vapors to the atmosphere except in accordance with the standards and provisions of the Ministry of the Environment Regulation on *Air Protection*, or relevant authorities as applicable.

(i) Wildlife Management.
Wildlife at the airport shall be managed in accordance with the provisions of JCAR 139.337.

(j) Land Use Within Airports.
Land use within the airport shall be managed by the airport operator in accordance with the provisions of JCAR Part 139 and JCAR Part 150.

(k) Land Use Planning Around Airports.
(1) In accordance with Article (7) of the Civil Aviation Law No. (41) of 2007, the approval of land use planning around the airport is the responsibility of CARC and shall be determined in cooperation with the concerned land authority.
(2) Where the airport operator owns, or is responsible for, land around the airport, the airport operator shall comply with approved land use plans.
(3) In the case of any actual or suspected infringement, such infringement shall be reported by the relevant airport operator to the appropriate land authority and to CARC.

301.17 Environmental Management System.

(a) Certification of Airports.
The issuance of airport certification under JCAR Part 139 by CARC requires that, as of 31 December 2009, the applicant develop an Environmental Management System to be included in the Airport Certification Manual. The Environmental Management System shall address:
(1) The environmental compliance requirements of this Part by both the airport operator and by the services and commercial entities operating at the airport under agreement with the airport operator.
(2) The assessment of violation penalties identified by this Part, and the invoicing, management of these penalties.

(b) Content of an Environmental Management System.
The Environmental Management System to be included in the Airport Certification Manual shall describe to the satisfaction of CARC the following:
(1) The Environmental Policy statement for the airport operator that provides the airports' commitment to environmental quality.
(2) The Environmental Management Plan to be implemented by the airport operator, including:
(i) The environmental priorities of the airport operator during the period during the certification period to ensure compliance with applicable environmental requirements.
(ii) How the priorities shall be achieved.
(iii) General timing of key actions to achieve the priorities.

(iv) The financial resources necessary to achieve the priorities and how they shall be raised.

(3) The Environmental Monitoring and Enforcement Plan to be implemented by the airport operator, including:

(i) Mechanisms for monitoring the proper environmental performance of all parties operating at the airport.

(ii) Mechanisms for enforcing the environmental management obligations of all parties operating at the airport.

(iii) The provision to CARC of a report annually that verifies the compliance of the airport operator and all parties operating at the airport with the environmental requirements set out in this Part as well as including non-compliance and corrective actions.

(c) CARC shall give its determination on the specified operational measures within 20 working days of receipt of the measures.

301.19 Environmental Impact Assessment.

(a) The airport operator shall notify CARC of any construction or other development they propose to undertake and shall conduct an Environmental Impact Assessment, as necessary, in accordance with the regulations of the Ministry of Environment or relevant authorities, as applicable.

(b) The Environmental Impact Assessment shall be presented to CARC prior to submission to the Ministry of Environment or relevant authorities, as applicable for comment.

301.21 Environmental Baseline.

(a) Environmental Baseline Report

(1) The airport operator shall prepare an Environmental Baseline Report in accordance with the requirements of the Ministry of Environment or relevant authorities, as applicable, or in accordance with this Part.

(2) The Environmental Baseline Reports shall be submitted as follows:

(i) Existing airports under the same management.
Within 6 months of the coming into force of this Part, the airport operator shall submit to CARC an Environmental Baseline Report prepared according to Terms of Reference drafted by the operator and approved by CARC. The report shall contain all the findings and recommendations, and be independently prepared by duly qualified individuals experienced in preparation of such reports without hindrance or influence from the airport operator, CARC or any service or commercial enterprise operating currently or in the past at the airport or other parties except that the airport operator shall undertake the administrative functions to hire the necessary expertise and to ensure the proper delivery of the report.

(ii) Existing airports under new management.
As part of the documentation necessary for the transfer of the Airport Certificate, the incoming operator shall submit to CARC an

Environmental Baseline Report prepared according to the Terms of Reference drafted by the operator and approved by CARC. The report shall contain all the findings and recommendations, and be independently prepared by duly qualified individuals experienced in preparation of such reports without hindrance or influence from the airport operator, CARC or any service or commercial enterprise operating currently or in the past at the airport or other parties except that the airport operator shall undertake the administrative functions to hire the necessary expertise and to ensure the proper delivery of the report.

(iii) New airports.

Applicants for an Airport Certificate for a new airport shall comply with the relative requirements of the Ministry of Environment or relevant authorities as applicable.

(b) Scope of Environmental Baseline Report.

The Environmental Baseline Report shall address at least the following environmental liabilities as they existed at the time that the airport operator assumes operational control of the airport; as well as any other requirements imposed by the Ministry of Environment or relevant authorities, as applicable, as well as the requirements of CARC:

(1) Pollution of soil.
(2) Pollution of groundwater.
(3) Air emissions.
(4) Noise levels.
(5) Extent of uncontrolled solid waste and litter.
(6) Aircraft that are not airworthy or other aircraft or parts of aircraft or support equipment or other related aviation materials that are on the airport site and for which an owner cannot be identified.
(7) Other conditions at the airport that impact negatively on the ambient environment and which pose an inherited environmental liability for the operator of the airport as a consequence of previous actions or absence of actions.
(8) Recommended approaches for correcting the identified environmental liabilities.
(9) Costs for correcting the identified environmental liabilities.
(10) Environmental criteria and standards used in the report shall be the most recent standards, as applicable.

(c) Agreement on Environmental Baseline Study.

(1) Appropriate international standards and benchmarks shall be used where environmental liabilities are found for which no Jordanian standard or criterion exists, having regard for both environmental quality and airport safety.
(2) CARC shall advise its acceptance of the report within 2 months of its receipt.

(d) Responsibility of Airport Operator for Environmental Liabilities.

(1) The airport operator or intending airport operator, shall not be financially responsible for environmental liabilities determined by the Environmental Baseline Study to have existed at the time that the operator's report was first submitted to CARC.

(2) Within 6 months of notification of acceptance of the Environmental Baseline Report for established airport operators, or within 6 months of receiving the airport certificate in the case of new airport operators or new airports, the airport operator shall undertake the work necessary to correct the environmental liabilities.

301.23 Availability and Inspection of Documents.

(a) Availability of Documents.

The airport operator shall retain all documents related to the scope of this Part for a minimum of 5 years following the end of the calendar year to which they pertain. The airport operator shall include the following clause into all contracts and agreements with service deliverers and commercial entities at the airport:

"[NAME OF ENTITY] shall retain all documents relating to environmental management for a minimum of 5 years following the end of the calendar year to which they pertain and shall make them available for inspection by the airport operator and/or CARC upon demand."

(b) Inspection of Documents.

A person duly authorized by the Chief Commissioner of CARC shall have the right to inspect at any time and without prior notice any documents of the airport operator that may be related to the implementation of the requirements of this Part.

301.25 Communications.

(a) CARC shall respond in writing to the airport operator within 5 working days to confirm receipt of any report, application, proposal or amendment it receives from the airport operator.

(b) CARC shall approve, and, unless otherwise specified in this Part, shall notify the airport operator in writing of its approval, within 20 working days of receipt of the report, application, proposal or amendment, or within the same timeframe it shall notify the airport operator in writing of deficiencies or requirements that it must address and the date by which the deficiencies or requirements must be addressed.

301.27 Environment Committee.

(a) As of 1 April 2009, the airport operator shall establish an Environment Committee to advise and facilitate the application of this Part generally, including the noise reduction and management measures specified in JCAR 301.11 (b) (1), as well as carbon management at the airport to minimize the adverse effect of carbon emissions. The committee shall comprise an odd number of full members drawn from relevant government and municipal

entities, a representative of the airlines, other entities that the airport operator considers relevant, and at least 2 community representatives from area(s) where noise exceeds thresholds specified in JCAR Part 150 Appendix A Table 1. CARC may attend meetings of the committee as an observer. All full members of the Committee shall have equal voting rights.

(b) The airport operator shall:
  (1) Chair the meetings of the Environment Committee.
  (2) Set the agenda of meetings of the committee and distribute this to members of the committee and to CARC at least 5 working days before each meeting of the committee.
  (3) Prepare Minutes of each meeting of the committee and distribute the Minutes to each member of the committee and to CARC within 5 working days following each meeting.

(c) The Environment Committee shall meet at least once every three (3) months.

(d) Unless it can show just cause the airport operator shall comply with the resolutions of the Environment Committee.

(e) The airport operator shall report to the Environment Committee on all activities and expenditure undertaken in accordance with this Part.

(f) The CARC shall make public all expenditure from the Environment Committee.

301.29 Payment of Noise Reduction Plan and Emissions Penalties.

(a) Airline companies and all parties operating at the airport or their agents shall make payments according to the terms of agreed arrangements in accordance with this Part. The penalties prescribed in JCAR 301.31 (b) shall be applied and be payable under this Part.

(b) The airport operator shall collect and maintain all penalties received in accordance with this Section in a special Environmental Account.

(c) Penalties applied and payable become effective from January 1, 2010.

(d) The airport operator shall invoice aircraft operators for Noise Reduction Plan Penalties and the aircraft operator shall pay the required penalties to the airport operator within 15 working days of the of the invoice date.

301.31 Enforcement by Airport Operators.

(a) General.

All penalties relating to non-compliance with the provisions of this Section and/or to non-payment of penalties imposed under 301.29 of this Part shall be invoiced by the airport operator to the aircraft operator or airport tenant, as applicable, within 5 working days of the occurrence of the infraction and shall be payable within 15 working days.

(b) Noise.
  (1) A Stage 2 aircraft, as identified in JCAR Part CS (adopted EASA CS-36) and Part 91, that fails to adhere to an operational measure for noise reduction required by the airport operator shall be assessed a Noise

Operational penalty as prescribed in the Civil Aviation Law No. (41) of 2007 article (61).

(2) Stage 2 aircraft may be subject to curfews and other noise limiting procedures in addition to any Noise Operational penalty and/or operational measure imposed.

(3) An aircraft classified as a Stage 3 aircraft, or an aircraft that is certified to be less noisy than a Stage 3 aircraft under certification standards equivalent to those set out by the ICAO, that fails to adhere to an operational measure for noise reduction required by the airport operator, shall be assessed a Noise Operational penalty as prescribed in the Civil Aviation Law No. (41) of 2007 article (61).

(4) Where an aircraft operator or airport tenant as applicable, does not pay the penalty prescribed in JCAR 301.31 (b) (1) and (3) within 15 working days of the time specified in the relevant invoice, the airport operator shall immediately send the aircraft operator or airport tenant, as applicable, a warning letter stating that the unpaid penalty shall be charged an interest rate in accordance with applicable laws and shall be applicable after 10 working days of receipt of the warning letter.

(5) Airport operators are encouraged by CARC to implement a system of graded landing fees that will promote the use of Stage 3 or higher aircraft.

(c) Aircraft Engine Emissions.

(1) An aircraft operator that fails to adhere to an operational measure for emissions reduction that is required by the airport operator shall be assessed an Emissions Reduction penalty as prescribed in the Civil Aviation Law No. (41) of 2007 article (61).

(2) Where an aircraft operator does not pay within 15 working days of the specified time an Emissions Reduction penalty prescribed in JCAR 301.31 (c) (1) above, the airport operator shall immediately send the aircraft operator a warning letter stating that the unpaid penalty shall be charged an interest rate in accordance with applicable laws and shall be applicable after 10 working days of receipt of the warning letter.

(d) Non-Aviation Operations – Waste and Dangerous Goods Disposal.

(1) The airport operator shall monitor the operations of the aircraft operators, service and commercial entities operating at the airport in accordance with its Environmental Management System.

(2) The airport operator shall document instances of environmental management that do not meet the standards contained in this Part, and report these instances to the Ministry of Environment and /or relevant entities for enforcement action.

(3) Where remedial action is necessary to correct the environmental consequences of actions that are contrary to this Part, and the responsible party fails to effect adequate corrective measures, the airport operator shall undertake the required work under order of CARC and shall require the responsible party to pay, within 2 months of the completion of the remedial action, the cost of the remedial action plus a penalty of three (3)

times the cost of the remedial action, or make other payment arrangements acceptable to CARC.

(e) Non-Payment of Penalties.

(1) Action by the Airport Operator.
Where an aircraft operator has not paid any penalty (together with any outstanding interest rate) to the airport operator within 6 months after the invoice date for the penalty, the airport operator may not permit an aircraft operator to use the airport for as long as a penalty under this part, and the outstanding interest rate if not previously paid, remain unpaid.

(2) Action by CARC.
Following advice to CARC by the airport operator that the provisions of 301.31 (e) (1) above have been applied, CARC may, at its discretion:

(i) Suspend a license, certificate or permit it has issued to the entity that has not made payment, and/or

(ii) Order the airport operator to prohibit access to the airport by personnel, or a subset of personnel, of the entity that has not made payment, and/or

(iii) Exercise its rights under Article 14 (b) of the Civil Aviation Law and prohibit the subject aircraft from flying.

Subpart B
CORSIA Implementation
Monitoring, reporting and verification (MRV) system for CO_2 emissions offsetting requirements and emissions units

Definitions

Aerodrome. A defined area on land or water (including any buildings, installations and equipment)
Aerodrome pair. A group of two aerodromes composed of a departing aerodrome and an arrival
aerodrome. intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft
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 via Item 4 (Name of owner) and Item 5 (Address of owner) on the certificate of registration of an Aeroplane
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.
CORSIA eligible fuel. A CORSIA sustainable aviation fuel or a CORSIA lower carbon aviation fuel, which an operator may use to reduce their offsetting requirements.
CORSIA lower carbon aviation fuel. A fossil-based aviation fuel that meets the CORSIA Sustainability Criteria under Volume 4 of Annex 16.
CORSIA sustainable aviation fuel. A renewable or waste-derived aviation fuel that meets the CORSIA Sustainability Criteria under Volume 4 of Annex 16.
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)
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 operator.
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 body. A legal entity that performs the verification of an Emissions Report and, when required, an Emissions Unit Cancellation Report, as an accredited impartial third party.
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 report. A document, drafted by the verification body, containing the verification opinion and required supporting information.
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.

Abbreviations and Units

Where the following abbreviations are used in this subpart, they have the meanings ascribed to them below:

Abbreviations
ACARS: Aircraft Communications Addressing and Reporting System
AOC: Air operator certificate
CERT: CO_2 Estimation and Reporting Tool
CO_2: Carbon dioxide
CO_2e: Carbon dioxide equivalent
CORSIA: Carbon Offsetting and Reduction Scheme for International Aviation
GHG: Greenhouse gases
IAF: International Accreditation Forum
IEC: International Electrotechnical Commission
ISO: International Organization for Standardization
MRV: Monitoring, Reporting and Verification
MJ: Megajoule

RTK: Revenue Tonne Kilometres

Non-SI units

Specific quantity	**Unit**	**Symbol**	**Definition (in terms of SI units)**
mass	tonne	t	1 t = 103 kg
time	hour	h	1 h = 60 min = 3 600 s
volume	litre	L	1 L = 1 dm3 = 10-3 m3

Article 1: General Provisions

Applicability

301.1.1. This Article shall be applicable to an aeroplane operator attributed to Hashemite Kingdom of Jordan according to the approach in 301.1.2.

Attribution of an aeroplane operator to Hashemite Kingdom of Jordan

301.1.2. The aeroplane operator is considered attributed to Hashemite Kingdom of Jordan under this subpart in the following cases:
(a) Where the aeroplane operator has an International Civil Aviation Organization (ICAO) Designator, which is notified by Hashemite Kingdom of Jordan;
(b) Where the aeroplane operator does not possess an ICAO Designator, but has a valid air operator certificate (or equivalent) issued by Hashemite Kingdom of Jordan; or
(c) Where the aeroplane operator does not possess an ICAO Designator or air operator certificate, but is registered as juridical person in Hashemite Kingdom of Jordan. This also applies where the aeroplane operator is a natural person having residence and registration in Hashemite Kingdom of Jordan.
301.1.3. If the aeroplane operator changes its ICAO Designator, AOC (or equivalent) or place of juridical registration, and is subsequently attributed to ~~a new~~ 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 fulfils its requirements under CORSIA at the start of the next compliance period.

301.1.4. Civil Aviation Regulatory Commission (CARC) shall ensure the correct attribution of an aeroplane operator according to the approach in 301.1.2.

301.1.5. The aeroplane operator with a wholly owned subsidiary aeroplane operator that is legally registered in Jordan can be treated as a single consolidated aeroplane operator liable for compliance with the requirements of this subpart, subject to the approval of CARC. Evidence shall be provided in the aeroplane operator's Emissions Monitoring Plan (refer to 2) to demonstrate that the subsidiary aeroplane operator is wholly owned.

301.1.6. CARC 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. CARC may submit updates to this list to ICAO on a more frequent basis.

Attribution of international flights to an aeroplane operator

301.1.7. The aeroplane operator shall identify international flights that are attributed to it according to the approach in 301.1.8.
301.1.8. 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 ~~CARC~~ Jordan, 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.
301.1.9. Upon request by CARC, owners of aeroplanes registered in Jordan shall provide all information necessary to identify the actual aeroplane operator of a flight.
301.1.10. The aeroplane operator may delegate the administrative requirements of this subpart to a third party contractor. The third party contractor may not also conduct verification services for the aeroplane operator as prescribed in ~~this subpart~~ Articles 4 and 6. Liability for compliance shall remain with the aeroplane operator in all situations.

Record keeping
301.1.11. The aeroplane operator shall keep records relevant to demonstrating compliance with the requirements of this subpart for a period of 10 years.
301.1.12. CARC shall keep records relevant to the aeroplane operator's CO_2 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 301.5.9 – 301.5.11.

Article 2: Monitoring of CO_2 Emissions and CORSIA Eligible Fuels

Applicability
301.2.1. This Article shall be applicable to each an aeroplane operator attributed to Jordan that produces annual CO_2 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.
301.2.2. This Article 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 CARC.
301.2.3. This Article shall be applicable to a new entrant aeroplane operator attributed to Jordan from the year after it meets the requirements in 301.2.1. and 301.2.2.

Emissions Monitoring Plan

301.2.4. The aeroplane operator shall submit an Emissions Monitoring Plan to CARC by 28 February 2019.

301.2.5. The Emissions Monitoring Plan shall contain the information as defined in Appendix 1.

301.2.6. The aeroplane operator shall submit the Emissions Monitoring Plan to CARC in the form prescribed by CARC.

301.2.7. CARC 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 CARC by 30 April 2019.

301.2.8. The emission data shall be reported by state pair as level of aggregation.

301.2.9. A new entrant aeroplane operator shall submit an Emissions Monitoring Plan to CARC within three months of falling within the scope of applicability of this Article.

301.2.10. An aeroplane operator that falls within the scope of applicability of this Article 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 of this Article, and CARC 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 Article 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 CARC as soon as possible.

301.2.11. The aeroplane operator shall resubmit the Emissions Monitoring Plan to CARC for approval if a material change is made to the information contained within the Emissions Monitoring Plan.

301.2.12. The aeroplane operator shall inform CARC of changes that would affect CARC'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 CO_2 emissions

301.2.13. The aeroplane operator shall monitor and record its fuel use from international flights in accordance with an eligible monitoring method.

301.2.14. An aeroplane operator's fuel use monitoring method shall be submitted for approval by CARC.

301.2.15. 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

301.2.16. The aeroplane operator with annual CO_2 emissions from international flights, under the applicability of this Article, greater than or equal to 500 000 tonnes shall use a Fuel Use Monitoring Method as described in Appendix 2.

301.2.17. The aeroplane operator with annual CO_2 emissions from international flights, under the applicability of this Article, of less than 500 000 tonnes shall use either a Fuel Use Monitoring Method or the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT).

301.2.18. If the aeroplane operator's annual CO_2 emissions from international flights increases above the threshold of 500 000 tonnes in 2019, CARC shall permit, at its discretion, the aeroplane operator to continue to use the chosen monitoring method during 2020.
301.2.19. If the aeroplane operator does not have an approved Emissions Monitoring Plan as of 1 January 2019, it shall monitor and record its CO_2 emissions in accordance with the eligible monitoring method outlined in the Emissions Monitoring Plan that it will submit, or has submitted, to CARC.
301.2.20. If the aeroplane operator's Emissions Monitoring Plan is determined to be incomplete and/or inconsistent with the eligible Fuel Use Monitoring Method, then CARC 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.
301.2.21. If the aeroplane operator does not have sufficient information to use a Fuel Use Monitoring Method, CARC shall, at its discretion, approve the use of the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT) for a period lasting no later than 30 June 2019.

2021-2035 period
301.2.22. The aeroplane operator with annual CO_2 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 CO_2 Estimation and Reporting Tool (CERT).
301.2.23. The aeroplane operator, with annual CO_2 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 CO_2 Estimation and Reporting Tool (CERT).
301.2.24. If the aeroplane operator's annual CO_2 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).
301.2.25. If the aeroplane operator's annual CO_2 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).
301.2.26. The aeroplane operator that falls under the applicability of this Article 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 CO_2 Estimation and Reporting Tool (CERT), in the year when it falls under the applicability of this Article (year y). If the aeroplane operator does not have sufficient information to use a Fuel Use

Monitoring Method, CARC shall, at its discretion, approve the use of the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT) for a period lasting no later than 30 June in the year after the aeroplane operator falls under the applicability of this Article (year y + 1).

Calculation of CO_2 emissions from aeroplane fuel use

301.2.27. 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.

301.2.28. 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.

301.2.29. The aeroplane operator using a Fuel Use Monitoring Method shall determine the CO_2 emissions from international flights using the following equation:

$$CO_2 = \sum_f \left(M_f * FCF_f\right)$$

where:

CO_2 = CO_2 emissions (in tonnes);

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

FCF_f = Fuel conversion factor of given fuel f, equal to 3.16 (in kg CO_2/kg fuel) for Jet-A fuel, Jet-A1 fuel, TS-1 fuel, or No. 3 Jet fuel and 3.10 (in kg CO_2/kg fuel) for AvGas or Jet-B fuel.

Note. – For the purpose of calculating CO_2 emissions the mass of fuel used includes all aviation fuels assuming that all fuels used are conventional fuels.

Monitoring of CORSIA eligible fuel claims

301.2.30. The aeroplane operator that intends to claim for emissions reductions from the use of CORSIA eligible fuels shall use a CORSIA eligible fuel that meets the CORSIA Sustainability Criteria as defined within the ICAO document entitled "CORSIA Sustainability Criteria for CORSIA Eligible Fuels" that is available on the ICAO CORSIA website.

301.2.31. The aeroplane operator that intends to claim for emissions reductions from the use of CORSIA eligible fuels shall only use CORSIA eligible fuels from fuel producers that are certified by an approved Sustainability Certification Scheme included in the ICAO document entitled "CORSIA Approved Sustainability Certification Schemes", that is 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.

301.2.32. 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.

Article 3: Reporting of CO_2 Emissions and CORSIA Eligible Fuels

Applicability

301.3.1. This Article shall be applicable to an aeroplane operator attributed to Jordan that produces annual CO_2 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.

301.3.2. This Article 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 CARC.

301.3.3. This Article shall be applicable to a new entrant aeroplane operator attributed to Jordan from the year after it meets the requirements in 301.3.1. and 301.3.2.

Reporting of CO_2 emissions

CO_2 emissions occurred during Reporting periods of 2019 and 2020

301.3.4. The aeroplane operator shall submit to CARC 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.

301.3.5. When the aeroplane operator reports its consolidated CO_2 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.

CO_2 emissions occurred during Reporting periods of 2021-2035

301.3.6. The aeroplane operator shall submit to CARC 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

301.3.7. The Emissions Report shall include information contained in ~~AC 3~~ Appendix 3.

301.3.8. The aeroplane operator shall submit the Verified Emissions Report to CARC in the form prescribed by CARC.

301.3.9. An aeroplane operator's Verified Emissions Report shall be submitted for approval by CARC.

301.3.10 Based on Emissions Reports, CARC shall calculate average total CO_2 emissions of each aeroplane operator from 2019- 2020. CARC shall inform the aeroplane operator of this calculation by 30 September 2021.

Treatment of confidential information

301.3.11. 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 CARC 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, CARC shall determine whether this data is confidential.

301.3.12. 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 CARC that such data not be published at State pair level, explaining the reasons why disclosure would harm their commercial interests. Based on this request, CARC shall determine whether this data is confidential.

Reporting of CORSIA eligible fuels

301.3.13. The use of CORSIA eligible fuel reported to CARC shall not include any fuels traded or sold to a third party.

301.3.14. The aeroplane operator which participates in other greenhouse gas reductions schemes shall notify CARC of such participation. This notification shall include a declaration that CORSIA eligible fuels reported under this subpart have not also been claimed under another greenhouse gas reduction scheme.

301.3.15. The aeroplane operator may claim reduced emissions from using CORSIA eligible fuel in its Emissions Report. In order to make such claim, the aeroplane operator must provide supplementary information as described in ~~AC~~ 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.

301.3.16. 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.

301.3.17. 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.

CARC reporting to ICAO

301.3.18. CARC shall use the CORSIA Central Registry (CCR) to report CO_2 emissions and, if applicable, CORSIA eligible fuels data to the International Civil Aviation Organization in accordance with the deadlines in 301.3.18, 301.3.19 and 301.3.20.

301.3.19. CARC shall, report 2019 information as defined in Appendix 5, and Appendix 7, if applicable, to the International Civil Aviation Organization by 31 August 2020.

301.3.20 CARC shall report 2020 information as defined in Appendix 5, and Appendix 7, if applicable, to the International Civil Aviation Organization by 31 August 2021.

301.3.21 Regarding the 2021-2035 period, CARC 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.
301.3.22 In cases where 301.3.10 and 301.3.11 apply, CARC shall determine whether this data is confidential, and also inform the International Civil Aviation Organization of any data deemed confidential in accordance with 301.3.10 and 301.3.11 within the reports to be submitted in accordance with the deadlines in 301.3.18, 301.3.19 and 301.3.20.
301.3.23 All aeroplane operator data which is deemed confidential in accordance with 301.3.10 and 301.3.11 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.

Article 4: Verification of CO_2 Emissions and CORSIA Eligible Fuels

Applicability

301.4.1. This Article shall be applicable to each an aeroplane operator attributed to Jordan that produces annual CO_2 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.
301.4.2. This Article 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 CARC.
301.4.3. This Article shall be applicable to a new entrant aeroplane operator attributed to Jordan from the year after it meets the requirements in 301.4.1 and 301.4.2.

Verification of an Emissions Report and submission of relevant Reports

301.4.4. The aeroplane operator shall engage a verification body for the verification of its Emissions Report.
301.4.5. A verification body shall conduct the verification according to the relevant requirements in Appendix 10.
301.4.6. 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 Emissions Report and associated Verification Report to CARC, in accordance with the timeline in 301.3.4 and 301.3.6.
301.4.7. CARC shall perform an order of magnitude check of the Emissions Report.
301.4.8. 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 subpart, CARC shall share, upon agreement with another State's 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.

301.4.9. CARC 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.

301.4.10. The aeroplane operator shall engage a verification body quoted in the latest version of the ICAO Document "CORSIA CCR Information and data for Transparency", (List of Verification Body Accredited in the States for the verification of its Emission Report)

Requirements for a verification body and national accreditation body

301.4.11. A verification body shall be accredited to ISO 14065:2020/17029:2019 in accordance with Appendix 11 by a national accreditation body, in order to be eligible to verify the Emissions Report of the aeroplane operator.

301.4.12. A national accreditation body shall be working in accordance with ISO/IEC 17011:2017

301.4.13. CARC shall use the CORSIA Central Registry (CCR) to submit to ICAO a list of verification bodies accredited in Jordan by 30 April 2019, and annually by 30 November thereafter. CARC may submit updates to this list to ICAO on a more frequent basis.

Verification of CORSIA eligible fuels

301.4.14. 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.

301.4.15. 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

301.4.16. 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.

301.4.17. The aeroplane operator using a Fuel Use Monitoring Method shall fill a data gap by using the ICAO CORSIA CO_2 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.

301.4.18. If the aeroplane operator realizes it has data gaps that exceed the threshold in 301.4.17, then the aeroplane operator shall engage with CARC to take remedial action to address this.

301.4.19. 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 CARC in their annual Emissions Report.

301.4.20. The aeroplane operator shall fill all data gaps and correct systematic errors and misstatements prior to the submission of the Emissions Report.

301.4.21. If the aeroplane operator does not provide its Emissions Report in accordance with the timeline in 301.3.4 and 301.3.6, CARC shall engage with the aeroplane operator to obtain the necessary information. If this proves unsuccessful, then CARC shall estimate the aeroplane operator's annual emissions using the best available information and tools, such as the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT).

301.4.22. If an error in the aeroplane operator's reported emissions is identified by CARC, the verification body, or the aeroplane operator after the reported CO_2 emissions have been submitted to ICAO, CARC shall update the reported CO_2 emissions to address the error. CARC 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.

301.4.23. CARC shall report an error in the aeroplane operator's CO_2 emissions and the follow-up result of the related adjustment to ICAO.

Article 5: CO_2 Offsetting Requirements from International Flights and Emissions Reductions from the Use of CORSIA Eligible Fuels

Applicability

301.5.1. This Article shall be applicable from 1 January 2021 to 31 December 2035 to each aeroplane operator attributed to Jordan that produces annual CO_2 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 "CORSIA States for 3 State Pairs" that is available on the ICAO CORSIA website, with the exception of humanitarian, medical and firefighting flights.

301.5.2. This Article 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 CARC.

301.5.3. This Article shall not be applicable to a new entrant aeroplane operator for three years starting in the year when it meets the requirements under this Article, or until its annual CO_2 emissions exceed 0.1 per cent of total CO_2 emissions from international flights in 2019, as contained in the ICAO document entitled "CORSIA 2020 Emissions" that is available on the ICAO CORSIA website, whichever occurs earlier. This Article shall then be applicable in the subsequent year.

Calculation of annual offsetting requirements

301.5.4. CARC shall calculate the amount of CO_2 emissions required to be offset by each aeroplane operator attributed to Jordan in a given year, prior to consideration of the emissions reductions from the use of CORSIA eligible fuels, as described in 301.5.6, 301.5.7, 301.5.8, 301.5.9, 301.5.10 and 301.5.11.

301.5.5. By 30 November of each year, CARC shall calculate the preceding year's offsetting requirements of all aeroplane operators attributed to Jordan, and shall inform each aeroplane operator of its offsetting requirements in the preceding year.

Annual offsetting requirements for the period 2021 – 2023

301.5.6. CARC shall notify ICAO on the decision of Jordan to calculate the offsetting requirements of all aeroplane operators attributed to Jordan either based on the aeroplane operators' emissions covered by 301.5.1, 301.5.2 and301.5.3 in each of the three years, or based on the aeroplane operators' emissions covered by 301.5.1, 301.5.2 and 301.5.3 in 2019.

301.5.7. CARC shall calculate the annual offsetting requirements of each aeroplane operator attributed to Jordan as follows:

$$ORy = OE * SGFy$$

where:

ORy = Aeroplane operator's offsetting requirements in the given year y (in tonnes);

OE = Aeroplane operator's CO_2 emissions covered by 301.5.1, 301.5.2 and 301.5.3 (in tonnes) depending upon the option selected by the Jordan in accordance with 301.5.6; and

SGFy = 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

301.5.8. CARC shall calculate the annual offsetting requirements of each aeroplane operator attributed to Jordan as follows:

$$ORy = OEy * SGFy$$

where:

ORy = Aeroplane operator's offsetting requirements in the given year y (in tonnes);

OEy = Aeroplane operator's CO_2 emissions covered by 301.5.1, 301.5.2 and 301.5.3 in the given year y (in tonnes); and

SGFy = Sector's Growth Factor in the given year y as contained in ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF)".

Annual offsetting requirements for the period 2033 – 2035

301.5.9. CARC shall calculate the annual offsetting requirements of each aeroplane operator attributed to Jordan as follows:

$$ORy = 85\% * (OEy * SGFy) + 15\% * (OEy * OGFy)$$

where:

ORy = Aeroplane operator's offsetting requirements in the given year y (in tonnes);

OEy = Aeroplane operator's CO_2 emissions covered by 301.5.1, 301.5.2 and 301.5.3 in the given year y (in tonnes);

SGFy = Sector's Growth Factor in the given year y as contained in ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF)"; and
OGFy = Aeroplane operator's Growth Factor calculated in accordance with 301.5.10.
301.5.10. CARC shall calculate, when applicable, the growth factor for each aeroplane operator attributed to Jordan for a given year (OGFy) in accordance with the CO_2 emissions from the verified Emissions Report submitted by each aeroplane operator, as follows:

$$OGFy = (OEy - OEB,y)/OEy$$

where:
OEy = Total aeroplane operator's CO_2 emissions covered by 301.5.1, 301.5.2 and301.5.3 in the given year y (in tonnes); and
OEB,y = 85% of total annual aeroplane operator's CO_2 emissions in 2019 covered by 301.5.1, 301.5.2 and 301.5.3 in the given year y (in tonnes).
301.5.11. For the calculation in 301.5.10, when an aeroplane operator does not have CO_2 emissions covered by 301.5.1, 301.5.2 and 301.5.3 in 2019, and does not qualify as a new entrant, CARC shall use a value of 10 000 tonnes of CO_2 as the OEB,y.

Calculation of emissions reductions from the use of CORSIA eligible fuels
301.5.12. An aeroplane operator attributed to Jordan that intends to claim for emissions reductions from the use of CORSIA eligible fuels in a given year of a compliance period shall calculate these emissions reductions as follows:

$$ERy = FCF * [\Sigma MSf,yf * (1 - LCEF/LC)]$$

where:
ERy = 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 CO_2/kg fuel for Jet-A fuel, Jet-A1 fuel, TS-1 fuel, or No. 3 Jet fuel and 3.10 kg CO_2/kg fuel for AvGas or Jet-B fuel;
MSf,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;
LCEF = Life cycle emissions value for a CORSIA eligible fuel (in gCO_{2e}/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.
301.5.13. For the calculation in 301.5.12:
(a) If a Default Life Cycle Emissions value is used, then the aeroplane operator shall use the ICAO document entitled "CORSIA Default Life Cycle Emissions Values 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 "CORSIA 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

301.5.14. CARC shall calculate the total final amount of CO_2 emissions required to be offset by each aeroplane operator attributed to Jordan in a given compliance period, taking into consideration the emissions reductions from the use of CORSIA eligible fuels, as follows:

$$FORc=(OR1,c+ OR2,c+ OR3,c)-(ER1,c+ ER2,c+ ER3,c)$$

where:

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

ORy,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 301.5.7 or 301.5.8 or 301.5.9 (in tonnes); and

ERy,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 301.5.12 (in tonnes).

301.5.15. If the sum of the aeroplane operator's offsetting requirements in the three years of a given compliance period (OR1,C + OR2,C + OR3,C) is less than 3 000 tonnes of CO_2, then the aeroplane operator has no offsetting requirements for the compliance period and the aeroplane operator may choose to voluntarily engage with CARC in order to offset such emissions.

301.5.16. CARC shall round the total final offsetting requirements of each aeroplane operator attributed to Jordan up to the nearest tonne of CO_2.

301.5.17. Upon calculating the total final offsetting requirements for the compliance period in accordance with 301.5.14, CARC shall inform each aeroplane operator attributed to Jordan 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.

301.5.18. If an aeroplane operator's total final offsetting requirements during a compliance period are negative, then CARC shall inform the aeroplane operator that it does not have any offsetting requirements for the compliance period. CARC shall not carry forward to subsequent compliance periods any negative offsetting requirements.

Article 6: CORSIA Eligible Emissions Units

301.6.1. This Article shall be applicable to each aeroplane operator attributed to Jordan that is subject to offsetting requirements in accordance with Article 5.

301.6.2. For the purposes of this Article, "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

301.6.3. Each aeroplane operator attributed to Jordan 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 CARC according to 301.5.17.

301.6.4. For the purposes of 301.6.3, CORSIA Eligible 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.

301.6.5. For the purposes of 301.6.3, 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.

301.6.6. In fulfilment of the provisions in 301.6.3, 301.6.4 and 301.6.5, 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 CARC 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 period, by 7 February of the second calendar year following the last year of the compliance period.

301.6.7. For the purposes of 301.6.6 b), the information for each cancelled CORSIA Eligible Emissions Unit shall include the consolidated identifying information in Field 5 in Appendix 8, except fields 5.j, 5.k and 5.m.

As soon as CARC will be informed by ICAO Council of any changes in the CORSIA eligibility emissions units' criteria, CARC will inform the aeroplane operators attributed to the Hashemite Kingdom of Jordan of the programme eligibility changes involving a decision by the council to immediately revoke eligibility within 14 days of the publication of the change by ICAO. In addition, before purchasing any CORSIA Eligible Emissions Units after the end of the 3-year compliance period, the aeroplane operators attributed to the Hashemite Kingdom of Jordan shall consult the latest available documents approved by ICAO council on the CORSIA website, CORSIA implementation elements named "CORSIA Eligible Emissions Units".

Reporting on the cancellation of CORSIA Eligible Emissions Units

301.6.8. Each aeroplane operator attributed to Jordan shall report to CARC the cancellation of CORSIA Eligible Units carried out in accordance with 301.6.3 to meet its total final offsetting requirements for a given compliance period.

301.6.9. In fulfilment of 301.6.8, the aeroplane operator shall submit to CARC 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

301.6.10. The aeroplane operator shall provide information on the cancellation of CORSIA Eligible Emissions Units, in accordance with 301.6.3, in the Emissions Unit Cancellation Report that shall contain the information in Appendix 8.

301.6.11. The aeroplane operator shall prepare its Emissions Unit Cancellation Report in the form prescribed by CARC.

301.6.12. The aeroplane operator shall submit its Emissions Unit Cancellation Report to CARC for approval.

Verification of the Emissions Units Cancellation Report

301.6.13. The aeroplane operator shall engage a verification body for the verification of its Emissions Unit Cancellation Report prior to its submission to CARC in accordance with the timeline in 301.6.9.

301.6.14. 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.

301.6.15. A verification body shall conduct the verification according to the relevant requirements in Appendix 10.

301.6.16. 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 CARC, 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 301.6.9.

301.6.17. CARC 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.

CARC reporting to ICAO

301.6.18. CARC 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 Jordan.

301.6.19. CARC 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.

301.6.20. Following the submission to the International Civil Aviation Organization, CARC should publish the following information, as reported by each aeroplane operator attributed to Jordan, 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.

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 (CORSIA).

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-subsidiary relationship seeks to be considered a single aeroplane operator for purposes of this Regulation, then confirmation shall be provided that the parent and subsidiary(ies) are attributed to Jordan 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

2.2.1 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 CO_2 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 CO_2 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 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 2, 3, or 4 requirements.
Note. — The aeroplane operator using the ICAO CORSIA CO_2 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 CO_2 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 CO_2 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 Article 2, Article 3, or Article 4 requirements.

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 301.2.17 and chooses to use the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT), then the following information shall be provided:
(a) An estimate of CO_2 emissions for all international flights within the applicability of Article 2, Article 3, or Article 4 requirements for 2019 with supporting information on how the estimation was calculated.
(b) The type of input method used in the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT):
• Great Circle Distance input method; or
• Block Time input method.
Note. – Guidance on estimating CO_2 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 (CORSIA).
2.3.1.2 If the aeroplane operator meets the eligibility criteria in 301.2.16 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.

(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-subsidiary relationship and seeks to be considered as a single aeroplane operator for purposes of this Regulation, 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 CO_2 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 301.2.23, and it chooses to use the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT), then the following information shall be provided:
(a) An estimate of CO_2 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 CO_2 estimation was calculated.
(b) The type of input method used in the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT):
• Great Circle Distance input method; or
• Block Time input method.
2.3.2.3 If the aeroplane operator meets the eligibility criteria in 301.2.22, 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).

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 CARC when there are material changes;

(f) procedures for providing notice in the Emissions Report of non-material changes that require the attention of CARC; and

(g) a data flow diagram summarizing the systems used to record and store data associated with the monitoring and reporting of CO_2 emissions.

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 CARC.

2. Fuel Use Monitoring Methods

2.1 The aeroplane operator, with the exception of an aeroplane operator eligible to use the ICAO CORSIA CO_2 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:

$$FN = TN – TN+1 + UN+1$$

where:

FN = Fuel used for the flight under consideration (=flight N) determined using Method A (in tonnes);

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

TN+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

UN+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 301.2.27 and 301.2.28 for requirements on fuel density values.

Note 2. — Fuel uplift UN+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 (TN or TN+1) shall be determined at block-off for the flight or subsequent flight. In exceptional cases the variable TN+1 cannot be determined. This is the case when an aeroplane performs activities other than a flight, including undergoing major maintenance involving the emptying of the tanks, after the flight to be monitored. In such case the aeroplane operator may substitute the quantity "TN+1 + UN+1" with the amount of fuel remaining in tanks at the start of the subsequent activity of the aeroplane or fuel in tanks at Block-on, as recorded by technical logs.

2.3 Method B

2.3.1 The aeroplane operator shall use the following formula to compute fuel use according to Method B:

$$FN = RN\text{-}1 – RN + UN$$

where:
FN = Fuel used for the flight under consideration (i.e., flight N) determined using Method B (in tonnes);
RN–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);
RN = 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
UN = Fuel uplift for the flight considered measured in volume and multiplied with a density value (in tonnes).
Note 1. — See 301.2.27 and 301.2.28 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 RN-1 with the amount of fuel remaining in aeroplane tanks at the end of the previous activity of the aeroplane, as recorded by technical logs.

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:

$$FN = TN - RN$$

where:
FN = Fuel used for the flight under consideration (=flight N) determined using Block-off / Block-on Method (in tonnes);
TN = Amount of fuel contained in aeroplane tanks at Block-off for the flight under consideration i.e., flight N (in tonnes); and
RN = 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:

$$FN = UN$$

where:
FN = Fuel used for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes); and
UN = Fuel uplift for the flight considered, measured in volume and multiplied with a density value (in tonnes).

Note 1. — See 301.2.27 and 301.2.28 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:

$$FN = UN * [BHN/BHN+BHN+1+\cdots+BHN+n]$$
$$FN+1 = UN * [BHN+1/BHN+BHN+1+\cdots+BHN+n]$$
$$FN+n = UN * [BHN+n/BHN+BHN+1+\cdots+BHN+n]$$

where:
FN = Fuel used for the flight under consideration (i.e., flight N) determined using fuel uplift (in tonnes);
FN+1 = Fuel used for the subsequent flight (i.e., flight N+1) determined using fuel uplift (in tonnes);
FN+n = Fuel used for the follow-on flight (i.e., flight N+n) determined using fuel uplift (in tonnes);
UN = Fuel uplift for the flight under consideration (i.e., flight N) (in tonnes);
BHN = Block hour for the flight under consideration (i.e., flight N) (in hours);
BHN+1 = Block hour for the subsequent flight (i.e., flight N+1) (in hours); and
BHN+n = Block hour for the follow-on flight (i.e., flight N+n) (in hours).

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

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:

$$AFBR_{AO,AT} = \Sigma UAO_{,AT,NN} / \Sigma BHAO_{,AT,N}$$

where:

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

UAO, 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

BHAO, 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:

$$AFBR_{AO,AT} = \Sigma UAO_{,AT,NN} / \Sigma BHAO_{,AT,N}$$

where:

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

UAO, AT, N = Fuel uplifted for the international or a domestic flight N for aeroplane operator (AO) and aeroplane type (AT) measured in volume and multiplied with a specific density value (in tonnes); and

BHAO, 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 301.2.27 and 301.2.28 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:

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

where:

FN = 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.

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

Appendix 3: Content of an Emissions Report from aeroplane operator to CARC

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 Monitoring Plan 1.d Method and identifier used to attribute an aeroplane operator to Jordan in accordance with 301.1.2. 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 Note. - CARC may require providing reference to updated Emissions Monitoring Plan, if applicable.
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 Note: - Verification Report to be a separate report from aeroplane operator's Emissions Report
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(s) used	6.a Total fuel mass per type of fuel: • Jet-A (in tonnes) • Jet-A1 (in tonnes) • TS-1 (in tonnes) • No. 3 Jet fuel (in tonnes) • Jet-B (in tonnes) • AvGas (in tonnes) Note 1. – Above totals to include CORSIA eligible fuels. Note 2.- The aeroplane operator using the ICAO CORSIA CERT, does not need to report Field 6.
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 Article 2, Article 3, and Article 4 requirements, during the reporting period. Note. - Total (sum of values from Field 9)

Field 9	Number of international flights per State pair or aerodrome pair	9.a Number of international flights, subject to Article 2, Article 3, and Article 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 Article 2, Article 3, and Article 4 requirements, per State pair (in tonnes); or 10.b CO_2 emissions from international flights, subject to Article 2, Article 3, or Article 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 301.4.17 and rounded to the nearest 0.1%) 11.b Reason for data gaps if per cent of data gaps exceeds the threshold defined in 301.4.17
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 8643 — Aircraft Type Designator (in tonnes per hour to 3 decimal places) Note: - 12.d is only required if the aeroplane operator is using the Fuel Allocation with Block Hour method, as defined in Appendix 2.
Field 13	Eligibility for and use of the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT) as per Article 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 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.	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) 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.

Field 15	Total CO_2 emissions	15.a Total CO_2 emissions (based on total mass of fuel in tonnes from Field 6 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 Article 2, Article 3, and Article 4 requirements. and that are not subject to offsetting requirements (in tonnes) Note. – During the 2019-2020 period, only fields 15.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.

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

Field	Data Field	Details
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 CORSIA eligible fuel	
Field 3	Identification of the producer of the neat CORSIA eligible fuel	3.a Name of producer of the neat CORSIA eligible fuel 3.b Address of the producer of the neat CORSIA eligible fuel
Field 4	Fuel Production	4.a Production date of the neat CORSIA eligible fuel 4.b Production location of the neat CORSIA eligible fuel 4.c Batch identification number of each batch of neat CORSIA eligible fuel 4.d Mass of each batch of neat CORSIA 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 CORSIA eligible fuel 5.c Conversion process used to create the neat CORSIA eligible fuel
Field 6	Fuel Purchased	6.a Proportion of neat CORSIA eligible fuel batch purchased (rounded to the nearest %) Note. - If less than an entire batch of CORSIA eligible fuel is purchased. 6.b Total mass of each batch of neat CORSIA eligible fuel purchased (in tonnes) 6.c Mass of neat CORSIA eligible fuel purchased (in tonnes) Note. — Field 6.c is equal to the total for all batches of CORSIA eligible fuels reported in Field 6.b.
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	8.a Default or Actual Life Cycle Emissions Value (LCEF) 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) 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) 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)
Field 9	Intermediate purchaser	9.a Name of the intermediate purchaser 9.b Address of the intermediate purchaser 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.
Field 10	Party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender	10.a Name of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender 10.b Address of party responsible for shipping of the neat CORSIA eligible fuel to the fuel blender
Field 11	Fuel Blender	11.a Name of the party responsible for blending neat CORSIA eligible fuel with aviation fuel 11.b Address of the party responsible for blending neat CORSIA eligible fuel with aviation fuel
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	
Field 14	Mass of neat CORSIA eligible fuel received (in tonnes)	Note. - This number may differ from the number in Field 6.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).
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)	Note. - This number may differ from the number in Field 6.c in cases where only a portion of a batch or batches are claimed by the aeroplane operator.

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

Field	Data Field	Details
Field 1	Total annual CO_2 emissions per State pair aggregated for all aeroplane operators attributed to Jordan (in tonnes)	Note. – Include emissions from CORSIA eligible fuels, calculated using fuel conversion factor(s) from corresponding aviation fuels, in accordance with 301.2.29.

Appendix 6: Emissions Report from CARC to ICAO annually after 2021

Field	Data Field	Details
Field 1	Total annual CO_2 emissions on each State pair aggregated for all aeroplane operators attributed to Jordan	1.a Total annual CO_2 emissions on each State pair subject to offsetting requirements aggregated for all aeroplane operators attributed to Jordan (in tonnes) 1.b Total annual CO_2 emissions on each State pair not subject to offsetting requirements, aggregated for all aeroplane operators attributed to Jordan (in tonnes)
Field 2	Total annual CO_2 emissions for each aeroplane operator attributed to Jordan	2.a Total annual CO_2 emissions for each aeroplane operator attributed to Jordan (in tonnes) 2.b Indicate whether the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT) is used
Field 3	Total aggregated annual CO_2 emissions for all State pairs subject to offsetting requirements for each aeroplane operator attributed to Jordan (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 Jordan (in tonnes)	

Appendix 7: CORSIA eligible fuels supplementary information to the Emissions Report from CARC 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 (LCEF) for given CORSIA eligible fuel	This would provide a total mass for each fuel type being claimed by all aeroplane operators attributed to Jordan
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)	

Appendix 8: Emissions Unit Cancellation Report from aeroplane operators to CARC

Field	Data	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 Jordan, in accordance with 301.1.2 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 CARC
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 (batch 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; 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.

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

Field	Data Field	Details
Field 1	Aeroplane operators attributed to the State	1. Aeroplane operators attributed to Jordan 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 the report
Field 3	Total final offsetting requirements	3. Total aggregated aeroplane operators' final offsetting requirements (in tonnes), as informed by CARC
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	For each batch of cancelled emissions units (batch 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; 5.i Demonstration of unit date eligibility; and 5.j Programme-designated registry name.

Appendix 10: Requirements for conducting the verification

1. Introduction

Note — The procedures specified in this Appendix are concerned with the verification requirements in Article 4 and Article 6 of this subpart.

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 CORSIA.

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 Subpart.

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 Regulation and the approved Emissions Monitoring Plan;

(c) the aeroplane operator has correctly applied the method of flight attribution documented in the approved Emissions Monitoring Plan and in accordance with 301.1.8, 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 subpart.

2.3.2 When conducting the verification of an Emissions Unit Cancellation Report, the verification team shall perform sufficient procedures to conclude whether:
(a) the aeroplane operator has accurately reported cancellations of its CORSIA Eligible Emissions Units in accordance with this Regulation;
(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
(c) the eligible emissions units cancelled by the aeroplane operator to meet its offsetting requirements under this subpart 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) CO_2 emissions from aeroplane fuel monitoring methods, calculated in accordance with Article 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 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 subpart 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 per cent for aeroplane operators with annual emissions on international flights subject to Article 2, Article 3, and Article 4 requirements above 500 000 tonnes; and
(b) of 5 per cent for aeroplane operators with annual emissions on international flights subject to Article 2, Article 3, or Article 4 requirements equal or less than 500 000 tonnes of CO_2.
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 Regulation.
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 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 CARC.

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, responsibilities and qualifications; and
(b) any external resources required.

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;
(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) aeroplane operator information and data used by the verification team to cross-check data and carry out other verification activities;
(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 CO_2 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 Regulation;

(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;
(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 Regulation, 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)

2.13.1 On request of CARC, the verification body shall disclose the internal verification documentation on a confidential basis to the CARC.

2.13.2 Where issues that may render a previously issued verification opinion invalid or inaccurate are brought to the attention of the verification body, then it shall notify CARC.

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 Article 4 and Article 6 of this subpart.

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 subpart:

(a) Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA); 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 subpart.

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.

2.2.3 The verification body, and any 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 CO_2 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 relates 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 Regulation, 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 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 evaluations of the competence assessment process to ensure that it continues to be relevant for this Regulation.

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

(a) the requirements as outlined in this Regulation, the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), and any public ICAO explanatory material;

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

(c) the eligibility criteria for technical exceptions, scope of applicability, State pair phase-in rules, and State pair coverage as outlined in this Regulation;

(d) the monitoring requirements as outlined in this Regulation; and

(e) the national requirements in addition to the provisions set out in this Regulation.

2.5.3 When conducting the verification of an Emissions Unit Cancellation Report, only 2.5.1 (a), (b) and (e) shall be applicable.

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;
(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 CO_2 emissions estimate;
(e) CO_2 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 subpart, 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.

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.
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 assessors, 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 CARC;
(e) requirement of the verification body to communicate any suspected intentional misstatement or noncompliance by the aeroplane operator to CARC 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;
(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 CARC. 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.