



Cargo Compartment Halon Replacement Working Group (CCHRWG) Update

November 1, 2017

*International Aircraft Systems Fire Protection Working Group Meeting
Atlantic City, New Jersey, USA*

By

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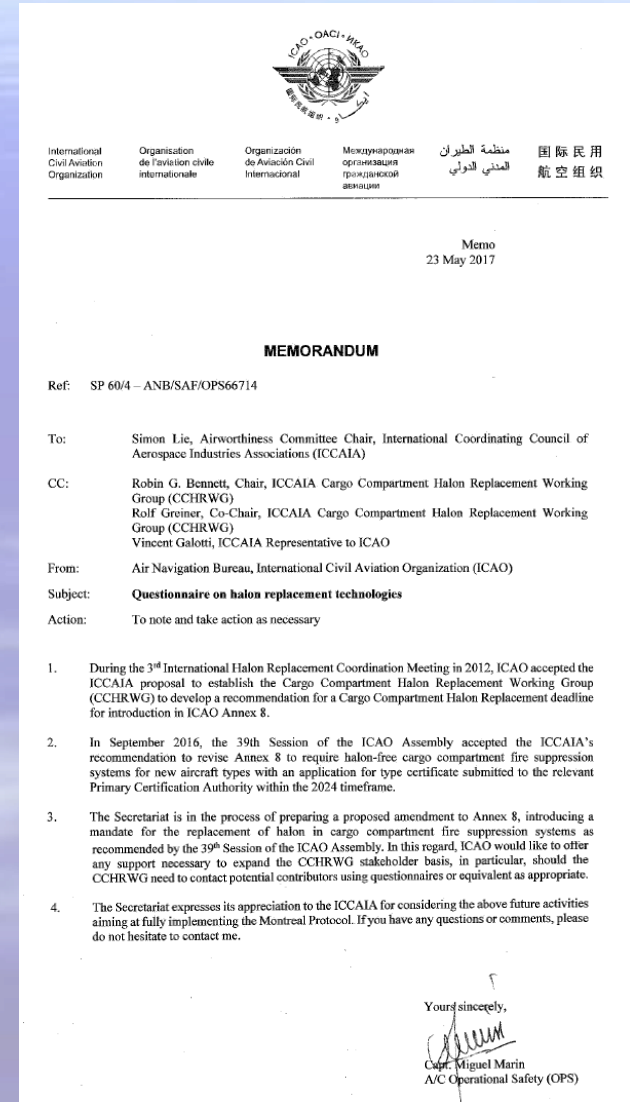
Industry coordination ongoing

- CCHRWG Terms of Reference require continued effort in support of 2024 deadline
 - Deliverable: Continued ICCAIA representation to ICAO regarding a cargo compartment halon replacement and implementation status for new type certification aircraft applications.
- Name changed . . .
 - ICCAIA renamed the industry expert groups to distinguish them from similarly named ICAO bodies.
 - Cargo Halon Replacement Working Group → Cargo Halon Replacement Advisory Group
 - New acronym: CCHRAG



ICAO moving forward

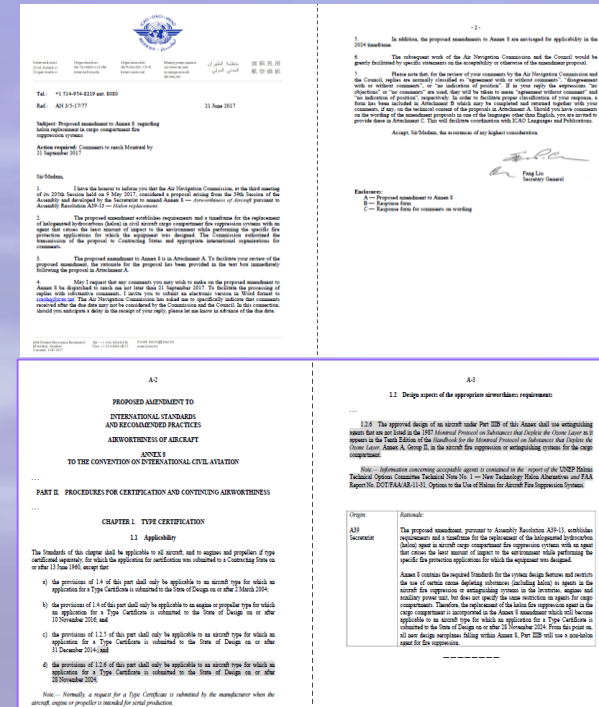
- ICAO May 23, 2017 memo
 - “ICAO would like to offer any support necessary to expand the CCHRWG stakeholder basis . . . using questionnaires or equivalent . . .”
 - “The Secretariat expresses its appreciation to the ICCAIA for considering the above future activities aiming at fully implementing the Montreal Protocol.”





ICAO Coordination Continues

- June 21, 2017 ICAO Letter to Member States
 - “Subject: Proposed amendment to Annex 8 regarding halon replacement in cargo compartment fire suppression systems
 - . . . the provisions of 1.2.6 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate is submitted to the State of Design on or after 28 November 2024.
 - 1.2.6 The approved design of an aircraft under Part IIIB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer . . .*”
- October 17, 2017 ICAO Working Paper
 - Summary of comments – none adverse (ICCAIA responded w/agreement)
 - Secretariat to propose amendment to the Council for adoption in 2018





Stakeholder engagement is constructive

- May 11th CCHRWG Meeting engaged stakeholders
 - 27 participants w/representation from
 - 3 agencies, 6 suppliers, 6 OEMs
 - Overview of Halon Replacement Technologies Assessment Plan
- Stakeholder Questionnaire on potential technologies
 - Eight (8) participants including system suppliers, chemical manufacturers, and others
- Meeting tomorrow to review next steps
 - Technical assessment criteria
 - Supporting ICAO deadline

DATE	DELIVERABLE
17 April 2017	Confirm Technical Work Stream Plan
5 May 2017	Finalize questionnaire format and distribution
11 May 2017	Stakeholder meeting to invite halo assessment by CCHRWG to identify deadline.
June - Sept 2017	CCHRWG finalizes and distributes questionnaire to participants, develop plan for information criteria, and participant coordination
Oct 2017	CCHRWG status report to ICAO
Oct 2017	Stakeholder meeting to confirm plan
Nov 2017 – April 2018	CCHRWG executes assessment plan
May 2018	Stakeholder meeting to review progress and/or feedback.
June - Sept 2018	CCHRWG to complete assessment
Oct 2018	CCHRWG status report to ICAO
Oct 2018	Stakeholder meeting to review findings
Nov 2018 – April 2019	CCHRWG to prepare final report (ICAO)
May 2019	Stakeholder meeting to share final report
June – Sept 2019	CCHRWG to prepare for ICAO General Assembly
Oct 2019	ICAO General Assembly accepts ICAO decision
Oct 2019	Stakeholder meeting to share ICAO decision, if appropriate

DRAFT

Questionnaire for Stakeholders
Fire Suppression/Extinguishing Systems based on Halon Replacements

Stakeholder Name & Contact Information:			
Question	Answer (text)	No Answer (x)	
1	Are you currently working on replacements for Halon 1301 for aircraft cargo compartment fire suppression systems?		
2	ICAO is in the process of adopting Annex 8 2024 as a deadline for requiring Halon replacement for airplanes with new type certificates. What are the steps you will have to take to qualify a replacement technology to be ready for this deadline?		
3	If you are using the TRL (Technology Readiness Level) approach, at which TRL is your technology currently? Is your development schedule correlated to the 2024 deadline?		
4	If you are using a different technology development system, what is your development schedule with respect to the 2024 deadline?		
5	What is the basic technical approach of your technology (e.g. chemical, physical, inerting, single agent, multiple agents, blends, etc.)?		
6	Does your replacement technology contain ODS, GHS or other regulated substance(s)?		
7	What specific aircraft architecture or provisions (e.g. bleed air, fuel tank inerting systems, etc.) does your technology use?		
8	What, if any, are the operational restrictions in using your technology in aircraft during flight (e.g. limitation of ETOPS diversion time)?		
9	What, if any, are the operational restrictions in using your technology in aircraft on-ground and during maintenance (e.g. cold weather operations)?		
10	What are the anticipated impacts of your technology on airline and maintenance operations (e.g. spare parts management and agent availability)?		
11	Is your technology optimized for a particular aircraft size? If so, explain.		



2017 - 2019 CCHRAG WORK PLAN

Technical Work Stream

DATE	DELIVERABLE	ASSIGNED TO:
17 April 2017	Confirm Technical Work Stream Plan Schedule	CCHRWG Core Group
5 May 2017	Finalize questionnaire format and ICAO coordination	CCHRWG Core Group
11 May 2017	Stakeholder meeting to invite halon replacement suppliers to participate in an assessment by CCHRWG to identify potential candidates in support of the ICAO 2024 deadline.	CCHRWG Core Group & Stakeholders
June - Sept 2017	CCHRWG finalizes and distributes questionnaire, logs responses and confirms participants, develop plan for information management, establishment of assessment criteria, and participant coordination schedule.	CCHRWG Core Group
Oct 2017 Feb 2018?	CCHRWG status report to ICAO	CCHRWG Core group
Oct Nov 2017	Stakeholder meeting to confirm plan and commitment with participants.	CCHRAG Core Group & Stakeholders
Nov 2017 – April 2018	CCHRAG executes assessment plan including participant input and coordination.	CCHRAG Core Group & Stakeholders
May 2018	Stakeholder meeting to review progress to assessment plan and provide updates and/or feedback.	CCHRAG Core Group & Stakeholders
June - Sept 2018	CCHRAG to complete assessment	CCHRAG Core Group & Stakeholders
Oct 2018	CCHRAG status report to ICAO	CCHRAG Core Group
Oct 2018	Stakeholder meeting to review final assessment and confirm conclusions.	CCHRAG Core Group & Stakeholders
Nov 2018 – April 2019	CCHRAG to prepare final report (ICCAIA WP) for ICAO General Assembly	CCHRAG Core Group
May 2019	Stakeholder meeting to share final report and discuss next steps (if any).	CCHRAG Core Group & Stakeholders
June – Sept 2019	CCHRAG to prepare for ICAO General Assembly	CCHRAG Core Group
Oct 2019	ICAO General Assembly accepts ICCAIA WP & recommendation (if any).	CCHRAG Core Group
Oct 2019	Stakeholder meeting to share ICAO General Assembly outcome and potential next steps, if appropriate	CCHRAG Core Group & Stakeholders



Questions & Answers



Thank you!

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