

**The Secretary
Senate Standing Committee on Rural and Regional Affairs and Transport
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26 June 2008

Inquiry into the Administration of the Civil Aviation Safety Authority (CASA) and related matters

Submission: Susan Michaelis- ATPL 407100 – Available for public view

Terms of reference:

- to assess the effectiveness of administrative reforms undertaken by CASAs management since 2003;
- to examine the effectiveness of CASA's governance structure; and
- to consider ways to strengthen CASA's relations with industry and ensure CASA meets community expectations of a firm safety regulator.

Dear Senators,

I am a former Australian commercial pilot (ATPL 407100) and had my pilot medical certificate failed by CASA in 1999 after several years exposure to oil fumes whilst flying on the BAe 146 which forced me to medically retire from flying in 1997. 11 years later I still suffer ill health and have amassed a wealth of knowledge on the subject of aircraft contaminated air. I am now aware of a large and growing number of pilots and cabin crew around the world in the same situation suffering short and long-term ill health more likely than not related to cabin air contamination as well as many crew operating aircraft in an impaired state. As such I do not consider that CASA to date has acted in an anywhere near adequate way on this issue and as such provide this brief submission to you to support my statements.

Since 1997 I have extensively researched the subject of contaminated air and have published my data in the first ever collated (844 page) fully referenced source of data on this issue: Michaelis S. (2007) Aviation Contaminated Air Reference Manual. ISBN 9780955567209 www.susanmichaelis.com. You will see from the website that the RAAF has stated my research is 'seminal' work and 'ground breaking' & it has accused the airline industry including regulators of being in 'denial'. Despite extensive ill health I am the researcher for the Global Cabin Air Quality Executive (www.gcaqe.org) and am currently undertaking a PhD at UNSW on the contaminated air in aircraft issue and have published numerous papers on the issue. Upon reviewing my research you will see that I am very well qualified to make the comment that CASA has not to date met it's obligations to aircraft safety and air crew in relation to contaminated air due to leaking synthetic jet oil into the air supply of aircraft cabins.

I wrote to the 1999 Australian Senate [¹] Inquiry into cabin air quality and voiced my strong concerns and have done so on many occasions since & express a few of my concerns in brief below followed by just one example to support my concerns. All the data below is supported in my 'Aviation Contaminated Air Reference Manual' [²].

- CASA has put commercial airline interests ahead of aircraft crew health and safety
- CASA has failed to enforce aviation regulations related to reporting, follow up maintenance, airworthiness and crew health and fitness aspects of air quality contaminated air events:
- CASA has failed to protect the health and safety of aircrews and the travelling public in relation to contaminated air events despite regulations being available that if met would protect such people.

- CASA has failed to take adequate steps to prevent contaminated air events occurring
- CASA failed to adequately deal with the recommendations made by the Australian Senate Inquiry in 1999-2000 into cabin air contamination.
- CASA has refused to look at the evidence available on contaminated air that has not suited them & has enabled the airline operators & manufacturers to remain untouchable despite clear, repetitive and overwhelming evidence that the regulations are systematically being ignored.
- CASA is not an independent aviation regulator & enforcer of the aviation regulations
- CASA has virtually ignored the contaminated air issue claiming it is an OH&S issue and not an air safety one, despite the regulations showing it is both and these cannot be separated.
- CASA CEO showed how unimportant he felt the contaminated air issue to be when questioned by Senator O'Brien in the 2006 Senate Estimates hearings on the CASA references committee on air quality.
- CASA has failed to take appropriate action or review with regard to BAe Systems related companies and Allied Signal making payments to Ansett & East West Airlines for oil and obnoxious fume issues in the early 1990s as well as false data supplied by Allied Signal, BAe Systems and Ansett Airlines provided to the 1999 Australian senate inquiry into cabin air. As such the Parliament and CASA have been misled and to date CASA has refused to even recognize this or deal with the factual data available on the parliamentary record.[³ ⁴]

As an example the airworthiness regulation related to ventilation in aircraft, necessitating clean air, has been in existence since the mid 1960s [⁵]. Oil fume events have always been seen as a major defect and as such reportable to CASA under the regulations. Such regulations include the now superseded CAO 100.8 and the current CAAP 51-1(0) in which CASA states it considers the following to be a major defect: *"smoke , toxic or noxious fumes inside the aircraft"*. As such CASA's own regulations prove that oil fume contamination is a major defect and as such reportable to CASA every time within 2 days (CAR 52A). This is supported by CAR 248 which requires all technical defects to be reported by pilots in the aircraft log book. This is supported by a statement in the Parliament in 2004 in which CASA advised:

- *"All instances of smoke or fumes in the aircraft cabin that adversely affect the quality of cabin air on Australian registered aircraft operating domestically or internationally, are categorized by the Civil Aviation Safety Authority as a 'Major Defect'"* [⁶]

However as was made clear at the Australian 1999 Senate inquiry into air quality and on many occasions since CASA has shown it has not regarded fumes as reportable or not reportable until the introduction of the Airworthiness Directive on the BAe 146 enacted in 2001 after the inquiry was completed.

CASAs unwillingness to enforce it's own regulations can be no more evident than in a statement made in 2002 and again in 2008 as follows:

- *"Prior to the issue of the AD by CASA, there was no specific requirement for National Jet Systems (NJS) to report to CASA on incidents of air contamination"*. [⁷]
- *"Overt 'smoke and fumes' incidents are a rare event onboard Australian commercial aircraft. These events are monitored by the Civil Aviation Safety Authority (CASA) with a mandatory reporting requirement in place since a 2000 Senate inquiry into BAe 146 aircraft cabin air problems."* [⁸]

As can be seen even to date in 2008 CASA does not recognize it's own longstanding requirements for operators to report fume events to the regulator, despite regulations in force showing such reports are mandatory and a statement to parliament in 2004 showing this(above).

The requirement to report fume events that CASA refers to above in it's 2008 statement on the BAe 146 is in fact an Airworthiness Directive [⁹]. It applies to the BAe 146 only and is not the actual regulations and advisory materials that are in the CASA publications applicable to all aircraft types. As such CASA will still be failing to recognize fume events are required to be reported on other aircraft types. This is unacceptable and shows either that: CASA is deliberately attempting to ensure it's own regulations are ignored or CASA does not have the expertise to know that such regulations exist.

This is simply one area where I can show CASA has clearly failed in its mandate. There are many others & I would be more than happy to advise the Senate on these. However I suggest the Senate asks CASA or the APH library to provide it with a copy of my reference manual to show the overwhelming volume of data showing CASA has failed to take the contaminated air issue seriously.

As such I still hear from aircrews in Australia too scared to report contaminated air events or in fear of reprisal for those that do given the very close relationship between CASA and the operators, manufacturers at the expense of crew unions advocating a far higher profile for crew health and safety.

I end my short submission with a glimmer of hope. CASA has established an Expert Panel on Aircraft Air Quality (EPAAQ) and I trust this will see an end to the totally industry biased views shown to date. The only way this will possibly occur is if the Chair and the panel chosen are independent of the vested industry interests shown to date and are adequately qualified to research this issue in depth. To date however the choice of the panel for the EPAAQ remain closed to the public and are being chosen on a closed basis by CASA and I assume the Chair. I believe this ought to be an open process and I feel that my expertise and that of many other experts with first hand knowledge on this issue, needs to be carefully utilized for this inquiry.

Please do not hesitate to contact me if I can be of assistance to the Senate committee by video or phone linkup.

Sincerely,

Susan Michaelis
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1. Senate Rural & Regional Affairs & Transport References Committee. Air Safety & cabin air quality in the BAe 146 aircraft. Canberra: Parliament of Australia. Final report, October 2000.
 2. Michaelis S. (2007) Aviation Contaminated Air Reference Manual. ISBN 9780955567209
 3. Commonwealth Of Australia Senate Hansard. Monday, 13 August 2007 Aircraft Cabin Air Quality - Senator O'Brien
 4. Commonwealth Of Australia Senate Hansard. 20 September 2007 Aircraft Cabin Air Quality - Senator O'Brien
 5. FAR 25.831 a/b (1964) available at:
http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgFAR.nsf/0/B36660C0701ACDDB852566720051889A?OpenDocument.
 - 6 Australian Parliament Hansard, Q3011: Air safety- Cabin air quality, 29 march, 2004
http://parlinfoweb.aph.gov.au/PIWeb//view_document.aspx?TABLE=HANSARDR&ID=2252965
 7. APH Hansard: Aviation- Senator O'Brien - BAe 146 Aircraft (Question No. 398) 2 December, 2002
 8. CASA: Corporate Communications Department statement Civil Aviation Safety Authority, 21 April 2008
 9. CASA: AD/BAe 146/86 Environmental Control System Inspection for Contamination 5/2001TX