



28 March 2023

Mrs. Adina VALEAN
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European Commission
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Sent via email: cab-valean-contact@ec.europa.eu

RE: Response to European Hansard E-004009/2022 – Aircraft cabin air quality – 28/2/2023
https://www.europarl.europa.eu/doceo/document/E-9-2022-004009-ASW_EN.html

Dear Madam Commissioner:

We are writing on behalf of almost a half million aviation workers represented by the GCAQE, ETF, and EurECCA regarding your written response to the recent European Hansard on the subject of aircraft cabin air quality. For almost 20 years, our organizations and affiliates have been very active on the subject of cabin air quality, including correspondence and actions through the European Committee for Standardization (CEN) and EASA. The air onboard aircraft is an essential part of our working environment. Our concerns follow:

1. In your response to the European Hansard, you said that that the *“initial objective of the CEN initiative was to prepare a European standard. However, the resulting draft standard included statements and requirements that were not supported by conclusive scientific evidence of health or safety concern. For these reasons, the draft standard was rejected by many of the CEN voting members.”*

Certainly, the original objective of the CEN TC436 committee was to prepare a European standard. However, even though 13 EU countries voted to approve the draft standard, seven countries rejected it (May 2021; N314). In our view, those seven votes were heavily influenced by commercial interests and were not a good faith vote to address health and flight safety. So, despite the majority voting in favor of publishing the draft standard, the majority of the population did not, so that ballot failed. As a compromise measure to move the document forward, the CEN TC436 committee proposed that the draft standard be republished as a technical report (TR). To achieve this, all of the requirements were reframed as recommendations and the technical contents of document were unchanged. In response, 72% of voting countries voted in favor of this approach. The following three ballots that led to the publication of the TR were similarly strong – with 88%, 65%, and 79% of the votes cast in favor.

We are also concerned by your claim that there is not *“conclusive evidence”* to protect aircraft occupants from breathing oil fumes during routine flights. We have an in-depth understanding of the literature and can unequivocally state that there is a credible, consistent, and extensive body of literature that affirms the health and flight safety concerns associated with exposure to aircraft supply (bleed) air fumes. This includes air accident investigation reports, documentation, peer review published and other literature including occurrence reports, legal cases, patents and epidemiological studies. The weight of evidence is strongly suggestive of a causal link between aircraft cabin contamination and health effects. The paper trail is detailed, long, and global, but the industry has misused information and applied it selectively (1). Ultimately, the industry not been motivated to regulate themselves and EASA has failed in its role to protect air crew and passengers from this hazard.

2. In your response, you described the CEN initiative as *“unsuccessful”*; respectfully, we disagree. Our committee succeeded in finding a productive and agreeable path forward, within a diverse working group in the face of powerful commercial interests. Despite the challenges, the committee published an 83-page technical report which consolidates best practices in aircraft design, maintenance, and operation, including worker training and a standardized reporting system. It is practical and comprehensive; it demands nothing from the industry; it encourages and defines best industry practices. Also, it is grounded in two important pieces of EU documentation and legislation; the Precautionary Principle (2) and the Hierarchy of Controls (3). The TR 17904 document offers a clear and comprehensive *“road map”* for industry to follow to reduce the frequency and severity of *“fume events”* that can compromise flight safety and crewmember health.
3. You note that the *“Commission and EASA have actively investigated this subject since 2009. Several research projects have been commissioned by EASA and the Commission. These projects did not reveal so far health or safety concerns that would support the need to impose new design or operational rules to transport aeroplanes.”*

It is true that EASA and the EC have funded cabin air projects since 2009, but none of them have been designed with input from the people who work in the aircraft environment on a daily basis. Also, with the exception of the AVOIL work (4), none of those projects have been designed to answer unanswered questions or to move the field forward. Instead, the tenders were granted to industry consortia who have protected their commercial products. Further, some of the consortia’s research communications have been misleading, and some of the research findings have been disregarded.

As an example of miscommunication, the authors of the central component of the FACTS study (2016-2019) acknowledged that some of their key findings were marred by system contamination and should *“always be approached and interpreted with some caution”* (5, 6). Still, the data were published and promoted (6).

As an example of disregarding research findings, the CAQ1 study funded by EASA/EC confirmed the presence of a measured *“low background level”* of ambient TCP during *“non-event cases.”* The authors described the source of this TCP as *“an assumed permanent low oil leakage of the engines and APU.”* (7) This low-level constant leakage been recognized elsewhere (8-14) and has potentially serious health consequences. (15-17) Still, the CAQ1 authors dismissed the relevance and importance of this finding. As another example of disregarding research findings, one of the outputs from the in-vitro lung toxicity component of the FACTS study was that *“results suggest that exposure to engine oil and hydraulic fluid fumes can induce considerable lung toxicity, clearly reflecting the potential health risks of contaminated cabin air.”* (6) Still, the current CAQIII

study did not include any work to either assess in vivo lung toxicity or to develop exposure control measures to prevent exposure to these fumes.

4. Finally, you claimed that *“research continues to gather further knowledge and evidence on this complex subject. A project funded under the Horizon 2020 programme has been recently launched.”*

We are aware of this work and have formally submitted our concerns, questions, and recommendations. We presented that information at the EASA-hosted meeting in Cologne in January 2023 which we invite you to review: <https://doi.org/10.5281/zenodo.7574569> (18). In short, our concerns are: (a) The title of the CAQIII project is “Cabin air quality assessment of long-term effects of contaminants” (19, 20), but the actual study design does not mention long-term effects; (b) The tender document emphasizes the need to involve all stakeholders, including worker representatives, but worker representatives are not included (19); (c) The CAQIII study includes testing to measure neurotoxicity and neuroinflammation effects in mice, but only after sub-acute exposure to very high levels of oil fumes under conditions that do not reflect the exposure pattern of crewmembers; (d) Analysing HEPA filters for the presence of oil residue may speak to cumulative exposure of the filter over time but does not characterize exposure patterns in the cabin or flight deck; (e) There is no follow up to FACTS in-vitro findings of toxicity to the lungs; and (f) Neither development nor testing of exposure control measures is included.

In summary, on behalf of those who work on aircraft, the studies that EASA and the EC is funding and relying on are not defining means to prevent onboard exposure to oil fumes which put crews and passengers at risk of impairment and long-term ill-health. We believe it is inappropriate to rely on studies that do not address what they purport to investigate and at the same time use these to seek 100% conclusive proof of a causal effect before taking mitigating actions. We consider that, instead, taxpayer money should be used to promote public and worker health and safety. There is a broad range of risk mitigation strategies that are available now, and others that should be developed and implemented with some urgency. For example, at a meeting in January 2023 hosted by EASA, two engine oil manufacturers announced that they were developing “less hazardous oils” – one is a French company called NYCO. We feel that EU taxpayer money would best be spent supporting the rapid introduction of these oils, per the EU Precautionary Principle, rather than on funding research that does not offer a solution.

Finally, we consider that CEN TR 17904 provides a practical, comprehensive framework for industry to better prevent exposure to oil fumes onboard commercial flights. We ask you to investigate these points further.

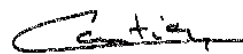
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