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AIR NAVIGATION ACT 1966

AIR NAVIGATION  
(CARBON EMISSIONS AND REPORTING)  
REGULATIONS 2022

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In exercise of the powers conferred by section 9 of the Air Navigation Act 1966, the Civil Aviation Authority of Singapore, with the approval of the Minister for Transport, makes the following Regulations:

**PART 1****PRELIMINARY****Citation and commencement**

1. These Regulations are the Air Navigation (Carbon Emissions and Reporting) Regulations 2022 and come into operation on 1 January 2023.

**Definitions**

2. Any term in these Regulations that is defined in the First Schedule to the Air Navigation (91 — General Operating Rules) Regulations 2018 (G.N. No. S 441/2018) has the meaning given to that term in that Schedule unless the term is otherwise defined in the First Schedule to these Regulations.

**Application of these Regulations**

3. These Regulations apply to every Singapore operator.

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PART 2

REGISTRATION OF SINGAPORE OPERATORS

**Obligation to apply to register Singapore operator**

4.—(1) Subject to paragraph (2), a Singapore operator must apply to the Director-General of Civil Aviation to be registered as a registered Singapore operator if the Singapore operator operates, on or after 1 January 2019, at least one defined aeroplane for any international flight —

- (a) attributed to the Singapore operator; and
- (b) for the purpose of commercial air transport, aerial work or complex general aviation, as the case may be (called in these Regulations a defined international flight).

(2) However, the following international flights must not be counted for the purposes of paragraph (1):

- (a) an international flight conducted —
  - (i) to combat the effects of any emergency;
  - (ii) to provide emergency medical assistance for casualties or survivors;
  - (iii) to provide a life critical medical emergency evacuation; and
  - (iv) to fight a fire;
- (b) an international flight preceding or following any international flight conducted for any purpose specified in sub-paragraph (a)(i), (ii), (iii) or (iv) if —
  - (i) the flight was conducted with the same aeroplane as the second-mentioned flight; and
  - (ii) the flight was required to accomplish the same purposes as the second-mentioned flight or to reposition thereafter the aeroplane for its next activity;
- (c) an international flight that is engaged in a diplomatic or consular mission.

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## Applications for registration

5.—(1) An application under regulation 4 to be registered as a registered Singapore operator must —

- (a) be made within 7 days after the first operation, on or after the date of commencement of these Regulations, of any defined aeroplane for any defined international flight attributable to the applicant; and
- (b) be accompanied by the following information:
  - (i) the name and address of the applicant and the applicant's representative, if any;
  - (ii) the aircraft types operated by the applicant for the purpose of commercial air transport, aerial work or complex general aviation, as the case may be;
  - (iii) details of the relationship between the applicant and any other Singapore operators in terms of equity interests and voting control, regardless of registration or otherwise of the other Singapore operators as a registered Singapore operator;
  - (iv) details of the defined international flights mentioned in sub-paragraph (a) that were operated or to be operated by the applicant per aerodrome pair for the purpose of commercial air transport, aerial work or complex general aviation, as the case may be;
  - (v) any other information that the Director-General of Civil Aviation may require to assess the application.

(2) Upon receiving a complete application made in accordance with this regulation, the Director-General of Civil Aviation must register the Singapore operator as a registered Singapore operator to which the application relates.

(3) A registration of a Singapore operator under this regulation is in force starting on the date of registration, until deregistration under regulation 7 of the Singapore operator.

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**Application to deregister as registered Singapore operator**

6.—(1) A registered Singapore operator may apply to the Director-General of Civil Aviation to be deregistered as such.

(2) An application to deregister must be accompanied by the following information:

- (a) the name and address of the applicant and the applicant's representative, if any;
- (b) a signed statement from the chief executive or equivalent of the applicant, stating that —
  - (i) the applicant no longer operates any defined aeroplane for any defined international flight attributable to the applicant; and
  - (ii) the applicant has discharged all obligations and liabilities under these Regulations (whether under Part 3 or 4) that the applicant acquired or incurred, or accrued to the applicant, as a registered Singapore operator;
- (c) any other information that the Director-General of Civil Aviation may require to assess the application.

(3) The Director-General of Civil Aviation may refuse to accept any application to deregister that is incomplete or not made in accordance with paragraph (2).

**Deregistration**

7.—(1) Upon receiving a complete application made in accordance with regulation 6, the Director-General of Civil Aviation may deregister a registered Singapore operator if he or she is satisfied that the registered Singapore operator —

- (a) no longer operates any defined aeroplane for any defined international flight attributable to that Singapore operator; and
- (b) has discharged all obligations and liabilities under these Regulations (whether under Part 3 or 4) that the Singapore

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operator acquired or incurred, or accrued to the Singapore operator, as a registered Singapore operator.

(2) The operation by a registered Singapore operator of any defined aeroplane for any international flight mentioned in regulation 4(2) must be disregarded for the purposes of paragraph (1)(a).

### PART 3

#### REPORTING BY PRIMARY REGISTERED SINGAPORE OPERATORS

##### *Division 1 — Preliminary*

#### **Reporting period for primary registered Singapore operator**

8. In this Part, “reporting period”, for a primary registered Singapore operator, means each of the following periods:

- (a) the whole year of the year in which the registered Singapore operator first becomes a primary registered Singapore operator;
- (b) each whole year subsequent to the year in paragraph (a) but before the year in paragraph (c);
- (c) where the primary registered Singapore operator is deregistered as a registered Singapore operator, from 1 January of that year in which the deregistration takes place up to and including the day immediately before the deregistration takes effect.

#### **Primary registered Singapore operator**

9.—(1) For the purposes of these Regulations, a registered Singapore operator becomes a primary registered Singapore operator immediately when in any year, the total CO<sub>2</sub> emissions produced by the registered Singapore operator from the operation of any defined aeroplane for any defined international flight attributable to the Singapore operator exceeds 10,000 tonnes.

(2) For the purposes of these Regulations, where in any year the total CO<sub>2</sub> emissions produced by a primary registered Singapore operator from the operation of any defined aeroplane for any defined

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international flight attributable to the Singapore operator is 10,000 tonnes or lower, the registered Singapore operator —

- (a) ceases to be a primary registered Singapore operator; and
  - (b) becomes a secondary registered Singapore operator,
- immediately after the end of that year.

(3) To avoid doubt, any registered Singapore operator that ceases to be a primary registered Singapore operator under paragraph (2) may become a primary registered Singapore operator again under paragraph (1).

*Division 2 — Emissions reporting and verification*

**Enhanced emissions reports**

**10.**—(1) A primary registered Singapore operator must prepare and submit, within the time delimited in paragraph (3), to the Director-General of Civil Aviation, an enhanced emissions report for each reporting period relating to the total CO<sub>2</sub> emissions from the operation by the primary registered Singapore operator of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator.

- (2) For the purposes of paragraph (1), the first reporting period is —
- (a) where the primary registered Singapore operator is a new entrant — the year immediately after the year in which the Singapore operator first becomes a primary registered Singapore operator; and
  - (b) in any other case — the year in which the Singapore operator first becomes a primary registered Singapore operator.

(3) Every enhanced emissions report must be submitted to the Director-General of Civil Aviation no later than 30 April (or any later date as the Director-General of Civil Aviation may in any particular case allow) of the year immediately following the end of the reporting period to which the enhanced emissions report relates.

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- (4) An enhanced emissions report must —
- (a) contain all information specified in the Third Schedule; and
  - (b) if the primary registered Singapore operator is a single Singapore operator mentioned in regulation 30(1) — set out a breakdown of the CO<sub>2</sub> emissions of the parent primary Singapore operator and each wholly-owned subsidiary.

**Enhanced emissions report must be verified, etc.**

**11.**—(1) Every enhanced emissions report submitted under regulation 10 to the Director-General of Civil Aviation must be —

- (a) verified by a verification body appointed by the primary registered Singapore operator; and
- (b) accompanied by a report by the verification body of its verification.

(2) A primary registered Singapore operator must not appoint a person as a verification body unless that person meets the requirements specified by the Director-General of Civil Aviation in the Aviation Specifications 3 — Verification Body.

(3) For the purposes of paragraph (1)(a), the verification body must —

- (a) conduct the verification in accordance with the requirements specified by the Director-General of Civil Aviation in the Aviation Specifications 3 — Verification Body; and
- (b) issue a verification report on the verification.

(4) The verification body must separately submit a copy of the verification report, and the verified enhanced emissions report, to the Director-General of Civil Aviation no later than 30 April (or any later date as the Director-General of Civil Aviation may in any particular case allow) of the year immediately following the end of the reporting period to which the verified enhanced emissions report relates.

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**Accuracy of enhanced emissions report**

**12.**—(1) Where a primary registered Singapore operator discovers any error or omission in a record of fuel use mentioned in regulation 15(1), or in its information management system containing the record of fuel use, the primary registered Singapore operator must take steps to rectify the error or omission discovered in a timely manner.

(2) Subject to paragraph (3), a primary registered Singapore operator using a fuel use monitoring method specified by the Director-General of Civil Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods for the purposes of regulation 15(1) must use the ICAO CORSIA CERT specified in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods to rectify any error or omission in a record of fuel use mentioned in that regulation.

(3) If the errors or omissions in a record of fuel use mentioned in regulation 15(1) represent the fuel use of more than 5% of all defined international flights attributable to the primary registered Singapore operator mentioned in paragraph (2) and operated, in a reporting period, by the primary registered Singapore operator using any defined aeroplane, then —

- (a) paragraph (2) does not apply to the primary registered Singapore operator; and
- (b) the primary registered Singapore operator must —
  - (i) in the enhanced emissions report submitted under regulation 10 to the Director-General of Civil Aviation —
    - (A) inform the Director-General of Civil Aviation of the extent of those errors or omissions; and
    - (B) provide an explanation for those errors and omissions; and
  - (ii) in consultation with the Director-General of Civil Aviation, take remedial action to improve on the

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accuracy and completeness of the record of fuel use as soon as practicable.

*Division 3 — Emissions monitoring*

**Emissions monitoring plan**

**13.**—(1) A primary registered Singapore operator must prepare and submit, within the time delimited in paragraph (2), to the Director-General of Civil Aviation, an emissions monitoring plan setting out the basis on which the primary registered Singapore operator ensures the quality of the data required for the computations necessary for its enhanced emissions report under regulation 10.

(2) A primary registered Singapore operator must submit the emissions monitoring plan mentioned in paragraph (1) to the Director-General of Civil Aviation for the Director-General of Civil Aviation's approval by the following applicable times:

- (a) where the submission is of an emissions monitoring plan that has not been revised under regulation 14 —
  - (i) in the case of a primary registered Singapore operator who is a new entrant — within 2 months (or any longer period as the Director-General of Civil Aviation may in any particular case allow) after the end of the month in which the Singapore operator becomes a primary registered Singapore operator; and
  - (ii) in any other case — within 1 month (or any longer period as the Director-General of Civil Aviation may in any particular case allow) after the end of the month in which the Singapore operator becomes a primary registered Singapore operator;
- (b) where the submission is of an emissions monitoring plan that is being revised under regulation 14 for a material change — within 1 month (or any longer period as the Director-General of Civil Aviation may in any particular case allow) after the change occurred.

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(3) An emissions monitoring plan must contain all information specified in the Second Schedule.

(4) After reviewing the emissions monitoring plan mentioned in paragraph (1), the Director-General of Civil Aviation may —

- (a) approve the emissions monitoring plan subject to any conditions that the Director-General of Civil Aviation may impose; or
- (b) in respect of any incomplete or inaccurate emissions monitoring plan — direct the primary registered Singapore operator in writing to resubmit the emissions monitoring plan within the time period specified in the direction or such longer time as the Director-General of Civil Aviation may allow in any particular case.

#### **Revision of approved emissions monitoring plan, etc.**

**14.**—(1) A primary registered Singapore operator must revise its approved emissions monitoring plan if there is any material change in any of the matters set out in the approved emissions monitoring plan.

(2) A primary registered Singapore operator must notify the Director-General of Civil Aviation of any change in any of the matters in Part 1 of the Second Schedule as set out in its approved emissions monitoring plan, whether or not the change is a material change.

(3) In this regulation, “material change”, relating to any matter set out in an approved emissions monitoring plan, means any of the following:

- (a) any change that may affect the status of the primary registered Singapore operator as such;
- (b) any change that may result in the primary registered Singapore operator being ineligible to use the applicable monitoring method, or otherwise affect the decision by the Director-General of Civil Aviation on whether the primary registered Singapore operator’s approach to emissions monitoring or fuel use monitoring complies with these Regulations.

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**Monitoring of fuel use by primary registered Singapore operators**

**15.**—(1) Subject to paragraph (3), a primary registered Singapore operator must monitor and record its fuel use from the operation, during each reporting period, of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator, the monitoring and recording for which must be in accordance with the applicable monitoring method specified in its approved emissions monitoring plan.

(2) A primary registered Singapore operator without an approved emissions monitoring plan before the start of a reporting period may first monitor and record its fuel use from the operation, during the reporting period, of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator, in the following manner until it obtains the approval of the Director-General of Civil Authority under regulation 13(4) for its emissions monitoring plan:

- (a) if the primary registered Singapore operator has submitted an emissions monitoring plan under that regulation (called in this sub-paragraph a draft emissions monitoring plan) but has not obtained an approved emissions monitoring plan — in accordance with the applicable monitoring method specified in the draft emissions monitoring plan;
- (b) if the primary registered Singapore operator has not submitted an emissions monitoring plan under that regulation — in accordance with an applicable monitoring method that the primary registered Singapore operator has chosen.

(3) For the purposes of paragraph (1), unless the Director-General of Civil Aviation otherwise requires, the applicable monitoring method is —

- (a) for a primary registered Singapore operator whose total CO<sub>2</sub> emissions produced from the operation, in a reporting period, of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator, is 50,000 tonnes or more — a fuel use

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monitoring method specified by the Director-General of Civil Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods; or

- (b) for a primary registered Singapore operator whose total CO<sub>2</sub> emissions produced from the operation, in a reporting period, of any defined aeroplane for a defined international flight attributable to the primary registered Singapore operator is less than 50,000 tonnes — either of the following monitoring methods:
- (i) a fuel use monitoring method specified in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods;
  - (ii) the ICAO CORSIA CERT specified in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

(4) Despite paragraph (3)(a), if the total CO<sub>2</sub> emissions of the primary registered Singapore operator mentioned in that paragraph decreases below 50,000 tonnes for each of 2 consecutive years, the primary registered Singapore operator —

- (a) may use the ICAO CORSIA CERT to monitor and record its fuel use from the operation, during the second reporting period immediately following (called in this paragraph the relevant year), of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator; but
- (b) must submit a revised emissions monitoring plan no later than 30 September in the year immediately before the relevant year if the Singapore operator does so.

(5) Despite paragraph (3)(b), if the total CO<sub>2</sub> emissions of the primary registered Singapore operator mentioned in that paragraph increases to 50,000 tonnes or more in each of 2 consecutive years, and the primary registered Singapore operator has been monitoring its fuel use from the operation, during those years, of any defined aeroplane for any defined international flight attributable to the

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primary registered Singapore operator, using the ICAO CORSIA CERT, the primary registered Singapore operator must —

- (a) submit a revised emissions monitoring plan no later than 30 September in the year immediately following (called in this paragraph the relevant year) specifying the use of a fuel use monitoring method specified by the Director-General of Civil Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods; and
- (b) use that fuel use monitoring method to monitor and record its fuel use from the operation, during the reporting period immediately following the relevant year, of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator.

### **Monitoring of fuel density**

**16.**—(1) Where the amount of fuel uplift is determined in units of volume, the primary registered Singapore operator must apply a fuel density value to calculate fuel mass.

(2) The primary registered Singapore operator must keep and maintain a record of the fuel density mentioned in paragraph (1) in a technical log.

(3) The fuel density mentioned in paragraph (1) may be an actual value or a standard value of 0.8 kg per litre.

### **Method to determine emissions**

**17.** A primary registered Singapore operator using a fuel use monitoring method specified by the Director-General of Civil Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods for the purpose of regulation 15(1) must calculate its CO<sub>2</sub> emissions produced from the operation by the primary registered Singapore operator, during each reporting period, of any defined aeroplane for any defined international flight attributable to the primary registered Singapore operator, based on its fuel use recorded under regulation 15(1) in accordance with the

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formula specified in the Aviation Specifications 4 — Fuel Use Monitoring Methods.

*Division 4 — Miscellaneous*

**Records to be kept**

**18.**—(1) A primary registered Singapore operator must keep and maintain complete and accurate records of all enhanced emissions reports, and their supporting documents, submitted to the Director-General of Civil Aviation.

(2) The records mentioned in paragraph (1) must be kept for at least 10 years after —

(a) where the record relates to a document in paragraph (1) —

(i) the date of the document; or

(ii) where the document is not dated, the date on which the document containing the information in question was received by the primary registered Singapore operator; or

(b) the date on which the record is made by the primary registered Singapore operator.

(3) The primary registered Singapore operator may keep and maintain the records mentioned in paragraph (1) in electronic form.

PART 4

REPORTING BY SECONDARY REGISTERED  
SINGAPORE OPERATORS

*Division 1 — Preliminary*

**Reporting period for secondary registered Singapore operator**

**19.** In this Part, “reporting period”, for a secondary registered Singapore operator, means each of the following periods:

(a) the whole year of the year in which the registered Singapore operator first becomes a secondary registered Singapore operator;

- (b) each whole year subsequent to the year in paragraph (a) but before the year in paragraph (c);
- (c) for the year in which the secondary registered Singapore operator is deregistered as a registered Singapore operator, from 1 January of that year up to and including the day immediately before the deregistration takes effect.

*Division 2 — Emissions reporting and monitoring*

**Simplified emissions reports**

**20.**—(1) A secondary registered Singapore operator must prepare and submit, within the time delimited in paragraph (3), to the Director-General of Civil Aviation, a simplified emissions report for each reporting period relating to the total CO<sub>2</sub> emissions from the operation of any defined aeroplane for any defined international flight attributable to the secondary registered Singapore operator.

(2) For the purposes of paragraph (1), the first reporting period is the year in which the Singapore operator first becomes a secondary registered Singapore operator.

(3) Every simplified emissions report must be submitted to the Director-General of Civil Aviation no later than 30 April (or any later date as the Director-General of Civil Aviation may in any particular case allow) of the year immediately following the end of the reporting period to which the simplified emissions report relates.

(4) A simplified emissions report must —

- (a) specify the following information:
  - (i) the name, address and any other contact information of the secondary registered Singapore operator and its representative, if any;
  - (ii) information for attributing the secondary registered Singapore operator to Singapore;
  - (iii) the reporting period that the simplified emissions report relates to;

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- (iv) the total number of defined international flights operated by and attributable to the secondary registered Singapore operator per aerodrome pair (without rounding);
  - (v) information on the fleet of the secondary registered Singapore operator, including —
    - (A) a list of aeroplane types operated for international flights described in sub-paragraph (iv); and
    - (B) the information used for attributing those international flights to the secondary registered Singapore operator in accordance with regulation 32;
  - (vi) the version of the ICAO CORSIA CERT used to monitor and record its fuel use in accordance with regulation 21; and
- (b) if the secondary registered Singapore operator is a single Singapore operator mentioned in regulation 30(1) — set out a breakdown of the CO<sub>2</sub> emissions of the parent secondary registered Singapore operator and each wholly-owned subsidiary.

### **Simplified monitoring of fuel use by secondary registered Singapore operators**

**21.** A secondary registered Singapore operator must monitor and record its fuel use from the operation, during each reporting period, of any defined aeroplane for any defined international flight attributable to the secondary registered Singapore operator, in accordance with the ICAO CORSIA CERT specified by the Director-General of Civil Aviation in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

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*Division 3 — Miscellaneous*

**Records to be kept**

**22.**—(1) A secondary registered Singapore operator must keep and maintain complete and accurate records of all simplified emissions reports, and their supporting documents, submitted to the Director-General of Civil Aviation.

(2) The records mentioned in paragraph (1) must be kept for at least 10 years after —

(a) where the record relates to a document in paragraph (1) —

(i) the date of the document; or

(ii) where the document is not dated, the date on which the document containing the information in question was received by the secondary registered Singapore operator; or

(b) the date on which the record is made by the secondary registered Singapore operator.

(3) The secondary registered Singapore operator may keep and maintain the records mentioned in paragraph (1) in electronic form.

PART 5

OFFENCES

**Offences relating to registrations, etc.**

**23.**—(1) A person commits an offence if the person fails to apply to register as a registered Singapore operator where required by regulation 4.

(2) A person who is guilty of an offence under paragraph (1) shall be liable on conviction to a fine not exceeding \$5,000.

(3) In a prosecution for an offence under paragraph (1), it is not necessary for the prosecution to prove that the defendant intended to commit the offence.

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- (4) A person commits an offence if —
- (a) the person makes a statement or gives any information required to be made or given for an application for registration or deregistration under these Regulations;
  - (b) the statement or information is misleading in a material particular, or the statement or information omits any matter or thing without which the statement or information (as the case may be) is misleading in a material particular; and
  - (c) the person knows, or ought reasonably to know, that the statement or information is as described in sub-paragraph (b).
- (5) A person who is guilty of an offence under paragraph (4) shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 12 months or to both.

### **Offences relating to submissions of simplified emissions reports**

**24.—**(1) A person commits an offence if the person fails to submit a simplified emissions report in accordance with regulation 20.

(2) A person who is guilty of an offence under paragraph (1) shall be liable —

- (a) on the first conviction to a fine not exceeding \$5,000; and
  - (b) on a second or subsequent conviction to a fine not exceeding \$10,000 and, in the case of a continuing offence, to a further fine not exceeding \$500 for every day or part of a day during which the offence continues after that second or subsequent conviction.
- (3) In a prosecution for an offence under paragraph (1), it is not necessary for the prosecution to prove that the person charged with the offence intended to commit the offence.

- (4) A person commits an offence if —
- (a) the person provides a document in relation to the simplified emissions report, or makes a statement or gives any information required to be made or given in the simplified emissions report;

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- (b) the document, statement, or information is misleading in a material particular, or the statement or information omits any matter or thing without which the statement or information (as the case may be) is misleading in a material particular; and
  - (c) the person knows, or ought reasonably to know, that the document is misleading in a material particular, or that the statement or information is as described in sub-paragraph (b).

(5) A person who is guilty of an offence under paragraph (4) shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 12 months or to both.

### **Offences relating to emissions monitoring plans**

**25.—**(1) A person commits an offence if the person fails to submit an emissions monitoring plan in accordance with regulation 13.

(2) A person who is guilty of an offence under paragraph (1) shall be liable —

- (a) on the first conviction to a fine not exceeding \$10,000; and
- (b) on a second or subsequent conviction to a fine not exceeding \$20,000 and, in the case of a continuing offence, to a further fine not exceeding \$1,000 for every day or part of a day during which the offence continues after that second or subsequent conviction.

(3) In a prosecution for an offence under paragraph (1), it is not necessary for the prosecution to prove that the person charged with the offence intended to commit the offence.

(4) A person commits an offence if —

- (a) the person provides a document in relation to the emissions monitoring plan, or makes a statement or gives any information required to be made or given in the emissions monitoring plan;
- (b) the document, statement, or information is misleading in a material particular, or the statement or information omits

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any matter or thing without which the statement or information (as the case may be) is misleading in a material particular; and

- (c) the person knows, or ought reasonably to know, that the document is misleading in a material particular, or that the statement or information is as described in sub-paragraph (b).

(5) A person who is guilty of an offence under paragraph (4) shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 12 months or to both.

### **Offences relating to submissions of verified enhanced emissions reports**

**26.—**(1) A person commits an offence if the person fails to submit a verified enhanced emissions report in accordance with regulations 10 and 11.

(2) A person who is guilty of an offence under paragraph (1) shall be liable —

- (a) on the first conviction to a fine not exceeding \$10,000; and
- (b) on a second or subsequent conviction to a fine not exceeding \$20,000 and, in the case of a continuing offence, to a further fine not exceeding \$1,000 for every day or part of a day during which the offence continues after that second or subsequent conviction.

(3) In a prosecution for an offence under paragraph (1), it is not necessary for the prosecution to prove that the person charged with the offence intended to commit the offence.

(4) A person commits an offence if —

- (a) the person provides a document in relation to the verified enhanced emissions report, or makes a statement or gives any information required to be made or given in the verified enhanced emissions report;
- (b) the document, statement, or information is misleading in a material particular, or the statement or information omits

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any matter or thing without which the statement or information (as the case may be) is misleading in a material particular; and

- (c) the person knows, or ought reasonably to know, that the document is misleading in a material particular, or that the statement or information is as described in sub-paragraph (b).

(5) A person who is guilty of an offence under paragraph (4) shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 12 months or to both.

(6) Paragraph (4) does not apply to any error or omission mentioned in regulation 12.

### **Offences relating to records**

**27.—**(1) A person commits an offence if the person fails to comply with regulation 18 or 22.

(2) A person who is guilty of an offence under paragraph (1) shall be liable —

- (a) on the first conviction to a fine not exceeding \$10,000; and  
(b) on a second or subsequent conviction to a fine not exceeding \$20,000.

(3) In a prosecution for an offence under paragraph (1), it is not necessary for the prosecution to prove that the person charged with the offence intended to commit the offence.

(4) A person commits an offence if —

- (a) the person makes or causes to be made any entry in a record or document required to be kept under regulation 18 or 22;  
(b) the entry is misleading in a material particular, or the entry omits any matter or thing without which the entry is misleading in a material particular; and  
(c) the person knows, or ought reasonably to know, that the entry is as described in sub-paragraph (b).

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(5) A person who is guilty of an offence under paragraph (4) shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 12 months or to both.

## PART 6

### SUPPLEMENTARY INTERPRETIVE PROVISIONS

#### **Manner of applying or submitting reports, etc.**

**28.** Where an application is to be made, or a report or plan is required to be submitted, under these Regulations to the Director-General of Civil Aviation, the application must be made, or the report must be submitted (as the case may be) in the form and manner required by the Director-General of Civil Aviation.

#### **Separate flight**

**29.** Where a Singapore operator carries out 2 or more consecutive flights with the same flight number, each flight is a separate flight for the purposes of these Regulations.

#### **Parent and subsidiary as single Singapore operator**

**30.—(1)** A Singapore operator with a wholly-owned subsidiary Singapore operator may, with the approval of the Director-General of Civil Aviation, be treated as a single Singapore operator for the purposes of these Regulations.

(2) An applicant for an approval under paragraph (1) must submit to the Director-General of Civil Aviation documentary evidence demonstrating —

- (a) if the applicant is a wholly-owned subsidiary of another Singapore operator — that the applicant is a wholly-owned subsidiary of another Singapore operator; or
- (b) if the applicant has a wholly-owned subsidiary that is a Singapore operator — that the subsidiary Singapore operator is wholly-owned by the applicant.

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(3) In this regulation, a Singapore operator is a wholly-owned subsidiary of another Singapore operator if none of the members of the firstmentioned Singapore operator is a person other than —

- (a) that other Singapore operator;
- (b) a nominee of that other Singapore operator;
- (c) a subsidiary of that other Singapore operator being a subsidiary which none of the members is a person other than that Singapore operator or a nominee of that Singapore operator; or
- (d) a nominee of the subsidiary mentioned in sub-paragraph (c),

and “subsidiary” has the meaning given by the Companies Act 1967.

### **Reporting agent for registered Singapore operator**

**31.—**(1) A primary registered Singapore operator may appoint a person as its reporting agent to carry out the monitoring and reporting obligations of the primary registered Singapore operator in Part 3.

(2) A secondary registered Singapore operator may appoint a person as its reporting agent to carry out the monitoring and reporting obligations of the secondary registered Singapore operator in Part 4.

(3) The registered Singapore operator mentioned in paragraphs (1) and (2) must submit to the Director-General of Civil Aviation a copy of the agreement between the registered Singapore operator and the person appointed to carry out the monitoring and reporting obligations of the registered Singapore operator.

(4) However, a verification body must not be, and must not be appointed as, a reporting agent of the registered Singapore operator under paragraph (1) or (2).

(5) To avoid doubt, a registered Singapore operator mentioned in paragraphs (1) and (2) remains responsible for any monitoring or reporting obligation under Part 3 or 4 (as the case may be) despite a reporting agent being appointed to carry out the obligation on its behalf.

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**Attribution of flights to a Singapore operator, etc.**

**32.**—(1) To attribute a defined international flight to a registered Singapore operator for any period, the Singapore operator to which a defined international flight is attributed is to be determined in the following order:

- (a) if Item 7 (aircraft identification) of the flight plan filed by a Singapore operator in respect of the defined international flight contains an ICAO designator, the Singapore operator that has been assigned that ICAO designator;
  - (b) if Item 7 (aircraft identification) of the flight plan filed by a Singapore operator in respect of the defined international flight contains the registration mark of an aeroplane that is listed in an air operator certificate, a complex general aviation certificate or an aerial work certificate granted by the Authority, the Singapore operator that holds the air operator certificate, complex general aviation certificate or aerial work certificate, as the case may be;
  - (c) if a Singapore operator has proposed other means to identify and attribute defined international flights to itself in its approved emissions monitoring plan, the Singapore operator that is attributed to the defined international flight in accordance to those proposed means.
- (2) If a defined international flight is not attributed to any Singapore operator under paragraph (1)(a), (b) or (c), then —
- (a) the defined international flight is, by operation of this paragraph, attributed to the owner of the aeroplane; and
  - (b) the owner of the aeroplane is, by operation of this paragraph, treated as the operator of that aeroplane.
- (3) Where the Director-General of Civil Aviation requires, the owner of an aeroplane mentioned in paragraph (2)(b) must submit to the Director-General of Civil Aviation any information to identify the actual Singapore operator of the defined international flight in question.

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**New entrant**

**33.**—(1) In these Regulations, if a primary registered Singapore operator satisfies all conditions set out in paragraph (2), the primary registered Singapore operator is a new entrant when it first becomes a primary registered Singapore operator.

(2) The conditions are that —

(a) the primary registered Singapore operator is a holder of any of the following certificates that was granted on or after the date of commencement of these Regulations:

- (i) an air operator certificate issued under the Air Navigation (119 — Air Operator Certification) Regulations 2018 (G.N. No. S 443/2018);
- (ii) an aerial work certificate issued under the Air Navigation (137 — Aerial Work) Regulations 2018 (G.N. No. S 502/2018);
- (iii) a complex general aviation certificate issued under the Air Navigation (125 — Complex General Aviation) Regulations 2018 (G.N. No. S 501/2018); and

(b) the primary registered Singapore operator's activity —

- (i) is not in whole or in part a continuation of an air operation previously performed by another Singapore operator; or
- (ii) was not operated by another Singapore operator that —
  - (A) is a related corporation of the primary registered Singapore operator within the meaning of section 4(1) of the Companies Act 1967;
  - (B) was merged with the primary registered Singapore operator; or
  - (C) the primary registered Singapore operator had acquired a substantial shareholding in.

(3) For the purposes of paragraph (2)(b)(ii)(C), a substantial shareholding has the meaning given by section 81 of the Companies Act 1967.

## PART 7

### SAVING AND TRANSITIONAL PROVISIONS

#### **Saving and transitional provisions**

**34.**—(1) Where a Singapore operator operated, at any time during the period starting on 1 January 2019 and ending on 31 December 2022, at least one defined aeroplane for any defined international flight attributed to the Singapore operator, then, starting 1 January 2019 and subject to paragraph (2), the Singapore operator is treated as a registered Singapore operator for the purposes of these Regulations.

(2) Despite paragraph (1) and regulation 5(3), if a registered Singapore operator mentioned in paragraph (1) is no longer a Singapore operator on a date before 1 January 2023, then the registration of the registered Singapore operator ceases to be in force on that date.

(3) An emissions monitoring plan submitted to the Director-General of Civil Aviation by a registered Singapore operator mentioned in paragraph (1) that is a primary registered Singapore operator —

(a) after 1 January 2019 but before 1 January 2023; and

(b) that was approved by the Director-General of Civil Aviation,

is to be treated as an emissions monitoring plan submitted under regulation 13(1) and approved by the Director-General of Civil Aviation under regulation 13(4)(a).

(4) For the purposes of these Regulations, the first reporting period under regulation 10 for a registered Singapore operator mentioned in paragraph (1) that is a primary registered Singapore operator is the year 2019, and every enhanced emissions report submitted by the primary registered Singapore operator to the Director-General of

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Civil Aviation after 1 January 2019 but before 1 January 2023 is treated as if it were submitted under these Regulations.

(5) For the purposes of these Regulations, the first reporting period under regulation 10 for a registered Singapore operator mentioned in paragraph (1) that is a secondary registered Singapore operator is the year 2019, and every simplified emissions report submitted by the secondary registered Singapore operator to the Director-General of Civil Aviation after 1 January 2019 but before 1 January 2023 is treated as if it were submitted under these Regulations.

## FIRST SCHEDULE

Regulation 2

### DEFINITIONS

- “aerial work certificate” means an aviation safety instrument issued by the Authority under the Air Navigation (137 — Aerial Work) Regulations 2018 which authorises the holder of the certificate to carry out an aerial work operation that is stated in the certificate.
- “aerodrome pair” means a group of 2 aerodromes comprising a departing aerodrome and an arrival aerodrome.
- “air operation” means the operation of one or more aircraft for the purpose of commercial air transport, general aviation, or aerial work.
- “air operator certificate” means an aviation safety instrument issued under the Air Navigation (119 — Air Operator Certification) Regulations 2018 which authorises the holder of the certificate to conduct commercial air transport operations under, either or both of the following regulations:
- (a) the Air Navigation (121 — Commercial Air Transport by Large Aeroplanes) Regulations 2018 (G.N. No. S 444/2018);
  - (b) the Air Navigation (135 — Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018 (G.N. No. S 445/2018).
- “applicable monitoring method”, in relation to a primary registered Singapore operator, means the monitoring method that the primary registered Singapore operator is required to use under regulation 15(3).
- “approved emissions monitoring plan”, in relation to a primary registered Singapore operator, means an emissions monitoring plan that is approved by the Director-General of Civil Aviation under regulation 13, as may be

FIRST SCHEDULE — *continued*

revised with the Director-General of Civil Aviation's approval under regulation 14.

“complex general aviation certificate” means an aviation safety instrument issued under the Air Navigation (125 — Complex General Aviation) Regulations 2018 which authorises the holder of the certificate to conduct a complex general aviation operation.

“data gaps” means the occurrence of missing data relevant for the determination of a registered Singapore operator's fuel use for one or more international flights due to irregular operations, data feed issues or critical system failures.

“defined aeroplane” means an aeroplane that has an MCTOM exceeding 5,700 kg for an international flight.

“defined international flight” means an international flight that is countable for the purposes of regulation 4(1).

“emissions monitoring plan” means an emissions monitoring plan mentioned in regulation 13, and includes an emissions monitoring plan that is revised under regulation 14.

“enhanced emissions report” means an enhanced emissions report mentioned in regulation 10, and includes a verified enhanced emissions report.

“fuel uplift” means a measurement of fuel provided by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight.

“fuel use monitoring method”, in relation to a primary registered Singapore operator, means any method for monitoring the fuel use of the primary registered Singapore operator specified by the Director-General of Civil Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

“ICAO CORSIA CERT” means the monitoring method called the ICAO CORSIA CO<sub>2</sub> Estimation & Reporting Tool (CERT) specified in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

“international flight” means any operation of an aircraft into and out of Singapore.

“primary registered Singapore operator” has the meaning given to that expression in regulation 9.

“registered Singapore operator” means a Singapore operator registered under regulation 4.

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FIRST SCHEDULE — *continued*

“reporting period” means —

- (a) in respect of a primary registered Singapore operator — any period mentioned in regulation 8 as a reporting period; and
- (b) in respect of a secondary registered Singapore operator — any period mentioned in regulation 19 as a reporting period.

“secondary registered Singapore operator” means a registered Singapore operator who is not a primary registered Singapore operator.

“simplified emissions report” means a simplified emissions report mentioned in regulation 20.

“verification body” means the body appointed by a primary registered Singapore operator to conduct an independent, systematic and sufficiently documented evaluation process of an enhanced emissions report.

“verified enhanced emissions report” means an enhanced emissions report verified under regulation 11 by a verification body.

SECOND SCHEDULE

Regulations 13(3) and 14(2)

CONTENT OF EMISSIONS MONITORING PLAN

PART 1

PRIMARY REGISTERED SINGAPORE OPERATOR IDENTIFICATION

1. An emissions monitoring plan must contain the following identification information of the primary registered Singapore operator:

- (a) name and address of the primary registered Singapore operator;
- (b) information for attributing the primary registered Singapore operator to Singapore, including —
  - (i) information on the ICAO Designator used for air traffic control purposes, as listed in ICA Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services (Doc 8585); and
  - (ii) if the primary registered Singapore operator does not have an ICAO Designator, a copy of its air operator certificate;
- (c) details of ownership structure relative to any other primary registered Singapore operators with international flights, including whether the primary registered Singapore operator —

SECOND SCHEDULE — *continued*

- (i) is a parent company to any other primary registered Singapore operators with international flights; or
  - (ii) is a subsidiary of any other primary registered Singapore operators with international flights;
- (d) if the primary registered Singapore operator in a parent-subsiary relationship seeks to be considered as a single primary registered Singapore operator for the purposes of these Regulations, confirmation that the parent and subsidiary (or subsidiaries) are attributed to Singapore, and that the subsidiary (or subsidiaries) is (or are) wholly-owned by the parent;
- (e) contact information for the person within the primary registered Singapore operator's company who is responsible for the emissions monitoring plan;
- (f) the description of the primary registered Singapore operator's activities, including —
- (i) scheduled or non-scheduled flights;
  - (ii) operations of aircrafts for general aviation operations; and
  - (iii) geographical scope of operations.

## PART 2

## FLEET AND OPERATIONS DATA

2. An emissions monitoring plan must contain the following information on the fleet and operations of the primary registered Singapore operator:

- (a) a list of aeroplane types, and type of fuel used in aeroplanes operated for international flights (e.g. Jet-A, Jet-A1, Jet-B, AvGas), at the time of submission of the emissions monitoring plan, including —
- (i) the aeroplane types with a MCTOM of 5,700 kg or greater;
  - (ii) the number of aeroplanes per type, including owned and leased aeroplanes; and
  - (iii) the type of fuel used by the aeroplanes;
- (b) the information used for attributing international flights to the primary registered Singapore operator, including —
- (i) a list of the ICAO Designator (or Designators) used in Item 7 (aircraft identification) of the primary registered Singapore operator's flight plans; and

SECOND SCHEDULE — *continued*

- (ii) if the primary registered Singapore operator does not have an ICAO Designator, a list of the nationality or common mark, and registration mark of aeroplanes that are explicitly stated in the air operator certificate, complex general aviation certificate or aerial work certificate, and used in Item 7 (aircraft identification) of the primary registered Singapore operator's flight plans;
- (c) the procedures on how changes in the aeroplane fleet and fuel used will be tracked to ensure completeness of monitoring;
- (d) the procedures on how the specific flights of an aeroplane will be tracked to ensure completeness of monitoring;
- (e) the procedures for determining which aeroplane flights are international flights, and are subject to these Regulations;
- (f) a list of States to where the primary registered Singapore operator operates international flights at the time of initial submission of the emissions monitoring plan;
- (g) the procedure for identifying international flights mentioned in regulation 4(2) that are not counted for the purposes of regulation 4(1).

## PART 3

METHODS AND MEANS OF CALCULATING EMISSIONS  
FROM INTERNATIONAL FLIGHTS

3. If the primary registered Singapore operator is eligible to use ICAO CORSIA CERT as a fuel monitoring method under regulation 15(3)(b) or (4), and chooses to use ICAO CORSIA CERT as a fuel monitoring method for the purposes of regulation 15, the following information must be provided:

- (a) an estimate of CO<sub>2</sub> emissions for all international flights for the reporting period immediately before the reporting period to which the enhanced emissions report relates, and information on how the fuel use and CO<sub>2</sub> emissions during the firstmentioned reporting period was calculated;
- (b) the type of input method used in the method used in the ICAO CORSIA CERT, whether the Great Circle Distance input method described in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods issued by the Director-General of Civil Aviation or the Block Time input method described in Part 2 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

SECOND SCHEDULE — *continued*

4. If the primary registered Singapore operator uses a fuel use monitoring method specified by the Director-General of Civil Aviation in the Aviation Specifications 4 — Fuel Use Monitoring Methods, the following information must be provided:

- (a) the particular fuel use monitoring methods that will be used (i.e. 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, which methods applies to which aeroplane types;
- (c) the 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 technical log of the record of fuel density maintained by the primary registered Singapore operator mentioned in regulation 16(2);
- (d) the systems and procedures to monitor fuel consumption in both owned and leased aeroplanes;
- (e) if the primary registered Singapore operator has chosen the Fuel Allocation with Block Hour method described in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods, the systems and procedures used to establish the average fuel burn ratios as described in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods.

## PART 4

## DATA MANAGEMENT, DATA FLOW AND CONTROL

5. An emissions monitoring plan must contain the following information relating to the primary registered Singapore operator's data management:

- (a) the roles, responsibilities and procedures on data management;
- (b) the procedures to handle data gaps and erroneous data values, including —
  - (i) secondary data reference sources that would be used as an alternative;
  - (ii) alternative method or methods to handle data gaps and erroneous data values in case the secondary data reference source is not available; and
  - (iii) if a primary registered Singapore operators uses a fuel use monitoring method specified by the Director-General of Civil

SECOND SCHEDULE — *continued*

Aviation in Part 1 of the Aviation Specifications 4 — Fuel Use Monitoring Methods, information on systems and procedures for identifying data gaps and for accessing whether the 5% threshold for errors or omissions mentioned in regulation 12(3) has been reached;

- (c) the documentation and record keeping plan;
- (d) an assessment of the risks associated with the data management processes and means for addressing significant risks;
- (e) the procedures for making revisions to the emissions monitoring plan and resubmitting relevant portions to the Director-General of Civil Aviation when there are material changes;
- (f) the procedures for providing notice in the enhanced emissions report of non-material changes that require the attention of the Director-General of Civil Aviation;
- (g) a data flow diagram summarising the systems used to record and store data associated with the monitoring and reporting of CO<sub>2</sub> emissions.

THIRD SCHEDULE

Regulation 10(4)(a)

CONTENTS OF ENHANCED EMISSIONS REPORT

1. Primary registered Singapore operator information:
  - (a) name of primary registered Singapore operator;
  - (b) detailed contact information of primary registered Singapore operator;
  - (c) name of a point of contact;
  - (d) method and identifier used to attribute the primary registered Singapore operator to Singapore in accordance with regulation 32;
  - (e) Singapore as the State attributable to the primary registered Singapore operator.
2. Reference to the approved emissions monitoring plan to which the emissions monitoring for the purposes of the enhanced emissions report is conducted in accordance with.
3. Information to identify the verification body and verification report:
  - (a) name and contact information of the verification body;
  - (b) copy of verification report.

THIRD SCHEDULE — *continued*

4. Year of reporting period during which CO<sub>2</sub> emissions were monitored.
5. Total fuel mass per type of fuel used (in tonnes):
  - (a) Jet-A;
  - (b) Jet-A1;
  - (c) Jet-B;
  - (d) AvGas.
6. Total number of international flights by the primary registered Singapore operator during the reporting period.
7. Number of international flights per aerodrome pair (no rounding).
8. CO<sub>2</sub> emissions from international flights per aerodrome pair (in tonnes).
9. Scale of data gaps:
  - (a) percentage of data gaps (rounded to the nearest 0.1%);
  - (b) reason for data gaps if percentage of data gaps exceeds the threshold specified in regulation 12(3).
10. Aeroplane information:
  - (a) list of aeroplane types operated for international flights;
  - (b) aeroplane identifiers used in Item 7 (aircraft identification) used in the flight plan filed by the primary registered Singapore operator for the reporting period (if the aeroplane identifier is based on an ICAO designator, only the ICAO designator is to be reported).
11. Eligibility for and use of the ICAO CORSIA CERT:
  - (a) version of the ICAO CORSIA CERT used;
  - (b) scope of use of the ICAO CORSIA CERT (whether on all flights or only on data gaps).
12. Total CO<sub>2</sub> emissions based on total mass of fuel in tonnes calculated in item 5(a) (in tonnes).

Made on 14 December 2022.

EDMUND CHENG WAI WING  
*Chairperson,*  
*Civil Aviation Authority of*  
*Singapore.*

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