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CORISA Verification

*Regional Officer
ICAO ESAF and WACAF Office*

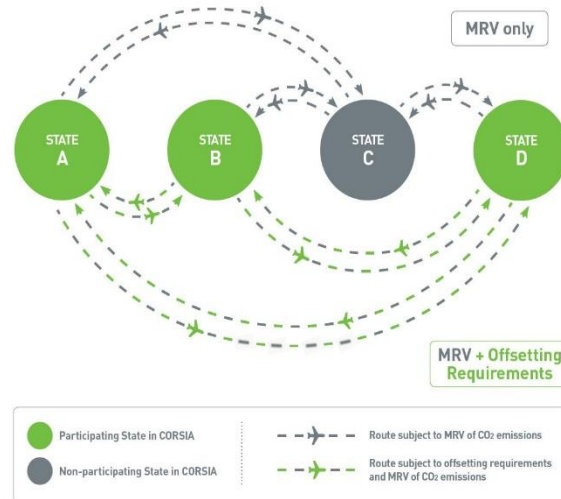
ICAO webinar

23 June 2022





Verification of CO₂ Emissions in CORSIA – Fundamentals





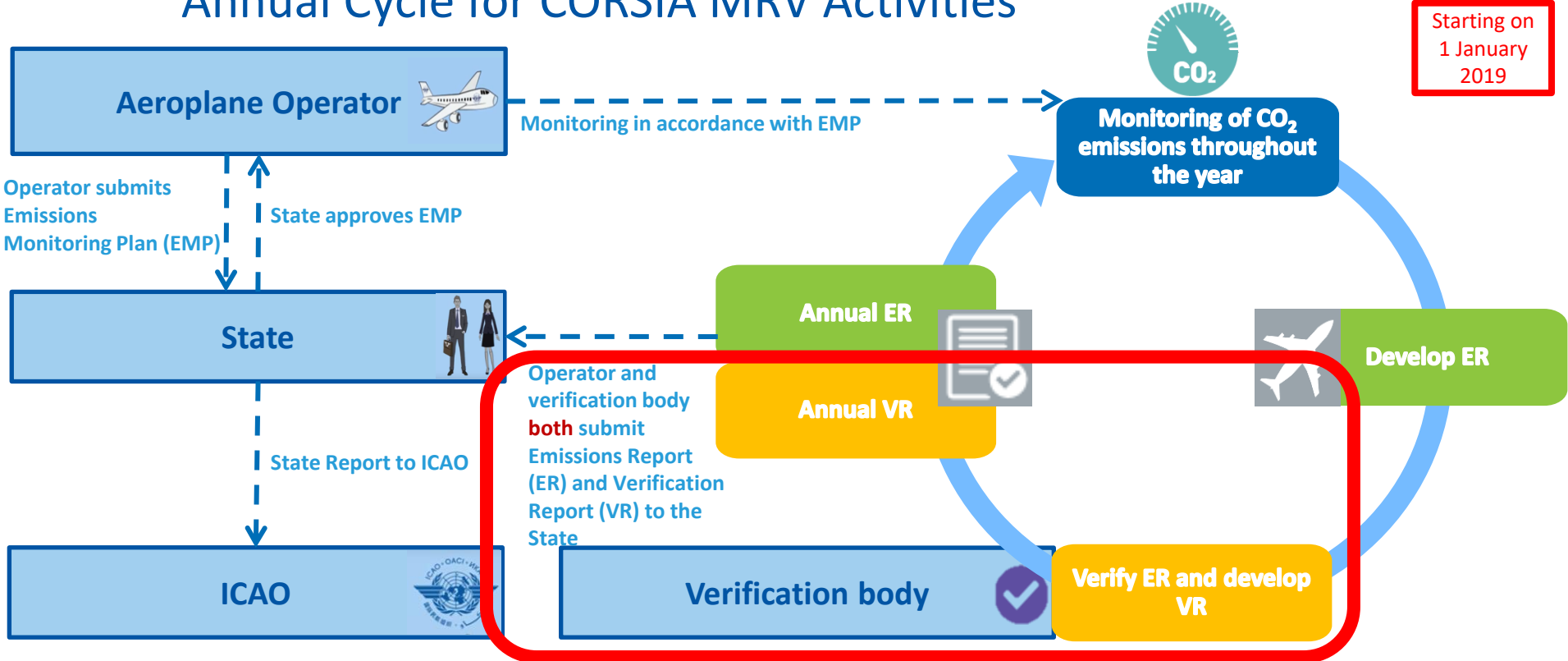
Verification of Emissions Reports

- Objective of the verification of CO₂ Emissions Report under CORSIA
 - To check that monitoring of CO₂ emissions by the AOs is done according to the approved Emissions Monitoring Plan (EMP) and Annex 16, Volume IV
 - To check that reported CO₂ emissions are correct and reliable
 - Represent accurately CO₂ emissions over the reporting period and supported by evidence
 - Aeroplane operator has monitored, calculated and reported emissions in accordance with Annex 16, Volume IV, and approved EMP
 - Flight attribution is correctly applied: no overlap/gaps with other operators
- Scope of verification
 - Entire reporting period as stated in CO₂ Emissions Report (1 year)
 - CO₂ emissions determined by the use of fuel use monitoring methods and/or CERT



Annual Cycle for CORSIA MRV Activities

Starting on
1 January
2019





Verification of Emissions Reports

- The aeroplane operator shall engage an accredited verification body for the verification of its annual Emissions Report
 - An aeroplane operator may engage a verification body accredited in another State, subject to rules and regulations affecting the provision of verification services in the State to which the aeroplane operator is attributed
- A verification body shall conduct the verification according to ISO 14064-3:2006, and the CORSIA-specific requirements described in Annex 16, Volume IV, Appendix 6, and the guidance in the ETM (Doc 9501), Volume IV

ISO 14064-
3:2006

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ICAO Annex 16,
Volume IV, APP 6

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Requirements for
conducting CORSIA
verification

Reference: Annex 16, Volume
IV, Part II, Chapter 2, 2.4.1



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Verification Process



Verification process by verification bodies

(1) Pre-contract stage

(2) Strategic analysis

(3) Risk analysis

(4) Verification Plan

(5) Verification

(6) Addressing misstatements and non-conformities

(7) Verification Report

(8) Independent review

(9) Authorization to forward by aeroplane operator

(10) Submit Verification Report and Emission Report to State

Voluntary pre-verification by aeroplane operator

**Deadline to submit to States:
30 April 2022**

Order of Magnitude Check by the State



Verification process by verification bodies

(1) Pre-contract stage

(2) Strategic analysis

(3) Risk analysis

(4) Verification Plan

(5) Verification

(6) Addressing misstatements and non-conformities

(7) Verification Report

(8) Independent review

(9) Authorization to forward by aeroplane operator

(10) Submit Verification Report and Emission Report to State

Voluntary pre-verification by aeroplane operator

Preparation for the verification

Order of Magnitude Check by the State

Reference: ETM (Doc 9501), Volume IV, Chapter 3, 3.3.4



Site Visit during Verification

- Site Visit is not a requirement under Annex 16, Volume IV
 - According to ETM (Doc 9501), Volume IV, **Site Visit is essential** means for verification team to collect sufficient and appropriate evidence to confirm whether Emission Report is free from material misstatements and non-conformity
 - If very low verification risks are identified, alternate remote verification technique like video-conferencing and direct access to aeroplane operator's database may be used to substitute **Site Visit**



The VB should coordinate with the State before replacing the site visit with an alternative approach



Verification process by verification bodies

(1) Pre-contract stage

(2) Strategic analysis

(3) Risk analysis

(4) Verification Plan

(5) Verification

(6) Addressing misstatements and non-conformities

(7) Verification Report

(8) Independent review

(9) Authorization to forward by aeroplane operator

(10) Submit Verification Report and Emission Report to State

Voluntary pre-verification by aeroplane operator

Verification Activities

Order of Magnitude Check by the State

Reference: ETM (Doc 9501), Volume IV, Chapter 3, 3.3.4



Verification process by verification bodies

(1) Pre-contract stage

(2) Strategic analysis

(3) Risk analysis

(4) Verification Plan

(5) Verification

(6) Addressing misstatements and non-conformities

(7) Verification Report

(8) Independent review

(9) Authorization to forward by aeroplane operator

(10) Submit Verification Report and Emission Report to State

Voluntary pre-verification by aeroplane operator

Submission of Reports

Order of Magnitude Check by the State

Reference: ETM (Doc 9501), Volume IV, Chapter 3, 3.3.4



Order of Magnitude Check by States

The objective of the State's order of magnitude check of an aeroplane operator's Emissions Reports is to assess the completeness of data reported by the operator

The order of magnitude check of the Emissions Report of the aeroplane operator is described in Annex 16, Volume IV, Part II, Chapter 2, 2.4.1.5.

The order of magnitude check follow a set of standardized requirements as outlined in Table 3-9 in ETM volume 4.

Table 3-9. State order of magnitude checklist for Emissions Report

No.	Question/Issue	Additional information	Status: OK/Yes/No/ Not Applicable	Notes and results of checks
Aeroplane operator				
1	Aeroplane operator/verification body both separately submit Emissions Report and Verification Report. Is the content of both submissions identical?	Minimum check: reported fuel consumption and number of flights. Get back to aeroplane operator in case of deviations.		
2	Is the name of the aeroplane operator given and unambiguous?	Ensure unambiguous identification of aeroplane operator. Get back to aeroplane operator in case of uncertainties.		
3	Is there a valid ICAO Designator for aeroplane operating agencies? Does it have the correct character length?	Ensure unambiguous identification of aeroplane operator. Get back to aeroplane operator in case of uncertainties.		
4	Basic information (address, AOC, etc.) plausible?	Ensure unambiguous identification of aeroplane operator. Get back to aeroplane operator in case of uncertainties.		



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Accreditation of Verification Bodies under CORSIA



Accreditation of Verification Bodies

- A verification body shall be accredited by a national accreditation body in order to be eligible to verify Emissions Reports in CORSIA:
 - ISO 14065:2013 “Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition”
 - CORSIA-specific requirements as described in Annex 16, Volume IV, Appendix 6
- A national accreditation body shall be working in accordance with ISO/IEC 17011 “*Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies*”
- As of June 2021, 64 verification bodies are accredited in 35 States
 - Published in ICAO document “*CORSIA Central Registry (CCR): Information and Data for Transparency*”



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Questions and Answers

Questions and Answers

Q1. Does the voluntary pre-verification substitute the third-party verification?

- No, the voluntary pre-verification does not substitute the third-party verification
- Voluntary pre-verification is not a requirement under Annex 16, Volume IV, although aeroplane operators are recommended to consider preparing for the third-party verification process by conducting a pre-verification

Q2. Is third-party verification a requirement under Annex 16, Volume IV ?

- Yes, the third-party verification is a requirement under Annex 16, Volume IV
- Annex 16, Volume IV, Part II, Chapter 2, 2.4.1.1 states:

The aeroplane operator shall engage a verification body for the verification of its annual Emissions Report.

CORSIA FAQ accessible available at: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-FAQs.aspx>



Questions and Answers

Q3. Is a third-party verification needed when using the ICAO CORSIA CO2 Emissions and Reporting Tool (CERT)?

- Yes, according to Annex 16, Volume IV, an aeroplane operator shall engage a third-party verification body for the verification of its annual Emissions Report also when the ICAO CORSIA CERT has been used for generating an Emissions Report

Q4. What are the requirements to be accredited as a verification body to conduct the third-party verification??

- In order to be eligible to verify the Emissions Report of the aeroplane operator under CORSIA, a verification body must be accredited to ISO standard 14065:2013 (*Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition*), and to the relevant requirements described in Annex 16, Volume IV, Appendix 6.



Questions and Answers

Q5. Who accredits the verification body?

- Accreditations are granted by **national accreditation bodies**. National accreditation bodies are required to work in accordance with ISO/IEC 17011 (*Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies*).

Q6. Should aeroplane operator submit a copy of accreditation certificate of the verification body to States along with the Emissions Report?

- No, according to the Annex 16, Volume IV, there is no such requirement for aeroplane operators to submit a copy of accreditation certificate to the States



Questions and Answers

Q7. Is there any requirement for a verification body to be accredited by the NAB of the State it is registered in?

- According to Annex 16, Volume IV, Part II, Chapter 4, 4.4.2, a verification body shall be accredited to ISO 14065:2013 and the relevant requirements in Appendix 6, Section 2 by a national accreditation body
- Additional requirements or conditions for NABs to accredit verification bodies, including the accreditation of a foreign verification bodies, are within the purview of the NABs of each State
- According to Annex 16, Volume IV, Part II, 2.4.2.1, note, an aeroplane operator may engage a verification body accredited in another State, subject to rules and regulations affecting the provision of verification services in the State to which the aeroplane operator is attributed

Q8. Can one verification body be accredited by several NABs?

- Yes, a verification body can seek accreditation by NABs in more than one States



Questions and Answers

Q9. Can a Civil Aviation Authority accredit verification bodies?

- No, according to Annex 16, Volume IV, Part II, Chapter 2, 2.4.2, accreditation is granted by the **national accreditation body**, in accordance with ISO/IEC 17011 (*Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies*)
- In case there is no national accreditation body, a State may notify aeroplane operators to engage verification bodies accredited in another State.
- The list of accredited verification bodies accredited in States for CORSIA is included in “*CORSIA Central Registry (CCR): Information and Data for Transparency*”, available at: <https://www.icao.int/environmental-protection/CORSIA/Pages/Data-for-Transparency.aspx>
- For further information, please check ETM (Doc 9501), Volume IV, Chapter 3. Section 3.3.2.3, and CORSIA FAQ 3.94 - 3.96

CORSIA FAQ accessible available at: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-FAQs.aspx>



Questions and Answers

Q10. What can State do to check the accreditation status of verification bodies referred in the Emissions Report?

- According (Doc 9501), Volume IV, Chapter 3, 3.3.4.3, Table 3-9. State order of magnitude checklist for Emissions Report, Question 62, State is encouraged to compare the verification body with the published list of ICAO
- If the verification body referred in the ER is not included in the list, the Emissions Report does not meet the requirements of Annex 16, Volume IV
- The list of accredited verification bodies accredited in States for CORSIA is included in “CORSIA Central Registry (CCR): Information and Data for Transparency”, available at: <https://www.icao.int/environmental-protection/CORSIA/Pages/Data-for-Transparency.aspx>



Questions and Answers

Q.11 Is a site visit in verification process the requirement under Annex 16, Volume IV?

- No, site visit is not a requirement under Annex 16, Volume IV on CORSIA
- ETM (Doc 9501), Volume IV, Chapter 3, 3.3.4 recommends site visit to take place as an essential means for verification team to collect sufficient and appropriate evidence to confirm whether Emission Report is free from material misstatements and non-conformity. Whether site visit takes place is dependent on the result of the risk analysis prior to the verification activities
- ETM (Doc 9501), Volume IV provides flexibility to replace a site visit with an equivalent approach when verification risk is determined to be low, and also recommends to clearly mention in the Verification Report whether site visit has been replaced and the reasoning for the decision. The verification body should coordinate with the State of the aeroplane operator before replacing the site visit with an alternative approach



Questions and Answers

Q12. Regarding the “Order Magnitude Check” by States, does it require specific training, or is it enough to follow the ETM Checklist?

- No, the order of magnitude check by States does not require special training.
- Under the ETM (Doc 9501), Volume IV, Chapter 3, 3.3.4.3, Table 3-9. State order of magnitude checklist for Emissions Report, provides a guide for States to conduct the order of magnitude check

No.	Question / Issue	Additional Information
Aeroplane Operator		
1	<u>Aeroplane Operator</u> /Verification Body both separately submit Emissions Report and Verification Report. Is the content of both submissions identical?	Minimum check: reported fuel consumption and number of flights. Get back to <u>Aeroplane Operator</u> in case of deviations.
2	Is the name of the <u>Aeroplane Operator</u> given and unambiguous?	Ensure unambiguous identification of <u>Aeroplane Operator</u> . Get back to <u>Aeroplane Operator</u> in case of uncertainties.
3	Is there a valid ICAO designator for <u>Aeroplane Operating Agencies</u> ? Does it have the correct character length?	Ensure unambiguous identification of <u>Aeroplane Operator</u> . Get back to <u>Aeroplane Operator</u> in case of uncertainties.
4	Basic information (address, AOC etc.) plausible?	Ensure unambiguous identification of <u>Aeroplane Operator</u> . Get back to <u>Aeroplane Operator</u> in case of uncertainties.



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Questions and Answers

Q13. Is there a training on CORSIA verification?

- Yes, ICAO has launched a CORSIA Verification Course (in-person and virtual classroom) aimed mainly for verification bodies to provide training on how to verify CO2 Emissions Reports that have been prepared by aeroplane operators, in accordance with the provisions of the CORSIA SARPs.

More information about the course, including upcoming deliveries can be found from:

<https://www.icao.int/training/Pages/training-catalogue-details.aspx?catid=2657&language=0®ion=&ITP=1>





Key Takeaways

- Verification is one of the key components of CORSIA to safeguard the quality of the reported information and data
- CORSIA Focal Points are encouraged to coordinate with the National Accreditation Bodies in their States to provide guidance for accredited verification bodies
- **CORSIA Frequently Asked Questions (FAQ):**
<https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-FAQs.aspx>



Additional Question?



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THANK YOU