

Senate Inquiry Submission on the ATSB findings of the ditching of the Westwind II VH-NGA off Norfolk Island on 18 November 2009 this report and Annexes are submitted under Parliamentary Privilege

1. Executive Summary

The ATSB public report released on 30 August 2012 is factually incorrect and contains flawed analysis. On reading the first draft, I was of the opinion that the investigation was due to incompetence. On seeing the second draft, and subsequent final report, I have a differing opinion.

In light of the CASA Special Audit now in the public arena, I believe that the ATSB report is partly incompetence, but now I am of the opinion it contains deliberate and intentional omission of safety critical facts and evidence which substantially changed the findings and analysis. Any aviation safety professional who reads the drafts', final report along with the now public Special Audit can only form the same reasonable conclusion. I believe the committee should determine if an offence against s24 of the Transport Safety Act 2003 (TSI) has occurred.

The ATSB and CASA never intended the Special Audit to be in the public arena. The ATSB legislation, the TSI Act 2003, contains very punitive penalties for release of draft reports. On reading the explanatory material from the Parliament, these provisions were intended to protect participants in the transport incident from being prosecuted by anyone using information contained in a draft report.

The ATSB are themselves protected using these provisions of draft reports and final reports from being used in any civil or criminal case as admissible evidence, to protect itself from public scrutiny of the report and of its previous reports. I do not believe the Parliament passed that legislation with the mind to allow the ATSB to deliberately omit safety critical information or authorise any person in the ATSB to withhold safety critical information.

This inquiry is not about Dominic James or Karen Casey. What has happened to them has long passed. The accident they were involved in is now the vehicle to uncover deliberate omission of safety critical information by both the ATSB and CASA.

I believe this is a landmark in aviation safety in Australia where the countries independent safety investigation body, the ATSB, has intentionally with-held safety critical information which adversely affects an investigation and thus, the travelling public.

CASA in turn, did not respond as a directly interested party that significant deficiencies with the operator and its manual existed at the time of the accident. The CASA Special Audit identifies many deficiencies and by CASA knowingly allowing the ATSB statements that the operators' procedures and manuals complied with the regulations is intentional, deliberate, and has omitted major oversight deficiencies which have an adverse affect on safety of the travelling public and their confidence in our aviation safety administration.

The evidence is striking and the question who orchestrated these critical omissions on the Australian public is now required to be answered.

The aviation industry is not there for the careers of highly paid public servants in the ATSB and CASA. Both organisations exist to safeguard the travelling public, not to treat them with contempt and regard them as stupid. In this case, they have put their self interests or others before that of the travelling public.

Governments come and go. The travelling public vote them in and out. But bureaucrats who are charged with the safety of the travelling public must be held accountable. The safety of the travelling public is every safety professionals prime and only concern.

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I thank the committee for allowing me to make a submission to the inquiry in my capacity as an aviation safety professional.

My name is Bryan Aherne I am an independent aviation accident/safety investigator and safety and risk advisor to industry here in Australia and Papua New Guinea and South East Asia. I hold an Air Transport Pilots Licence (Helicopter) and have performed single pilot Instrument Flight Rules multi-engine Emergency Medical Service, Search and Rescue, Police, and utility flying in Australia and Indonesia. I served as a police officer with Victoria Police from 1984 to 1998 in both policing duties on the ground and in the air as aircrew.

I was Operations Manager for a large international helicopter and fixed wing provider in Papua New Guinea. I was employed at the ATSB as a helicopter specialist Senior Transport Safety Investigator from 2004 to 2007. From 2007 to 2010, I was the RMIT University Aviation Accident Investigation course lecturer on a part-time basis.

From 2008 to 2009 I was a safety systems auditor with CASA, before becoming a consultant to industry and remain in that capacity today.

I hold a Diploma of Transport Safety Investigation, a Graduate Diploma of Technology in Air Transport Management, and a Master of Technology Management in Air Transport Management as well as lead auditing qualifications and industry courses in human factors, human factors for transport safety investigators, and investigation analysis amongst others.

I make this submission in the capacity of an aviation safety professional.

I have assisted the pilot Dominic James and the flight nurse Karen Casey in providing independent advice regarding the accident flight and subsequent CASA action taken against the pilot.

2. Critical Safety Issue

The change of a Critical Safety issue from one of intolerable risk to Minor Safety issue demonstrates both ATSB and CASA agreed in 2010 that the lack of regulation and guidance was intolerable. That it was changed to minor is something only the committee will be able to examine why.

3. CASA response to the ATSB report

There are significant deficiencies in the regulations and Aeronautical Information Publication (AIP). Regulations only require pilots to hold alternates on forecasts, and the AIP also states forecast whilst en-route NOT on reports or observations. Only at the flight planning stage does the AIP consider forecasts and reports for alternates. Yet, there is NO change being anticipated in CASA's response to the regulations or AIP. (See later discussion for more information)

3.1 Action taken by CASA in final report of Norfolk Island 2009 accident:

*“Finally, CASA also advised of their **intent** to regulate Air Ambulance/Patient transfer operations as follows:*

- Air Ambulance/Patient transfer operations in the proposed operational Civil Aviation Safety Regulations (CASRs) will be regulated to safety standards that are similar to those for passenger operations.*
- While CASR Parts 138/136 will be limited to domestic operations and, if CASA decides to retain Air Ambulance/Patient transfer operations in these rule suites, any such operation wishing to operate internationally will also be required to comply with CASR Part 119. If, however, CASA decides to move these operations into CASR Parts 121/135/133 they will already be required to comply with CASR Part 119. Either way, Air Ambulance/Patient transfer operations will be regulated to the same standard as Air Transport Operations (ATO). In relation to Norfolk and Lord Howe Islands, all ATO which include Air Ambulance/Patient transfer, will be required to carry mainland alternate fuel.*
- CASR Parts 119/121/135/133 are expected to be finalised by the end of 2012 and are currently proposed to commence in June 2014. CASR Parts 138/136 are expected to be made by June 2013 and are proposed to commence in June 2014. Given that the drafting of these CASR Parts are subject to third party arrangements (Attorney-General’s Department) and CASA and the industry’s ability to effectively implement the new rule suite, these timelines are subject to change.”*

I will draw the committees’ attention to the 2003 fatal accident of a Bell 407 helicopter in Queensland. This organisational investigation detailed a recommendation the ATSB made to CASA in 2001 to re-classify air-ambulance flights away from Aerial Work because passengers were not afforded the same level of safety as fare paying passengers as charter or Regular Public Transport flights. This has direct connection with the current investigation response by CASA.

I have included the extracts from the 2003 report below:

“4.1.2 Classification of operations

ATSB investigation BO/200100348

On 7 September 2001, the ATSB identified a safety issue with the classification of passenger carrying operations. The investigation noted that passengers were being carried on flights categorised as Aerial Work and were not being afforded the same level of safety as fare paying passengers on flights categorised as Charter or Regular Public Transport. Personnel flying in Aerial Work classification helicopters or aircraft were generally only personnel considered essential to the conduct of the flight. Helicopter EMS flights were categorised as Aerial Work and patients being flown on helicopters operating under Aerial Work categorisation were not essential crew. On 7 September 2001, the Bureau issued the following safety recommendation.

Recommendation R20010195

The Australian Transport Safety Bureau recommends that the Civil Aviation Safety Authority consider proposing an increase in the operations’ classification, and/or the minimum safety standards required, for organisations that transport their own employees and similar personnel (for example contractors, personnel from related organisations, or prisoners, but not farepaying passengers) on a regular basis. This recommendation applies to all such operations, regardless of the take-off weight of the aircraft involved.

CASA response

On 2 February 2002, CASA responded to Recommendation R20010195 as follows: As you are aware, CASA is presently reviewing the standards contained within the existing Civil Aviation Regulations (CARs) and Civil Aviation Orders (CAOs) with regard to the Classification of Aircraft Operations. The input and recommendations contained within Air Safety Recommendation R20010195 will be taken into consideration and addressed as part of this project. The outcome of the review will determine which category employees (and similar

personnel such as contractors) are placed and the standards that will apply to their transportation in aircraft. I trust that this review will satisfactorily address the issues raised in this Air Safety Recommendation.

On 14 November 2002, CASA once again responded to the recommendation:
...the draft Classification of Operations policy document is with the Standards Consultative Committee for consultation and it is anticipated that it will go to the Aviation Safety Forum for consultation on the 6th of December 2002. As a result of this consultation, CASA proposes releasing an NPRM early next year to consult with the aviation industry with a view to amend CAR 206 to give effect to changes which would see recommendation R20010195 being adopted.

On 21 December 2004, CASA once more responded to the recommendation:
A Notice of Proposed Rule Making (NPRM) proposing amendments to Civil Aviation Regulation (CAR) 206 was issued in March 2003. Responses to this NPRM and the associated review of the Classification of Operations confirmed that the proposed amendment to CAR 206, which would accommodate this recommendation would be problematic. Consequently, CASA has decided to proceed only with other amendments to CAR 206. The associated NFRM [Notice of Final Rule Making] is currently with the Department of Transport and Regional Services for clearance prior to Ministerial approval.

However, under the new Civil Aviation Safety Regulations, Corporate Operations will be classified as Aerial Work and will be regulated under CASR Part 132. The carriage of patients and other personnel (other than in air transport operations) will be regulated as Aerial Work under a subpart of Part 136 to be titled Emergency and Medical Services Operations. It is proposed that 'Emergency Services Flights' will cover aerial fire-fighting, law enforcement, and search and rescue operations, while 'Medical Services Flights' will cover air ambulance flights, health services flights, and emergency medical services flights. The development of these regulations is proceeding in consultation with industry.

ATSB classification: Monitor

I have cut and pasted the recommendations history on 8 October 2012 from the ATSB website. It is self explanatory:

“Aviation safety issues and actions

Recommendation issued to: Civil Aviation Safety Authority

Output No:	R20010195
Date Issued:	07 September 2001
Safety Action Status:	
Background:	Why this Recommendation was developed

Output Text

The Australian Transport Safety Bureau recommends that the Civil Aviation Safety Authority consider proposing an increase in the operations' classification, and/or the minimum safety standards required, for organisations that transport

their own employees and similar personnel (for example contractors, personnel from related organisations, or prisoners, but not fare-paying passengers) on a regular basis. This recommendation applies to all such operations, regardless of the take-off weight of the aircraft involved.

Initial Response

**Date
Issued:**

04 February 2002

**Response
from:**

Civil Aviation Safety Authority

**Response
Status:**

Monitor

I refer to your letter of 12 September 2001 enclosing a copy of Air Safety Recommendation R20010195 which relates to classification of passenger carrying operations. Please accept my apologies for the delay in my reply.

**Response
Text:**

As you are aware, CASA is presently reviewing the standards contained within the existing Civil Aviation Regulations (CARs) and Civil Aviation Orders (CAOs) with regard to the Classification of Aircraft Operations. The input and recommendations contained within Air Safety Recommendation R20010195 will be taken into consideration and addressed as part of this project.

The outcome of the review will determine which category employees (and similar personnel such as contractors) are placed and the standards that will apply to their transportation in aircraft. I trust that this review will satisfactorily address the issues raised in this Air Safety Recommendation.

ATSB Note: The Bureau sent an e-mail to CASA on 13 November 2002. It stated, in part:

**ATSB
Response:**

My understanding, based on our phone conversation today, is that CASA is acting on the recommendation and is in the consultation phase of this process. CASA has prepared a draft amendment to the Classification of Operations Policy that increases the requirements for operators who carry employees and similar types of passengers. The proposal is currently with the Standards Consultative Committee, and will be presented to the Aviation Safety Forum on 6 December 2002. It is anticipated that an NPRM to amend CAR 206 will then be issued for public comment in early 2003.

Can you please confirm whether this a correct understanding of the current situation?

Further Correspondence

Date Issued:		14 November 2002
Response from:		Civil Aviation Safety Authority
Response Text:	... the draft Classification of Operations policy document is with the Standards Consultative Committee for consultation and it is anticipated that it will go to the Aviation Safety Forum for consultation on the 6th of December 2002.	
	As a result of this consultation, CASA proposes releasing an NPRM early next year to consult with the aviation industry with a view to amend CAR 206 to give effect to changes which would	

see recommendation R20010195 being adopted.	
Date Issued:	02 February 2009
Response from:	Civil Aviation Safety Authority
Response Status:	Closed - Accepted
Response Text:	<p>A Notice of Proposed Rule Making (NPRM) proposing amendments to Civil Aviation Regulation (CAR) 206 issued in March 2003. Responses to this NPRM and the associated review of the Classification of Operations confirmed that the proposed amendment to CAR 206, which would accommodate this recommendation would be problematic. Consequently, CASA has decided proceed only with the other amendments to CAR 206. The associated NFRM is currently with the Department of Transport and Regional Services for clearance prior to Ministerial approval.</p> <p>However, under the new Civil Aviation Safety Regulations, Corp-orate Operations will be classified as Aerial work and will be regulated under CASR Part 132. The carriage of patients and other personnel (other than air transport operations) will be regarded as Aerial Work under subpart pf Part 136 to be titled Emergency and Medical Services Operations. It is proposed that 'Emergency Services Flights' will cover aerial fire-fighting, law enforcement, and search and rescue operations., while 'Medical Services Flights' will cover air ambulance flights, health services flights, and emergency medical services flights. The development of these regulations is proceeding in consultation with industry.</p> <p>ATSB Note:</p> <p>Based on the above advice the Australian Transport Safety Bureau reclassifies the recommendation as Closed - Partially Accepted as at 2 February 2009.</p>

“

CASA’s 2002 response is not that different to their 2012 response. They say much the same thing, about delays and this demonstrates that:

1. Nothing has been achieved in over 10 years and by the time the CASA proposal comes to fruition it will be 13 or 14 years since the ATSB recommendation.
2. If the operator had to comply with this flight as a Charter, the operation could not be conducted in a Westwind as it is not capable of uplifting enough fuel to hold an alternate for Norfolk Island on a flight from Samoa.
3. Mick Quinn will elaborate on efforts’ to have air-ambulance re-classified in 2009 as Deputy Director of Safety at CASA.

On 2 February 2009 only nine months before the accident flight, the ATSB, “Closed-Partially Accepted” the above CASA response.

ATSB and CASA have deliberately omitted discussing this very critical safety issue at all in the final report. The omission of this and the obvious decade long delay in CASA to do their job is a major regulatory attribution to this accident sequence.

The change in the regulations if made when the recommendation was made in 2001, would have prevented this type of aircraft undertaking this flight.

4. Removal of Critical Safety Information from draft reports

It is only under the privilege of parliament that I can raise these deliberate omissions from the draft reports. The whole collection can be found at Annex A. The main ones are the following:

4.1 "What the ATSB found

Removed from Draft 2 created 16 July 2012 *"The requirement to ditch resulted from the flight crew's incomplete pre-flight and en route planning and their not assessing before it was too late to divert that a safe landing could not be assured. The flight crew's in-flight management of the worsening and previously unforecast weather at Norfolk Island influenced their decision to continue to the island, rather than divert to a suitable alternate."*

Clearer guidance on the in-flight management by crews of previously unforecast, but deteriorating destination weather may have influenced the crew to consider their diversion options earlier, allowing more time for the necessary planning. However, the operator's limited oversight of its aeromedical operation increased the risk that crews would develop their own pre- and in-flight management methods, diminishing the reliability of its own risk controls in such operations. The occupants' exit from the immersed aircraft was facilitated by their prior wet drill and helicopter underwater escape training. Their location by rescuers might, in other circumstances not have been so positive."

Public Final 30 August 2012 *"The requirement to ditch resulted from incomplete pre-flight and en route planning and the flight crew not assessing before it was too late to divert that a safe landing could not be assured. The crew's assessment of their fuel situation, the worsening weather at Norfolk Island and the achievability of alternate destinations led to their decision to continue, rather than divert to a suitable alternate."*

The operator's procedures and flight planning guidance managed risk consistent with regulatory provisions but did not minimise the risks associated with aeromedical operations to remote islands. In addition, clearer guidance on the in-flight management of previously unforecast, but deteriorating, destination weather might have assisted the crew to consider and plan their diversion options earlier."

The occupants' exit from the immersed aircraft was facilitated by their prior wet drill and helicopter underwater escape training. Their subsequent rescue was made difficult by lack of information about the ditching location and there was a substantial risk that it might not have had a positive outcome."

The ATSB removed *"Clearer guidance on the in-flight management by crews of previously unforecast, but deteriorating destination weather may have influenced the crew to consider their diversion options earlier, allowing more time for the necessary planning. However, the operator's limited oversight of its aeromedical operation increased the risk that crews would develop their own pre- and in-flight management methods, diminishing the reliability of its own risk controls in such operations."*

And replaced with:

The operator's procedures and flight planning guidance managed risk consistent with regulatory provisions but did not minimise the risks associated with aeromedical operations to remote islands. In addition, clearer guidance on the in-flight management of previously unforecast, but deteriorating, destination weather might have assisted the crew to consider and plan their diversion options earlier."

This changed from clearer guidelines would've assisted the crew to divert earlier and the limited oversight by the operator increasing the risk of the flight crews developing their own methods which

diminished the reliability of its own risk controls, to the operator managing risk consistent with the regulations.

Clearly this has been changed to show less responsibility for oversight on the operator.

What information did the ATSB receive from 16 July to 30 August to change such significant findings?

“Personnel information 4.2 Pilot in command

Removed from Draft 1 26 March 2012 *“There was no evidence in the operator’s training file for the PIC to suggest the completion of that additional training during his post-endorsement training.*

Public Final 30 August 2012 *“There was no requirement in the operations manual for the content of such training to be recorded. The Australian Transport Safety Bureau (ATSB) was unable to independently confirm the extent of the PIC’s post-endorsement training.*

The following paragraphs are extracted from the 2008 ATSB report titled “Analysis, Causality and Proof in Safety Investigations”

“Although different parties will have different views as to what an appropriate standard of proof should be for a safety investigation, most would probably support the view that an independent investigation body such as the ATSB should be ‘safety-focussed’ or even ‘safety-biased’ rather than taking a highly conservative approach.

The ultimate purpose of a safety investigation is to enhance safety. If a highly conservative approach to determining contributing safety factors is taken, then there is a limited potential for an investigation to identify safety issues that can be used as a basis for facilitating safety action. There is also a limited potential for an investigation’s findings to provide a sufficiently detailed explanation of how an occurrence developed to facilitate learning opportunities, both for parties involved and not involved in the occurrence. With a mid-range standard, clearly defined terms, and appropriately qualified findings, the ATSB believes its current approach produces a reasonable, useful and appropriately qualified picture of how an occurrence developed ” pp 53.

“In terms of identifying items of information for evaluating a proposed finding, the ATSB guidelines ask investigators to identify items of evidence which appear to support the proposed finding, items of evidence which appear to oppose the proposed finding, and any other types of evidence which would normally be considered relevant to the type of finding of interest. The guidelines also ask investigators to consider what items of evidence would be expected for the proposed finding but were not seen, what items of evidence were observed but would not be expected, and any alternatives to the proposed finding that could account for the pattern of evidence.

A key point of emphasis throughout the ATSB guidelines is to ensure that all evidence that is contrary to a proposed finding is included and evaluated in the evidence table. This approach is consistent with the notion of favouring the ‘null hypothesis’ that the proposed finding is not proven unless and until there is sufficient evidence to do so.

After identifying all the potentially relevant evidence, investigators are asked to evaluate each of the items of evidence individually in terms of their credibility and relevance to the proposed finding. This involves considering a range of criteria, such as validity, reliability, bias or objectivity, sensitivity, and the scope or power of the test when ‘there was no evidence that...’ statements are used. Any concerns, limitations or salient features of the item of evidence can then be placed in the comments column of the evidence table.

After each of the items of evidence has been evaluated, the overall pattern of evidence is then considered. This involves considering another range of criteria, such as the quantity of evidence, consistency of evidence, independence of sources of evidence, extent to which opposing evidence can be explained, extent

to which evidence is converging or merely corroborating, and the extent to which there is direct evidence available. Based on the whole pattern of evidence, the investigation team can make overall judgements as to whether the proposed finding is supported or not supported, whether it can be supported if it is appropriately qualified, or whether further data collection is required. Any pertinent comments regarding the overall assessment are placed in the summary box.

Evidence tables are analysis tools to assist the investigation team, and they are not included in final investigation reports. However, the contents of the evidence tables will be reflected in the contents of the analysis section of the final report. In addition, completing the tables prior to writing the analysis helps ensure that the final report will be focussed and organised. In addition to assisting the investigation team, evidence tables also enhance the ability of the ATSB process for reviewing investigation reports prior to releasing draft reports to external parties for comment.” (Taken from ATSB Analysis, Causality and Proof in Safety Investigations March 2008).

Lack of evidence of training is evidence that training was not conducted. Operators are required to record all training in accordance with the CAR 217 requirements. The pilot disputes any of the CP and PNR training was conducted either at post endorsement or during the 6 month proficiency checks.

The ATSB should have interviewed the other line captains and asked the same question, did they choose to find this opposing evidence or omit this from the evidence tables as stipulated above?

Records are an intrinsic part of aviation safety, if the statement “there was no requirement in the operations manual to record such training” is acceptable as evidence to the ATSB, then this must set a new benchmark in ATSB investigations and CASA’s future auditing of aviation operators whereby operators can just claim the operations manual does not require training to be recorded, but “please take our word that the training was conducted”.

This of course is not the case and unacceptable.

The reason there is no evidence, is because the training was never conducted. (See later discussion about confirmation and outcome bias)

Removed from Draft 1 26 March 2012 *“The balance of evidence does not support the potential for the crew's performance to have been significantly affected by fatigue.*

Draft 2 16 July 2012 *“The flight crew had a less than ideal rest period in the morning prior to the flight, and they were probably experiencing fatigue at a level that has at least some effect on performance. However, there was insufficient evidence available to determine the level of fatigue, or the extent to which it may have contributed to the crew not comprehending the significance of the 0800 SPECI.*

Public Final 30 August 2012.

The flight crew had been awake for over 12 hours before being called on duty at 0900 for the departure from Sydney on the previous day, and they had been awake for over 22 hours when they landed at Samoa. After having breakfast they had about 8 hours opportunity at a hotel for rest prior to returning to the airport. The captain initially reported to the ATSB that he slept for most of this period and was well rested, but later reported to the Civil Aviation Safety Authority (CASA) that he had only about 4 hours sleep but did not feel fatigued. The first officer advised of having 5 to 6 hours sleep and feeling well rested.

Based on this information, it is likely that the flight crew were experiencing a significant level of fatigue on the flight to Samoa, and if the captain only had 4 hours sleep then it is likely he was experiencing fatigue on the return flight at a level likely to have had at least some effect on performance. However, there was insufficient evidence available to determine the level of fatigue, or the extent to which it may have contributed to him not comprehending the significance of the 0800 SPECI. “

The ATSB need to justify why after 28 months they find that in draft 1 that there was no evidence to support the crews performance was affected by fatigue, to 32 months of draft 2 where there was some effect on performance, and insufficient evidence to determine level of fatigue, to the final report, 33 months later where the crew were likely to have had some effect on performance and still insist this did not justify why the crew did not comprehend the 0800 SPECI?

When did the ATSB do their fatigue study and who did it? The committee needs to ask the date and who did the fatigue studies to arrive at this finding.

4.3 Flight Planning

From Draft 2 “Flight crews were expected to use their own methods, systems and tools for pre-flight planning. It was reported that copilots modified their techniques to reflect the preferred methods for each PIC with whom they flew.

Public Final “Flight crews were expected to use their own methods, systems and tools for pre-flight planning in compliance with the provisions of the operations manual. It was reported that copilots modified their techniques to reflect the preferred methods for each PIC with whom they flew. There was no independent evidence to indicate that the operator routinely assured itself of the accuracy of pilot’s international flight planning and forms or their in-flight navigation logs and crews’ compliance with the operator’s procedures.

Clearly, this has been changed to favour the operator. The ATSB have simply stated that the operators’ manual met the regulations in fuel planning, and that the crews developed their own methods to comply with the operations manual.

We know the operators ‘manual was deficient in fuel policy and planning and that is precisely why crews’ adopted their own methods. Again, the independence of evidence is actually ignored by the ATSB as the CASA Special Audit found the operator did not complete the in-flight navigation logs. (See more discussion of this later in report about outcome and confirmation bias)

4.4 Additional Information

From Draft 1 “The PIC stated that he planned his fuel requirements based on the figures taken from the OM.

Changed to in Public Final “The PIC stated that he planned his fuel requirements based on the method in the operations manual, which was found to give a similar result to that using the AFM fuel consumption figures.

Public Final “There was no independent evidence to confirm that the operator routinely assessed pilots’ processes for calculating/updating PNRs en route and their application of that revised data to their alternate decision making. This was consistent with the requirements of the operations manual, which did not require all elements of a proficiency check to be recorded as having been carried out.

This statement is fabrication of evidence in favour of the operator. We know the operators' manual fuel figures were inconsistent with the Aircraft Flight Manual and that is why they received an RCA by CASA. The operators' fuel figures do not account for changes in temperature, altitude and weight of the aircraft.

Statements again of the operators manual stating training was not required to be recorded is convincing the reader that the operator played no part in the accident sequence. (See later discussion on outcome and confirmation bias)

Removed from Draft 2 16 July 2012 "However, the operator's expectation that pilots would use their own methods, systems and tools for pre-flight planning had the potential to dilute those regulatory and procedural requirements as risk controls. To some extent, this might explain the pilot in command's (PIC) actions to develop the flight plan for the flight to Norfolk Island by reversing his outbound flight plan to Apia and applying the previously-experienced upper winds and NOTAMs to his planning for the return flight via Norfolk Island.

Similarly, by not specifically requiring the copilot to partake in the flight planning, and not overtly following the flight or ensuring the availability of operational and communications support at Apia, the operator precluded these additional potential safety defences from having effect. Together with the operator's normal process of not requiring crews to report to the operator if a flight was progressing satisfactorily, this would have increased the isolation felt by its crews, and prevented a full understanding by the operator of the residual risk affecting a flight

This perhaps most critical analysis from draft 2 was completely omitted by the ATSB from the final report. This stated clearly the operator expectation that pilots would do their own fuel calculation methods diluted their compliance with the regulations. Criticism of the lack of SOP for the co-pilot to be involved in flight planning was a safety defence which was absent, was all removed.

It does not appear in the final report. In fact, the ATSB state, the co-pilot not being part of flight planning was in accordance with their SOP's. (See later discussion re outcome and confirmation bias).

Who removed this and on what basis was the evidence found in the CASA Special Audit omitted?

4.5 Pre-flight Planning

Removed from Draft 1 "Despite the initially unforecast weather at Norfolk Island, a number of regulatory and operator risk controls were in place to address that hazard. In the first instance, more accurate fuel planning would have been expected had the flight crew sought an en route forecast that predicted the wind at the intended cruising level. In the event, given the forecast in-flight weather, aircraft performance and regulatory requirements, the flight crew departed Apia with less fuel than required to safely complete the flight in case of one engine inoperative or depressurised operations.

Replaced with :

Implications for the Flight

A number of regulatory and operator risk controls were in place to address the risk of previously unforecast but deteriorating weather at Norfolk Island. In the first instance, more complete fuel

planning would have been possible had an en route forecast been sought that predicted the wind at the intended cruising level. Knowledge of these winds was also necessary for the PIC to comply with the operator's requirement for the calculation during flight planning of the CP and PNR, and to take account of the risk of the aircraft sustaining an engine failure or in-flight depressurisation. It might also be expected that acting to obtain the upper winds might also have influenced the PIC to seek other perhaps relevant en route and aerodrome forecasts, NOTAMs and other information.

More emphasis has been placed on the pilot in the final report and favour of the "operators' requirements" which, we now know had NO procedure in their operations manual to calculate OEI or depressurisation fuel procedures (See later discussion and CASA Special Audit).

This clearly attributes the entire accident sequence on the pilot with no contribution from the operator.

Seeking and applying appropriate en route weather updates

Removed from Draft 1 "The pilot in command would have been aware of his responsibility for the safety of the flight, for which both crew members were qualified. The pilot's ATPL(A) qualification should have ensured his understanding of the importance, calculation and application of the regulatory and operator requirements in terms of CPs, PNRs/latest divert time/point to the flight.

The general nature of the regulatory guidance for seeking and then applying amended en route weather and other information and planning updates to in-flight operational decisions was expected to be supplemented by operator guidance to their crews for safe operations. In turn, the reliance on regulatory and operator requirements as risk controls in such circumstances was predicated on flight crew compliance with those requirements and procedures.

Replaced with in Public Final "The PIC would have been aware of his responsibility for the safety of the flight, for which both crew members were qualified. This included the need for in-flight weather-related decisions that were based on the most recent weather and other relevant information. The PIC's Airline Transport Pilot (Aeroplane) Licence (ATPL(A)) qualification assessed his ability to calculate and apply the regulatory and operator requirements in terms of CPs and PNRs. However, in the absence of any independent record of post-endorsement training or proficiency checks of that knowledge, the ATSB was unable to independently determine the PIC's ongoing exposure to, and application of those requirements in the Westwind. Clear and readily available guidance for seeking and applying amended en route weather and other information to in-flight operational decisions would assist pilots maintain proficiency in such in-flight decisions.

More outcome and confirmation bias (See later discussion)

4.6 En route management of the flight

Added to Public Final "However, there were no regulated requirements or operator procedures to inform the crew of when to obtain the most recent weather information in order to manage an unforecast deterioration in the weather. This increased the risk of crews inadvertently continuing to an unsafe destination.

A justification of the lack of guidance in the operators' manual to build a picture of outcome expectation.

4.7 Contributing safety factors

Removed from Draft 1 • The flight crew did not plan the flight in accordance with the existing regulatory and operator requirements, precluding a full understanding and management of the potential hazards affecting the flight.

Replaced with Public Final “• The pilot in command did not plan the flight in accordance with the existing regulatory and operator requirements, precluding a full understanding and management of the potential hazards affecting the flight.

Clearly changed from “flight crew” to “pilot in command” aimed at the Captain, yet we know the operators manual requires co-pilots to participate in checking fuel for flights, but the ATSB omit that information.

4.8 Other safety factors

Removed from Draft 2 • The operator’s limited oversight of the aeromedical operation and flight planning guidance prevented a full understanding by the operator of the residual risk affecting the operation. *[Minor safety issue]*

Added to Public Final

• The operator’s procedures and flight planning guidance managed risk consistent with regulatory provisions but did not effectively minimise the risks associated with aeromedical operations to remote islands. *[Minor safety issue]*

The operators limited oversight and flight planning guidance prevented knowing the risks, yet changed to say the operators’ procedures and flight planning guidance managed risk consistent with the regulations. What information did the ATSB receive from 16 July to 30 August to be so polarised from the CASA Special Audit findings and who changed this?

4.9 Operator oversight of the flight and its planning

Removed from Draft 2

Minor safety issue

The operator’s limited oversight of the aeromedical operation and flight planning guidance prevented a full understanding by the operator of the residual risk affecting the operation.

Action taken by CASA

Following the accident, CASA carried out a special audit⁵⁸ of the operator’s operations in Sydney, Adelaide and Nowra between 26 November and 15 December 2009. The audit included an extensive assessment of the operator’s Westwind operations and a number of the operator’s organisational aspects.

A number of deficiencies in the operator’s Westwind operations were identified, which were communicated to the operator on 7 December 2009.

Replaced with in Public Final

Minor safety issue

The operator's procedures and flight planning guidance managed risk consistent with regulatory provisions but did not effectively minimise the risks associated with aeromedical operations to remote islands.

Action taken by aircraft operator

Following the accident, CASA carried out a special audit⁵⁹ of the operator's operations in Sydney, Adelaide and Nowra between 26 November and 15 December 2009. The audit included an extensive assessment of the operator's Westwind operations and a number of the operator's organisational aspects.

This removal demonstrates outcome bias and deliberate omission of safety critical information. Changing from "operators' limited oversight" to "the operators' procedures and flight planning guidance managed risk consistent with regulatory provisions" is clearly not the case.

Deficiencies in the operators Westwind operations which were identified on 7 December 2009, were completely removed and replaced with "extensive assessment of the operators Westwind operations and a number of the operators organisations aspects"

This is writing the operator out of contribution and attribution in the accident sequence, and is clearly aimed at leaving the reader with the conclusion that this was all the responsibility of the pilot.

Who changed this and on what basis of evidence?

Removed from Draft 2

- Formal training for international operations was implemented.
- A refresher training course for Westwind pilots was implemented, covering:
 - Compliance, company structure, standard operating procedures, fuel calculations, flight planning and company human resources policies.
 - Knowledge of Westwind and CAO 20.7.1.B performance requirements, and the calculation of take-off data and CAO 100.7 weight and balance calculations.
 - Human factors, incorporating crew resource management and threat and error management skills (this course will take place biennially).
 - Revalidate all crew on the principles of Global Positioning System equipment for en-route navigation.
 - Safety Management System (SMS) training and in the Company Safety Policy.

– Ensure crew have a complete understanding of the FAID® system as part of the company’s fatigue risk management system and to ensure pilots understand and are proficient in completing the fatigue aspects of the operator’s SMS reporting system.

– Knowledge of aircraft systems.

– Instrument flight rules and procedures.

– Defect reporting requirements and the use of the aircraft maintenance log.

– Point of no return training, and training in the use of the ‘Howgozit’ graph for monitoring fuel use during long flights.

– The amended Westwind fuel policy.

The plan was initially supported by detailed pilot operations notice P47/09, which laid out the new operating requirements for Westwind operations. The general requirements were later transferred into the operations manual and supported by a shorter pilot operations notice, P 38/10, which provided Westwind-specific nominal fuel planning figures.

The operator is planning a review of the above changes, in consultation with the initial change agents, to assess the relevance of the implemented changes as an effective risk mitigation. Any subsequent change to the operator’s processes will be controlled through the review process.

Replaced with in Public Final • A refresher training course for Westwind pilots was implemented that covered required knowledge for Westwind operations.

All the information removed from draft 2 which highlighted the lack of oversight of the operation in the Westwind operation in the past by undergoing the new training, has been abbreviated to one sentence effectively saying very little.

Outcome bias (see later discussion)

Removed from Draft 2

4.10 ATSB assessment of the operator’s action

The ATSB is satisfied that the action taken by the operator adequately addresses the safety issue.

The above statement removed by the ATSB from draft 2 and not replaced.

5.0 Factual Errors in the ATSB Final Report

History of the Flight

The ATSB state the aircraft departed Sydney at 11.30 and arrived at Norfolk Island at 1459. The distance is approximately 907 nautical miles. If that was the case, the ground speed of the aircraft was around 258 knots.

As the aircraft is capable of a True Airspeed (TAS) over 380 knots this appears to be grossly inaccurate.

5.1 Flight Planning

“When the briefing officer asked if the PIC would like the details of the trend, the PIC declined”.

Factually incorrect and misleading. The transcript of the conversation quotes:

Briefing Officer *“ Ah there is a trend from 181500, probably won’t bother you greatly (pause) its ah 10 hours from now, do you want to take that down?”*

Pilot: *“Nah nah no thank you”*

The ATSB have deliberately omitted the actual content of the conversation. This is “Outcome bias” where information not useful for the ATSB’s intended outcome is omitted. This conversation reflects the context of the pilots’ conversation and supports the context of fatigue on decision making. The trend was of no consequence as it was for about 5 hours after their actual arrival time.

page 3

“The co-pilot did not, and was not required, to participate in the flight planning process”

Factually incorrect statement.

Part A of the Company Operations Manual states the following:

“1.2.9 Responsibilities of Co-pilot

1.2.9.1 A Company Co-pilot shall be responsible to the CP for:

Generally:

- a) Maintaining the highest standards of safety and efficiency in all operations.*
- b) Complying with the requirements of the Company OM.*
- c) Complying with all relevant laws, regulations and directions of any country where he/she is involved in Company flight operations.*
- d) Ensuring maximum comfort and courtesy towards passengers and clients.*
- e) Maintaining a neat personal appearance when on duty.*
- f) Advising the CP in writing of any deficiencies or improvements in Company operational documentation or procedures.*

Specifically:

- g) Confirming the required fuel load is on board the aircraft in accordance with the flight plan.*
- h) Completing the load and trim sheet.*
- i) Completing the passenger manifest.*
- j) Escorting passengers to and from the aircraft on movement areas.*
- k) Conducting the passenger briefing(s) required during the operation.*
- l) Confirming waypoints entered into the GPS are accurate.*
- m) Completing any other duties as delegated by the PIC.”*

Paragraph (g) specifically requires the co-pilot to be involved in flight planning by checking the fuel load with the flight plan.

5.2 Return Flight

“The flight was planned to depart from Samoa at 0530, flying the reverse of the outbound flight from Norfolk Island that morning, with an estimated time of arrival (ETA) of 0900 at Norfolk Island”.

“The flight departed Samoa at 0545, and initially climbed to flight level¹³ 350 (FL350) in airspace that was controlled from New Zealand”

“The PIC reported that, once established at FL390, he reviewed the fuel required for the remainder of the flight against the fuel remaining in the aircraft. He recalled that the 80 kts headwind experienced thus far was greater than expected (the pilot had planned on the basis of the upper winds that affected the flight the previous night), resulting in a revised ETA of 0930, 30 minutes later than planned”

“Recorded radio transmissions between the aircraft and the Unicom operator indicated that the flight crew initiated a missed approach procedure from the first approach at 1004:30.”

The statement underlined should be corrected to read, “15 minutes later than the pilots’ estimated time interval”. The pilots’ time interval of three and one half hours’ would make his estimate now 0915. As confirmed by the Unicom recording, it appears the aircraft arrived around the 1000 hours time. The quote of 30 minutes later than planned infers incompetence and attribution to the pilot. A fifteen minute difference in time over that distance is quite acceptable into a westerly headwind.

5.3 Incorrect TAF cloud height at Norfolk Island

Page 3

The Australian Bureau of Meteorology (BoM) issued an amended TAF at 0803. It forecast Broken cloud at 1,100 ft above the ARP at the aircraft’s ETA at Norfolk Island.

Factually incorrect statement. The forecast cloud was at 1000 ft.

5.4 Post Endorsement training

Page 13

In regard to the pilots’ post-endorsement training:

There was no requirement in the operations manual for the content of such training to be recorded. The Australian Transport Safety Bureau (ATSB) was unable to independently confirm the extent of the PIC’s post-endorsement training

Factually incorrect statement. No-where in the Company Manual suite does it state that any element of any check required does not need to be recorded. Contrary to the ATSB statement, the Manual states the following:

“ 1.4 Records

(h) Post Endorsement Training (Form PEL 3006)

- To be completed by the Check/Training/Supervisory Pilot after the completion of post endorsement training. **It provides a record of the pilots training** and shall be kept in the pilot’s personal file.*

1.4.2 Storage of Records

*1.4.2.1 All ground training **and air training/check flights shall be recorded** in the pilot’s file using, where appropriate, the above documentation. Such files and records shall be confidential and shall be stored in a lockable filing cabinet under the control of the Chief Pilot or HOTC if appointed*

3.4.5 Records

*3.4.5.1 During a period of post endorsement/ICUS training the Supervisory Pilot shall complete a **Form PEL 3006** that shall be kept on the pilot's record file."*

An Observation was raised by CASA regarding the lack of detail in the training forms

Captain James reported to me he never did this check and reported that any number of the company pilots could be interviewed and asked the same question.

5.5 Fatigue

Page 15

"However, there was insufficient evidence available to determine the level of fatigue, or the extent to which it may have contributed to him not comprehending the significance of the 0800 SPECI."

This is factually incorrect. Independent fatigue modelling, estimates the fatigue on arrival at Samoa using the internationally accepted bio-mathematical model SAFE.

The model done for the pilot of NGA indicated he arrived at Samoa with a Samn Perelli scale of 4.9 (the model assumed the pilot had slept for 1 hour before he commenced duty at Sydney at 1900 hr local. He did not sleep for this time).

This would be .1 off his fatigue level at the qualitative level of "Moderately tired, let down"

The model assumed a flight to Norfolk Island then onto Sydney and estimated a Sam Perelli scale of 5.3 over the qualitative descriptor of "Moderately tired, let down" (the model assumed the pilot slept 4.5 hours at Samoa, which the pilot reports he got about 3 to 4 hours sleep). The UK CAA limit is 5.2 on the Sam Perelli scale.

Note that the flight was actually meant to continue to Melbourne, a longer flight therefore without restive sleep the scale would have risen to over 5.3

5.6 Fuel Quantity

Page 16

The fuselage and wing tanks were interconnected, were commonly known as the 'main tanks' and carried about 7,330 lbs (3,324 kg) of usable fuel. The wingtip tanks, if filled, provided for a total usable fuel capacity of 8,870 lbs (4,023 kg).

Factually incorrect statement. Capacity is in litres or US GALLONS and is subject to Specific Gravity (SG). The SG of Jet Fuel is different around the world and due to temperature, SG can vary this amount.

5.7 Survival Aspects

Ditching

Page 20

"The flight crew had previously taken part in practice ditching procedures (wet-drill training). That included a simulated escape from a 'ditched aircraft'"

Factually incorrect and misleading. The Flight Crew's last wet drill training was in April 2008 and had expired over 7 months prior. Additionally, the pilot and nurse (All considered crew for aerial work

classification) had not done the complete wet drill training in demonstrating use of the life raft on the aircraft, or had been trained in the use of the Emergency Exits as required annually. (See the RCA's for this in the CASA Special Audit). I have not ascertained the co-pilot or doctors training status in respect to this.

5.8 Regulatory Context of the flight

Page 25

"Norfolk Island Airport had suitable runways, runway lighting, navigation aids and other facilities for the operation".

Factually incorrect. Information received suggests the aerodrome was 15 m short of the required overrun distance.

5.9 Minimum Descent Altitude

Page 28

"A pilot is not permitted to descend below the Minimum Descent Altitude (MDA) for a non-precision instrument approach, including during a VOR or a VOR/DME, unless the weather is above the landing minima"

This is factually incorrect, pilots are permitted to descend if the weather minima is at or above the landing minima.

See this section of the AIP ENR: 1.5-2 and CAR 257

1.6 says " must not land or continue an approach below the approved DA, RH, MDA"

5.10 Flight Planning

Page 32

"There was no independent evidence to indicate that the operator routinely assured itself of the accuracy of pilot's international flight planning and forms or their in-flight navigation logs and crews' compliance with the operator's procedures."

This is factually incorrect and has been deliberately used to mislead the reader and say something without indicating what it actually means.

The same paragraph can be re-worded with the correct intent of the findings of CASAs audit as :

"There was evidence that indicated the operator did not routinely assure itself of the accuracy of the pilots international flight planning and forms or their in-flight management logs and crews' compliance with the operator's procedures".

CASA issued RCAs for failing to comply with CAR 78 and CAO 82.1 for failure to maintain Navigation Log and for incomplete Navigation Log.

Part A of the Company Operations Manual stated the responsibilities of the Chief Pilot relevant to compliance with regulations, monitoring operational standards, flight planning and fuel consumption in (a) (f) and (i)

“1.2.3 Chief Pilot (CP)

1.2.3.1 The Chief Pilot (CP) shall be responsible to the MD for:

a) Ensuring Company air operations are conducted in compliance with current regulatory requirements.

b) Ensuring pilot rosters are produced in accordance with Company procedures.

c) Maintaining a record of licences, ratings and route qualifications held by each flight crew member, including:

- Validity,*
- Recency,*
- Type endorsements, and (if applicable)*
- Licence restrictions.*

d) Maintaining a system to record flight crew duty times and flight times to ensure compliance with duty and flight time limitations.

e) Ensuring compliance with loading procedures specified for each aircraft type and proper compilation of loading documents, including passenger and cargo manifests.

f) Monitoring operational standards, maintaining training records and monitoring the effective management of the approved training and checking organisation.

g) The initial and recurrent training of flight crew in the handling, loading and carriage of dangerous goods.

h) Allocation of aircraft appropriate to the planned task.

i) Maintaining a system for fuel consumption records.

j) Ensuring that a high level of responsibility, skill and professional conduct is maintained by all Company pilots.

k) Maintaining a complete and up to date reference library of operational documents.

l) The active promotion of the Company Quality/Safety Program.

m) Conducting proficiency checks in the execution of emergency procedures and issuing certificates of proficiency ([Form PEL 3001](#)).

n) Ensuring weighing scales are periodically calibrated.”

5.11 CP & PNR Calculations

Page 32

“There was no independent evidence to confirm that the operator routinely assessed pilots’ processes for calculating/updating PNRs en route and their application of that revised data to their alternate decision making. This was consistent with the requirements of the operations manual, which did not require all elements of a proficiency check to be recorded as having been carried out”

Factually incorrect statement, see (f) above and the Company Check and Training Manual (below). No-where in the Company Manual suite does it state that any element of any check required does not need to be recorded. Contrary to the ATSB statement, the Manual states the following:

“ 1.4 Records

(h) Post Endorsement Training (Form PEL 3006)

- To be completed by the Check/Training/Supervisory Pilot after the completion of post endorsement training. **It provides a record of the pilots training** and shall be kept in the pilot’s personal file.*

1.4.2 Storage of Records

1.4.2.1 All ground training and air training/check flights shall be recorded in the pilot’s file using, where appropriate, the above documentation. Such files and records shall be

confidential and shall be stored in a lockable filing cabinet under the control of the Chief Pilot or HOTC if appointed

3.4.5 Records

*3.4.5.1 During a period of post endorsement/ICUS training the Supervisory Pilot shall complete a **Form PEL 3006** that shall be kept on the pilot's record file."*

An Observation was raised by CASA regarding the lack of detail in the training forms

Captain James reported to me he never did this check and reported that any number of the company pilots could be interviewed and asked the same question.

In his training file supplied by CASA in the AAT hearing, the PEL 3006 form does not exist.

5.12 Additional Information

Application of the pilot's assumed weather conditions to the flight

Page 33 "For a flight in a Westwind from Apia to Norfolk Island, the most critical fuel requirement was in the case of depressurised operations from the least favourable position in the flight. The carriage of full fuel would have meant that if the aircraft experienced a depressurisation near this position, there would have been sufficient fuel remaining to fly to either of at least two suitable destinations in the depressurised configuration"

Unable to establish without the actual SG what the fuel weight actually was at full tanks with medical gear and passengers and crew.

5.13 Analysis

Page 38

"Although not required by the operator's procedures, closer review of flight documentation and how it was being applied would have increased the likelihood that inconsistent interpretation and application Parts A and B of the operations manual concerning fuel management would have been identified".

Factually incorrect statement.

It was required by the operator's procedures. CASA issued RCAs for failing to comply with CAR 78 and CAO 82.1 for failure to maintain **Navigation Log** and for **incomplete Navigation Log**.

"8.5.2 In-Flight Fuel Checks

*8.5.2.1 For International operations the PIC shall ensure that fuel checks are carried out in-flight at regular intervals. **This means at the end of each leg or every 30 minutes whichever comes first, the fuel remaining shall be annotated on the navigation log.** A sample Flight Navigation Log is available on the Company Extranet ([Form PEL 3031](#)).*

The remaining fuel must be recorded and evaluated to:

- a) Compare actual consumption with planned consumption.*
- b) Check that the remaining fuel is sufficient to complete the flight, and*
- c) Determine the expected fuel remaining on arrival at the destination*

8.5.6 Fuel Usage Records

8.5.6.1 In order to maintain an ongoing fuel consumption check for each aircraft, the Chief Pilot shall ensure that all fuel uplift records are recorded on the Company Flight Record Sheets for all company aircraft. The fuel records for each aircraft shall be kept on file for the period covering the previous 12 months.

8.8.3 Operational Records

8.8.3.1 On completion of each flight, the PIC shall return the following information to Base Operations:

- a) For International Flights – Flight Nav Logs and Flight Preparation forms.
- b) NOTACS.
- c) Fuel Invoices.
- d) All completed Flight Record Sheets.

This documentation shall be kept in storage by Base operations for a period of 3 months.

9.5.3.2 Company pilots shall keep details on the Company Flight Navigation Log of:

- a) Place and time of departure.
- b) Route segments and ETI's per segment.
- c) Actual times over each checkpoint/waypoint.
- d) **Actual fuel at each waypoint or every 30 minutes whichever comes first.**

1.2.3 Chief Pilot (CP)

1.2.3.1 The Chief Pilot (CP) shall be responsible to the MD for:

a) Ensuring Company air operations are conducted in compliance with current regulatory requirements.

b) Ensuring pilot rosters are produced in accordance with Company procedures.

c) Maintaining a record of licences, ratings and route qualifications held by each flight crew member, including:

- Validity,
- Recency,
- Type endorsements, and (if applicable)
- Licence restrictions.

d) Maintaining a system to record flight crew duty times and flight times to ensure compliance with duty and flight time limitations.

e) Ensuring compliance with loading procedures specified for each aircraft type and proper compilation of loading documents, including passenger and cargo manifests.

f) Monitoring operational standards, maintaining training records and monitoring the effective management of the approved training and checking organisation.

g) The initial and recurrent training of flight crew in the handling, loading and carriage of dangerous goods.

h) Allocation of aircraft appropriate to the planned task.

i) Maintaining a system for fuel consumption records.

j) Ensuring that a high level of responsibility, skill and professional conduct is maintained by all Company pilots.

k) Maintaining a complete and up to date reference library of operational documents.

l) The active promotion of the Company Quality/Safety Program.

m) Conducting proficiency checks in the execution of emergency procedures and issuing certificates of proficiency ([Form PEL 3001](#)).

n) Ensuring weighing scales are periodically calibrated.

1.2.2 Compliance (Safety – Security – Quality) Manager

1.2.2.1 The Compliance Manager (CM) shall be responsible overall to the board of directors for:

a) **Developing and managing ‘regulatory systems compliance’ and ‘Company systems conformance’ systems for Company flight and engineering operations.**

b) **Developing and managing a system of auditing and site inspections for Company flight and engineering operations.**

c) Developing and managing a system of document control, amendment and distribution for the controlled Company manuals required by the flight operations and engineering departments.

d) Developing and managing the Company Safety Management System (SMS) in accordance with Section 3.0 – [Quality System](#), of this manual.

e) Developing and managing the Company Transport Security Program (TSP) as detailed in the approved ‘Pel-Air Aviation Pty Limited Transport Security Program, version ‘A’, 21/02/2005’.

f) Developing and managing the Company Quality Management System (QMS) in accordance with Section 3.0 – [Quality System](#), of this manual.”

5.14 Co-Pilot SOP’s

Page 38

The development of the flight plan by the PIC without input from the co-pilot was in accordance with standard operating procedures

Factually incorrect statement. There were company standard operating procedures for the co-pilot.

Part A of the Company Operations Manual states the following:

“1.2.9 Responsibilities of Co-pilot

1.2.9.1 A Company Co-pilot shall be responsible to the CP for:

Generally:

a) Maintaining the highest standards of safety and efficiency in all operations.

b) Complying with the requirements of the Company OM.

c) Complying with all relevant laws, regulations and directions of any country where he/she is involved in Company flight operations.

d) Ensuring maximum comfort and courtesy towards passengers and clients.

e) Maintaining a neat personal appearance when on duty.

f) Advising the CP in writing of any deficiencies or improvements in Company operational documentation or procedures.

Specifically:

g) Confirming the required fuel load is on board the aircraft in accordance with the flight plan.

h) Completing the load and trim sheet.

i) Completing the passenger manifest.

j) Escorting passengers to and from the aircraft on movement areas.

k) Conducting the passenger briefing(s) required during the operation.

l) Confirming waypoints entered into the GPS are accurate.

m) Completing any other duties as delegated by the PIC.”

Paragraph (g) specifically requires the co-pilot to be involved in flight planning by checking the fuel load with the flight plan.

5.15 Regulatory and Operator Risk Controls

Page 39

“A number of regulatory and operator risk controls were in place to address the risk of previously unforecast but deteriorating weather at Norfolk Island.”

Statements on Page 40 and the below statement from Page 39 contradict the above statement and is factually incorrect.

“However, there were no regulated requirements or operator procedures to inform the crew of when to obtain the most recent weather information in order to manage an unforecast deterioration in the weather. This increased the risk of crews inadvertently continuing to an unsafe destination”

Page 40

“Clear and readily available guidance for seeking and applying amended en route weather and other information to in-flight operational decisions would assist pilots maintain proficiency in such in-flight decisions”.

5.16 Aircraft Operator oversight

Page 48

Aircraft operator

Oversight of the flight and its planning

Minor safety issue

“The operator’s procedures and flight planning guidance managed risk consistent with regulatory provisions but did not effectively minimise the risks associated with aeromedical operations to remote islands”.

Factually incorrect statement, see the numerous failings of the operators procedures and of the Act and Regulations in the CASA Special Audit.

Page 48

“A management action plan was developed in response to the audit findings and was designed to address a wide range of measures to provide the operator with confidence in the safety of its operations”

Factually incorrect and misleading statement. The action plan was designed to address the operators’ significant safety deficiencies.

6.0 Variation of the ATSB Final Report from the ICAO Annex 13 Format of the Final Report

Differences lodged with ICAO in the AIP Supplement H12/11 (5 May 2011). In the difference lodged of Chapter 6, (the format of the final report) Australia has reported the following:

Australia will endeavour to comply with the recommended format for international aviation accident and serious incident reports and the more complex domestic aviation occurrences. However, for some complex investigations Australia may use what it considers to be a more appropriate format to clearly disseminate the facts, analysis and findings. A simpler abbreviated format may be utilised for domestic occurrences of a less complex nature.

This is a complex international investigation. While the format is different than that required in Annex 13, the contents are still required to be reported in the factual information, analysis and findings.

Annex 13 refers to Manual of Aircraft Accident and Incident Investigation for detailed guidance.

**Variations noted from the ICAO Annex 13 which refers to the ICAO Doc 9756
Manual of Aircraft Accident and Incident Investigation
Appendix 1 to Chapter 1**

6.1 "FORMAT AND CONTENT OF THE FINAL REPORT

1. Factual Information

The collection of Human Factors information is an integral part of the investigation. Thus, the Human Factors information should be integrated into the appropriate areas of the factual part of the report, rather than being placed under a separate heading. Human Factors information should be presented in a language that is consistent with the presentation of the other factual information."

The ATSB report is almost completely devoid of any Human Factors investigation or analysis. As quoted from the above paragraph, "Human Factors information is an integral part of the investigation ". Issues such as the effect of fatigue and its impact on decision making or organisational issues around the operators fatigue risk management system are not discussed.

There is a three paragraph analysis on why the flight crew made the option to proceed to Norfolk Island using decision making about choices. Apart from those three paragraphs there is almost no human factors analysis into why the crew did what they did.

It is clear from CASA's Special Audit that there were serious deficiencies within the organisation. Supporting evidence from the audit such as on the interrelationships between the operator and its parent company:

"The company executive had relied upon (name withheld) to ensure that operational standards meet the appropriate regulatory and safety levels. Audit evidence suggest these standards were never identified. A lack of documentation, policy and procedures are the main pointers to this deficiency".

How this paragraph alone does not alert the ATSB into the serious deficiencies of the operator is striking. The deep systemic problems identified by the CASA Special Audit are indicative of the latent conditions within the operator which has shown direct links to the evolution of the accident sequence.

The flight crews' lack of training and the lack of documentation shows direct causal relationships with the decisions taken and errors made. There are many human factor issues in this area alone.

Fatigue also played its part in this accident sequence. Delayed decision making and slow reaction times appear to be a feature throughout this accident sequence, the ATSB has not accounted for any

of this in the final report. There is also no discussion on the impact to the flight crews' memory of events due to perishable memory or the effects of Critical Incident Stress and/or Post Traumatic Stress on the flight crew. This is why the CVR and FDR should have been recovered.

The ATSB was once regarded as a world leader in the field of human factors investigation. This report demonstrates that expertise was completely absent.

"Manual of Aircraft Accident and Incident Investigation

Appendix 1 to Chapter 1

6.2 FORMAT AND CONTENT OF THE FINAL REPORT

1.1.2 In the history of the flight section, the objective is to enable the reader to understand how the accident happened but to avoid any analysis of why the accident occurred. "

Here are two examples:

Page 14 of factual information in the final report contains the following analysis:

"Based on this information, it is likely that the flight crew were experiencing a significant level of fatigue on the flight to Samoa, and if the captain only had 4 hours sleep then it is likely he was experiencing fatigue on the return flight at a level likely to have had at least some effect on performance. However, there was insufficient evidence available to determine the level of fatigue, or the extent to which it may have contributed to him not comprehending the significance of the 0800 SPECI."

Page 33 of factual information in the final report contains the following analysis:

"The decision to continue to Norfolk Island

Under conditions of increased stress or workload, working memory can be constrained and may limit the development of alternative choices and the evaluation of options. Depending on whether the available options are framed in a positive (lives saved) or negative way (injuries and damage), a decision maker can be influenced by how they perceive the risks associated with each option when making a decision.

When decision-makers are confronted with options that are considered as a choice between two different benefits, decision makers tend to be more risk averse. They tend to prefer a guaranteed small benefit, compared with just the chance of a larger benefit. On the other hand, when decision makers are faced with a choice between two options that are considered as two separate losses, they tend to be more likely to accept risk.

In this instance, the flight crew described the choice when they first comprehended the deteriorating weather conditions at Norfolk Island as being between diverting to Noumea and continuing to the island in terms of assessing competing risks. Given the weather and other information held by the crew at that time, including their not having information on any possible alternates, their perception that the higher risk lay in a diversion was consistent with the greater number of unknown variables had they diverted."

"Manual of Aircraft Accident and Incident Investigation

Appendix 1 to Chapter 1

6.3 FORMAT AND CONTENT OF THE FINAL REPORT

1.3.1 With regard to the location of the occurrence, include: the latitude and longitude, as well as a geographical reference to a well-known location (such as 75 km south of XYZ)”

The latitude and longitude are not in the report. The geographical reference changes from the main titles and findings Norfolk Island Airport to Headstone Point. (5 km and 3km respectively)

**“Manual of Aircraft Accident and Incident Investigation
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6.4 FORMAT AND CONTENT OF THE FINAL REPORT

1.6.1 When relevant to the accident, provide a brief statement of the airworthiness and maintenance of the aircraft including the following information:”

Fuel: Type of fuel used and type of fuel authorized. Also, state the amount of fuel on board and how it was determined, **its specific gravity** and its distribution in the fuel tanks;

There is no mention of the specific gravity of the fuel uplifted at Samoa.

Aircraft load: The maximum certificated take-off mass and landing mass, actual take-off mass, and mass at the time of the occurrence should be given. Also, state the certificated limits for the centre of gravity of the aircraft, and the centre of gravity at take-off and at the time of the occurrence. Include a description of the operator’s loading control system, the load distribution and its security, and how the details of the aircraft mass and centre of gravity were established.

There is no mention of the actual take-off mass at Samoa and the mass at the time of the occurrence.

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6.5 FORMAT AND CONTENT OF THE FINAL REPORT

1.6.2 Describe any aircraft part or system which had a bearing on the accident. Similarly, describe operational procedures, performance limitations and other aircraft related circumstances which played a role in the accident. The objective is to enable the reader to fully understand how the accident happened.”

The ATSB have failed to mention the aircraft was not approved and crew not certified for Reduced Vertical Separation Minima (RVSM) operations in RVSM airspace, despite planning and operating in Fiji Airspace and Auckland Oceanic RVSM airspace contrary to the Fiji AIP dated Nov 2006 and the New Zealand AIP dated 15 Nov 2007, which states the following:

"1.3.5 Non-RVSM approved civil aircraft may not flight plan between FL290 and FL410 inclusive within RVSM airspace, except that aircraft unable to fly to an appropriate destination at or below FL280 or at or above FL430 may, after special coordination (as detailed in 1.3.6), flight plan within the RVSM stratum provided the aircraft:

(a) is being delivered for initial acceptance, change of ownership, or lease (see 1.4.1 for another option for delivery flights); or

(b) was formerly RVSM approved but has experienced an equipment failure and is being flown to a maintenance facility for repair to meet RVSM requirements and/or obtain approval, or is transporting externally a spare engine or strut assembly; or

(c) is being utilised for mercy or humanitarian purposes

1.3.6 Civil operators requesting ATC approval for non-RVSM approved aircraft to operate within or transit through the RVSM stratum must:

(a) for operations wholly within the New Zealand FIR, co-ordinate with the Christchurch ATS centre by telephone normally not more than 12 hours and not less than 1 hour prior to the intended departure time; or

(b) for aircraft departing from within the New Zealand FIR that are to enter the Auckland Oceanic FIR, co-ordinate with the Christchurch ATS centre by telephone normally not more than 12 hours and not less than 4 hours prior to the intended departure time; or

(c) for aircraft operating wholly within the Auckland Oceanic FIR, co-ordinate with Auckland Oceanic Control centre by telephone, normally not more than 12 hours and not less than 4 hours prior to the intended departure time; and

*(d) after approval is received from the Auckland Oceanic Control centre, **notify** all other affected centres prior to departure. Filing of a flight plan is not considered appropriate notification; and*

(e) include the remarks "approved non-RVSM" in field 18 of the ICAO flight plan.

1.3.7 This process is intended exclusively for the purposes indicated above and not as a means to circumvent the normal RVSM approval process. The telephone numbers for non-RVSM ATC approval request are:

(a) Christchurch ATS Centre: (03) 358 1694;

(b) Auckland Oceanic Control Centre: (09) 275 9817."

The section 1.3.7 of the AIP above outlines the purpose of 1.3.5 as not being a method to circumvent the normal RVSM approval process. This would require the aircraft to flight plan below the RVSM airspace. In that case, the aircraft is not legally capable of flying this type of operation at the flight planning stage, and therefore is unable to do the flight (s). This is despite the operator having an RVSM procedure in its operations manual without actually having the aircraft certified or the pilots trained as required by the Civil Aviation Regulations 1988.

(Both Fiji AIP and New Zealand AIP extracts are at Annex B and Annex C)

Part A of the Operators Operation Manual states:

"13.2 RVSM PROCEDURES

13.2.1 Climb and Cruise

13.2.1.1 Before entering RVSM airspace, the PIC must review the status of mandatory aircraft equipment. All the following systems and devices must be operating normally:

- a) Two independent primary altimetry systems;*
- b) A Mode C capable SSR transponder;*

- c) Altitude alert system; and
- d) Auto pilot.

13.2.1.2 The pilot must notify ATC whenever the aircraft:

- a) Is no longer RVSM compliant due to equipment failure; or
- b) Experiences loss of redundancy of altimetry systems; or
- c) Encounters turbulence that affects the capability to maintain flight level"

Despite aircraft not being approved to operate aircraft in RVSM airspace, 13.2.1.2 (a) suggests that the aircraft are RVSM compliant if the requirements of 13.2.1.1 (a) (b)(c)(d) are serviceable. This is not the case, and the Civil Aviation Regulations specify the approval process for the aircraft and crew.

On this basis alone, the accident flight operation cannot be planned to operate outside of RVSM airspace because of altitude and performance capability and the subsequent fuel uplift required exceeding the aircrafts fuel uplift capacity. (see the submission of Mr Richard Davies)

This is a failed regulatory risk control which would have prevented the aircraft performing this operation from Norfolk Island to Samoa and return.

This was not the first time this operator and accident aircraft operated this route, or in the Pacific. I have entered the relevant publicly available evidence below:

An International Civil Aviation Organization (ICAO) report in 2005 detailed many RVSM breaches by Non-RVSM approved aircraft across the pacific:

" Fifteenth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group (ATM/AIS/SAR/SG/15)
Bangkok, Thailand, 25 – 29 July 2005

ASSESSMENT OF NON-STATE-APPROVED OPERATORS USING PACIFIC RVSM AIRSPACE BASED ON TRAFFIC SAMPLES FROM APRIL 2003 AND APRIL 2004

Summary

This paper presents a comprehensive assessment of the identification of non-RVSM-approved operators using Pacific airspace where the RVSM is applied. Using actual Pacific traffic movement data collected during April 2003 and April 2004, the Pacific Approvals Registry and Monitoring Organization (PARMO) compared all observed air carrier aircraft operations flying between FL290 and FL390, inclusive, against the RVSM operational approvals noted in the approvals databases from the PARMO, Monitoring Agency for the Asia Region (MAAR), Caribbean/South American Regional Monitoring Agency (CARSAMMA), North American Approvals Registry and Monitoring Agency (NAARMO), North Atlantic (NAT) Central Monitoring Agency (CMA), and EUROCONTROL. The April 2003 traffic movement data used for this analysis were from the Anchorage Oceanic, Auckland, Brisbane, Nadi, Naha, Oakland Oceanic, Tahiti, and Tokyo Flight Information Regions (FIRs). The April 2004 traffic movement data used in this analysis were from the Anchorage Oceanic, Auckland, Naha, Oakland Oceanic, and Tokyo FIRs. By using the methodology explained in this paper, the PARMO identified potentially non-RVSM-approved operations and comprehensively summarized all cases of the identified operators and aircraft types. It reveals possible cases of non-RVSM approved operations, with some possible non-approved operations showing /W in Field 10 of the ICAO flight plans. The paper proposes

that the PARMO provide a copy of this document to the appropriate Asia-Pacific State civil aviation authorities (CAAs), and that the CAAs investigate the RVSM approval status of the identified operators and aircraft that are under their jurisdiction”.

The paper identified non-RVSM aircraft operating in the Pacific RVSM airspace in the month of April 2003 and the accident operator has two aircraft **VH-AJV** and the accident aircraft **VH-NGA** which features as follows:

“5. Summary of Observed Pacific Traffic Without RVSM Operational Approval

5.3. Table 7 presents a summary of the operations in the April 2003 Brisbane FIR traffic sample for which RVSM approvals were not found in the March 2005 combined RVSM approvals database. One of the aircraft, appearing 4 times in the sample, is registered in a State which does not provide regular updates of RVSM approvals to the PARMO.

<i>Agency Name / Registration Number</i>	<i>Aircraft Type</i>	<i>Number of Operations in Sample</i>
P2TAA	C550	4
VHNGA	WW24	9

Table 7. Operations in the Brisbane FIR Traffic Sample for Which RVSM Approvals Were Not Found

5.4. Table 8 presents a summary of the operations in the April 2003 Nadi FIR traffic sample for which RVSM approvals were not found in the March 2005 combined RVSM approvals database. The PARMO determined that the registration mark in the 2003 traffic sample for one aircraft, responsible for 2 operations in the sample, was not current. The remaining airframes in listed in Table 8, responsible for a total of 10 operations, were identified as non-approved by the ATC units. The PARMO has concluded that the ATC units were able to provide adequate separation for these operations without disadvantage to RVSM-approved aircraft.

<i>Agency Name / Registration Number</i>	<i>Aircraft Type</i>	<i>Number of Operations in Sample</i>
VHNGA	WW24	8
VHAJV	WW24	2
VHWZM	ASTR	2

Table 8. Operations in the Nadi FIR Traffic Sample for Which RVSM Approvals Were Not Found

5.9. Table 12 presents a summary of the operations in the April 2003 Auckland FIR traffic sample for which RVSM approvals were not found in the March 2005 combined RVSM approvals database. All of the operations listed in Table 12, were identified as non-approved by the ATC units. The PARMO has concluded that the ATC units were able to provide adequate separation for these operations without disadvantage to RVSM-approved aircraft.

<i>Agency Name / Registration Number</i>	<i>Aircraft Type</i>	<i>Number of Operations in Sample</i>
ASIAN EXPRESS AIRLINES PTY LIMITED (AXF)	B722	36
ALLCANADA EXPRESS LTD (CNX)	B722	4
VHJCR	LJ35	4
VHNGA	WW24	2

Table 12. Operations in the April 2003 Auckland FIR Traffic Sample for Which RVSM Approvals Were Not Found

*5.12. Table 14 presents a summary of the operations in the April 2003 Anchorage and **Oakland Oceanic** FIR traffic samples for which RVSM approvals were not found in the March 2005 combined*

RVSM approvals database. One of the operations listed in Table 14, appeared in other Pacific FIR April 2003 traffic samples, and had been identified as non-approved by the ATC units. The remaining operator-aircraft type pairs listed in Table 14 represent operations which took place on the Central East Pacific routes. The PARMO has concluded that the ATC units were able to provide adequate separation for all the operations listed in Table 14 without disadvantage to RVSM-approved aircraft.

Agency Name / Registration Number Aircraft Type Number of Operations in Sample

ATLANTA (ABD42P)	B747	2
BAY	F900	2
BAY	CL60	5
BAY	CL64	1
ALLCANADA EXPRESS LTD (CNX)	B727	2
BOMBARDIER AEROSPACE D/B/A		
BOMBARDIER BUSINESS JET		
SOLUTIONS, INC. (LXJ)	CL60	1
VHNGA	WW24	3

Table 14. Operations in the April 2003 Anchorage and Oakland FIR Traffic Sample for Which RVSM Approvals Were Not Found”

(see Annex D)

Further comments were made at the Informal South Pacific Air Traffic Services Co-ordinating Group (ISPACG) in September 2008:

“3.3.4 The meeting reviewed a summary of the most up to date safety assessments of RVSM operations in the widespread airspaces of the Asia/Pacific Region, as prepared by the Asia/Pacific RMAs under procedures and in formats established by RASMAG.

RVSM Non - Approved Operators Using RVSM Airspace

3.3.4

Persistent examples of a minority of RVSM non-approved flights ‘incorrectly’ filing flight plans showing RVSM approval have been identified through the work of the PARMO and AAMA. This meant that it was likely that in some circumstances the 1000 feet separation standard was being inadvertently applied by ATC when the 2000 feet separation standard was required – this was a breakdown of separation incident.

3.3.5

Questions were raised during RASMAG/9 about the legal responsibility of an air navigation service provider (ANSP) who knew, through the RMA work in this area for example, that some identified airframes were filing “W” (i.e. RVSM approved) when they were not authorized to do so but took no action to apply the greater vertical separation standard.

3.3.6

The meeting expressed serious concern in relation to flights that were apparently using RVSM airspace when they did not have the State approvals to do so. In agreeing that this issue ultimately required regulatory intervention, the meeting requested RASMAG to continue its investigations in this regard with the objective of providing a more comprehensive briefing to APANPIRG/20 (2009) in relation to this issue.”

(See Annex E)

I have attached copies of the PARMO RVSM approvals list for August 2009. The operators' aircraft do not appear on this or a later 2012 list as approved for RVSM.

(See Annex F and Annex G)

The ongoing use of non approved RVSM aircraft by the operator and the absence of the regulator taking action appear to be an organisational and regulatory systemic issue which would have prevented this accident. The Westwind II is not capable of flight planning outside of RVSM airspace and thus operating on this route. Captain James was doing what he was told to do and this route was selected by the company on many occasions. The fuel purchase order for the operator to the fuel distributor at Samoa for the uplift ex Samoa details the next destination as Norfolk Island. (Annex J)

The non-RVSM operation of the operator over many years is not mentioned by the ATSB in the final report despite the fact it was known by CASA and mentioned in the CASA investigation file of Dominic James and the CASA Special Audit.

(Mr Richard Davies of the Aviation Safety Institute was engaged as a specialist fixed wing investigator as a third party in this aspect, and his submission will discuss this in more detail)

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6.6 FORMAT AND CONTENT OF THE FINAL REPORT

1.6.3 The availability, serviceability and use of transponder, airborne collision avoidance system (ACAS) and traffic alert and collision avoidance system (TCAS), ground proximity warning system (GPWS) and terrain awareness warning system (TAWS), should be stated. The relevant systems should be discussed in detail for near collisions, mid-air collisions, approach and landing accidents and controlled flight into terrain accidents."

The ATSB has not mentioned the fact that the aircraft was fitted with ACAS and EGPWS in its avionics suite. There is no mention that it is a requirement to operate in Noumea Airspace and this equipment is mandatory. The pilot was not trained in the use of either and was not approved to operate this equipment and therefore was not allowed to plan to operate into Noumea.

There is also no mention in the ATSB report that the French Civil Aviation Authority had banned the operator from its airspace prior to the accident. Although the operator fitted this equipment, it was not in the Aircraft Flight Manual as a supplement, or a checklist or SOP and the pilot not trained in their use in accordance with the legislation.

This would explain the pilots understanding of why he could not flight plan via Noumea.

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6.7 FORMAT AND CONTENT OF THE FINAL REPORT

1.15.2 The location of crew members and passengers in relation to injuries sustained should be stated. The failure of structures, such as seats, seat belts and overhead bins should be described. Also, the use and effectiveness of safety equipment should be reported. Aspects pertinent to the crashworthiness of the aircraft should be addressed, as well as occupant survivability in relation to impact forces and fire."

There is no mention of the fact that the life jackets did not work as required by the FAA Technical Standard Order (TSO) TSO C13d which CASA accept as the standard for lifejackets using a locator light.

Flight Nurse Karen Casey reported that her lifejacket only inflated in the left chamber. She attempted manual inflation and this did not work. The whistle did not work. The light failed just before the rescue vessel arrived.

She held the patients head above water (who did not have a lifejacket) with her right arm for approximately one and a half hours, without relief. She also had to lean into the inflated chamber to stop her head being submerged. She has suffered permanent damage to her right arm as a result of this sustained exertion. A fully inflated lifejacket would have assisted her in maintaining a stable position in the water and cradling the patient with both arms.

The ATSB have failed to mention that the lifejacket in this case failed to meet:

CAO 20.11 5.1.6 (a) the standard set by CASA for this type of life jacket which is FAA TSO-C13d:

FAA TSO-C13.

4.1.4.3 Manual inflation.

The lifejacket failed to inflate manually.

4.1.13 Survival light.

Did not meet the 8 hour life of the light, as referenced to TSO-C85.

CAO 20.11 5.1.6 (c) for the whistle.

The ATSB have failed to report the operators Quality Management System or servicing or service life of these lifejackets.

The other two lifejackets had the same issue with the lights not working.

This would be at a minimum a Safety Alert to the lifejacket manufacturer or for the industry to be alerted for the correct service life of the same lifejackets.

There is no mention of these malfunctions.

(See Annex H)

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6.8 FORMAT AND CONTENT OF THE FINAL REPORT

1.17 Organizational and management information

1.17.1 When relevant to the accident, provide pertinent information on any organization and its management whose activities may have directly or indirectly influenced the operation of the aircraft. The organizations to be addressed in this section could include: operator;

— maintenance organizations;

- air traffic services;
- aerodrome administration;
- meteorological services;
- aircraft manufacturer;
- certification and licensing authority; and
- regulatory authority.”

The ATSB has not reported when the operator had last been audited by the CASA and its regulatory oversight of the operator in the previous twelve months.

The ATSB has not reported on the meteorological services not having approved weather observers and that the Unicom operators were no longer trained as approved weather observers or radio operators and why.

The ATSB has not reported on the replacement of approved weather observers with Automatic Weather Stations despite the Aeronautical Information Publication GEN 3.5-26 in 12.5.2, 12.14.1 and 12.8.1 warning pilots to “use caution when interpreting automated weather”. There is also no analysis on what the word “caution” means, i.e, that it over-reads or under-reads or what in fact a pilot is to interpret this caution to mean.

The ATSB has not reported on the ATS services of Fiji or New Zealand and Australia in their respective responsibilities to:

1. Provide Flight Information Services to non RVSM aircraft
2. Not provide weather updates
3. Provide Flight Planning assistance by phone
4. Provide the references used in the ATSB of the Pacific Air Services Agreement

There is no discussion on the conversations between the Norfolk Island Unicom and Auckland Oceanic regarding the deteriorating weather conditions or include the transcript of critical safety information discussed between the two parties well before the flight crew could have successfully diverted to Nadi if this information was passed on.

This is an omission of safety critical information.

(See Annex I)

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6.9 FORMAT AND CONTENT OF THE FINAL REPORT

1.17.2 When deficiencies in the organizational structure and functions had a bearing on the accident, the information could include, but need not be limited to, the following factors:

- safety culture;
- resources and financial viability;
- management policies and practices;
- internal and external communications; and
- certification, safety oversight and regulatory framework.”

The ATSB have failed to transparently report on the operators’ safety culture, its resources, its management policies and practices, and safety oversight.

Despite having the CASA special audit and emails from the ATSB to the pilot Dominic James in July of 2012 pointing out there was no significant changes warranted after reviewing the CASA Special Audit:

"16 July 2012

Dear Mr James

*Following Mr Maitland's letter of 3 July 12 and your email of 6 July 12, the ATSB reviewed the Norfolk Island draft report in light of the concerns raised. **That review included a review of the CASA special audit and other evidence. That review did not indicate that any significant changes were warranted but some amendments were made relating to your concerns.***

Given your concerns and the changes, the ATSB is conducting a limited distribution to some of the directly involved parties, yourself included.

Enclosed for your information is a copy of the following report:

Report Number: AO-2009-072

Report Type: Draft 2

Aircraft: Westwind

Registration: VH-NGA

Location: 5 km SW of Norfolk Island Airport

Date of occurrence: 19 November 2009

The ATSB's policy is to seek comment on the factual content of its transport safety reports from organisations and/or individuals who were directly involved in those occurrences, or in their immediate aftermath, or who may be affected by the findings.

The draft report has been provided to you under Section 26 of the Transport Safety Investigation Act 2003 to enable checking of the accuracy of the content and to ensure natural justice. Under Section 26, the report may only be copied and disclosed prior to its public release for the purpose of taking safety action or providing comment to the ATSB. Disclosure of this report in any other circumstance prior to its public release date constitutes a criminal offence.

Should you wish to comment on the factual accuracy of the enclosed report, including providing advice on safety action taken or proposed by you to address safety issues identified, your comments should be forwarded in writing to the General Manager Aviation Safety Investigations, Australian Transport Safety Bureau by 1500 EST Monday 23 July 2012. If your comment seeks to have the ATSB report amended, factual information in support of such a request must be included with your response. Given that you have previously commented that you have 'additional information' but was withholding it pending a second draft, this is the time to provide any information that might assist in confirming/refuting the factual information in the draft report.

Yours sincerely

(Name withheld)"

23 July 2012

"Dear Sirs,

Apologies for the late response - I have been delayed and was in the air.

Firstly, I will be relying upon Mr Maitland's letter of 17 July 2012 as my second submission to the ATSB. I still believe strongly that the report is completely unbalanced and fails to address numerous critical issues that relate to the accident. It is my hope that the ATSB will correct this imbalance in the final report.

Secondly, I would like to know (when available) the expected time and date that:

- the final report will be sent to myself*
- the final report will be publicly released*

Lastly, could you please clarify exactly how the Pel-Air special audit will be considered by the ATSB.

Regards, Dom James."

23 July 2012

G'day Mr James,

Thank you for your e-mail advice below of your reliance on Mr Maitland's letter of 17 July 2012. I separately responded to that letter on 19 July 2012.

Although I advised Mr Maitland that I envisaged the report would be released to the public on or about 3 August, it may due to other priorities be that this is more likely to be 10 August. In general our reports are planned to go public at 1030. I will let you know as soon as I can of a confirmed date of publication. In either case, as a directly involved party (DIP), you can expect to receive an advanced copy of the final report 8 working days before that public release.

As I reported to Mr Maitland, under section 25 of the Transport Safety Investigation Act 2003, approval for the release of Australian Transport Safety Bureau transport safety investigation reports rests with the Commission. The revised draft report, any DIP comments (including your e-mail below) and supporting evidence, and a copy of the Civil Aviation Safety Authority special audit report into the aircraft operator will be forwarded to the Commission to inform this approval process.

Thank you for your DIP response.

(Name withheld)

Despite the CASA Special Audit being in the possession of the ATSB investigator, supervisors and commissioners, the following comments which identified the operators Westwind operation on military contracts identified serious safety deficiencies:

The idiosyncratic nature of this operation has created an insular group used to working autonomously. The auditors believe that there is a risk that crews will operate outside of the civil aviation regulations due to a lack of understanding of the civil AOC requirements. In any case, a stronger connection to the company should be fostered in order that changes in line with Group SMS advancement can be made without conflict.

This finding in relation to the Westwind aero-medical operation not having or using a Regulated Take-off Weight Manual despite the operations manual requiring it:

Although capable of providing this service, the REX Group chose not to provide the Pel-Air Westwind operation with Regulated Take-off Weight charts and documented obstacle clearance procedures for a number of regularly used ports. The absence of this documentation is in contravention of CAO 20.7.1.b and an RCA has been raised.

Part A of the operators' manual stated:

"8.4.9.3 The PIC shall ensure the RTOW/Aircraft performance data derived from AFM for the aircraft type are used for all take-offs. Furthermore, the PIC shall, where applicable, plan to use any published special departure procedures associated with the departure runway in the event of an engine failure".

Pilot Dominic James reported to me the RTOW manual was not in the aircraft and was never used or worked out for Norfolk Island at the time of the accident and confirmed by the CASA Special Audit.

A review of the training records for s 47F was conducted. The Westwind Command Endorsement was conducted in the minimum five hours on 27 July 2007. s 47F was rostered to fly as a Westwind Co-Pilot until April 2008. On 16 April 2008, s 47F commenced line flying as a Captain In Command Under Supervision (ICUS) with s 47F. There is no evidence of a further left seat check or refresher prior to line flying and s 47F was not a CASA approved Training or Checking Captain. s 47F had been internally approved as a Supervisory Captain by Pel-Air Aviation Pty Limited. During the ICUS period, training including 'V1 cuts' was also conducted by s 47F who is not a CASA approved Training or Checking Captain. s 47F had been internally approved as a Supervisory Captain by Pel-Air Aviation Pty Limited. Had this position been approved by CASA, he would not have been qualified to conduct asymmetric training. CAO 82.1 Para 3.3 states 'Persons must not be nominated to supervisory positions within the training and checking organisation without the approval of CASA'. During the ICUS period s 47F was flying as a Co-pilot for extended periods and then returned to the Command seat. The Training and Checking forms (PEL 3001) completed during the ICUS period showed numerous deficiencies that were repeated flight after flight with no evidence of remedial training. Some PEL 3001's had no comment other than 'Asymmetric circuits' or 'flight OK' offering no useful information to subsequent Check Pilots or the Head of Training and Checking.

The second page of the PEL 3001 has no identification as to what flight it relates to and can lead to confusion when reviewing multiple forms. It is recommended that Page 2 of the PEL 3001 is marked as to what flight it relates to.

Comments from Westwind Pilots interviewed included concerns that endorsement training was to a bare minimum relying on ICUS to complete the training. Concerns exist on how this will be achieved without the freight runs as a training ground.

The structure of training flights appears to be a series of unstructured checks rather than a period of mentoring or training. The company needs to review the training requirements of the Captains and Co-Pilots to ensure that a structured training program is implemented and training is conducted only by approved Training or Checking Captains.

How the ATSB can ignore the fact that the pilot was checked to line as a captain by two unapproved Training and Checking Captains is perhaps the most damning of the omissions. How does the ATSB expect that the pilot was checked correctly? How does the ATSB explain his lack of training records and suitability? This fact is not even mentioned yet one of the pilots who trained Mr James was observed by CASA that that person would not even be qualified to conduct that training.

This alone would question the legality of Mr James to be a Captain on the accident flight. Significant safety deficiencies, such as these, represent a safety culture much departed from the regulations and is not discussed by the ATSB. As previously discussed, the ATSB continuously state the operator complied with the regulations.

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6. 10 FORMAT AND CONTENT OF THE FINAL REPORT

1.17.3 When relevant, provide pertinent information concerning the operator, such as type and date of issuance of the air operator certificate, types of operations authorized, types and number of aircraft authorized for use, and authorized areas of operation and routes. Also, include information concerning any deficiencies found in the operator’s company operations manual and other operator documentation, when the deficiencies had a bearing on the accident.”

There is no discussion in the ATSB report of the deficiencies of the operators’ operations manual and other documentation such as the findings of the CASA Special Audit:

A review of the fuel policy for the Westwind and Lear operations was conducted to assess for compliance with CAR 220, ‘An operator shall include in the operator’s operations manual specific instructions for the computation of the quantities of fuel to be carried on each route, having regard to all the circumstances of the operations, including the possibility of failure of an engine en route’.

For the Westwind aircraft, the Operations Manual has two methods of calculating fuel, 23lbs/min + 400lbs climb..... or 1700 1st hour, 1400 2nd hour, 1300 3rd hour. There is no guidance for which method should be used and when. There is no guidance for planning for flights requiring a ‘sea level’ cabin or flights where access to Reduced Vertical Separation Minima (RVSM) Airspace is denied by air traffic control (ATC), flights experiencing a depressurisation or flight involving an engine failure. As the company regularly conducts flights to isolated and remote islands, policy requiring the carrying of alternate fuel is needed.

The ATSB failed to mention that there was no guidance in the operations manual for planning flights when depressurisation occurs or when not permitted to operate in RVSM airspace by ATC direction or when an engine failure occurs. Yet, the ATSB attributed the following to the pilot Dominic James:

“Analysis

Although the PIC complied with a Westwind-specific fuel planning method in Part B of the operations manual, his flight planning method did not ensure compliance with all of the fuel policy requirements in Part A of that manual. Part A required pilots to account in their fuel planning for the possibility of abnormal operations.

Safety Factors

“Given the forecast in-flight weather, aircraft performance and regulatory requirements, the flight crew departed Apia with less fuel than required for the flight in case of one engine inoperative or depressurised operations.

The operator’s procedures and flight planning guidance managed risk consistent with regulatory provisions but did not effectively minimise the risks associated with aeromedical operations to remote islands. [Minor safety issue]”

The only conclusion I can form as to how the ATSB arrived at these findings and analysis, is that it was chosen to deliberately misconstrue the findings of the CASA Special Audit that there was no guidance in the operators’ manual for abnormal operations.

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Appendix 1 to Chapter 1

6. 11 FORMAT AND CONTENT OF THE FINAL REPORT

2. ANALYSIS

2.1 In the analysis part of the Final Report, the significance of the relevant facts and circumstances which were presented in the factual information part should be discussed and analysed in order to determine which events contributed to the accident. There might be a necessity to repeat the description of some of the evidence already presented in the factual information part, however, the analysis should not be a restatement of the facts. Also, no new facts should be introduced in the analysis part. The purpose of the analysis is to provide a logical link between the factual information and the conclusions that provide the answer to why the accident occurred.”

The ATSB analysis is flawed on the basis that it has only provided evidence which it has chosen to present. Factual information, such as lack of operations manual guidance on abnormal operations, inadequate fuel policy in general and the discussion on ATC not passing on critical weather information, non-RVSM approval, the fact that the flight cannot be legally planned or that the aircraft was capable of not being able to uplift enough fuel to carry alternates is gross failure of the ATSB’s function in the TSI Act 2003.

Even after the ATSB corrected the Fiji ATC reading out the wrong cloud height and a superseded weather METAR a day after they released the report, the ATSB have offered no analysis on what that error did to the flight crews’ understanding of the weather. The SPECI which showed cloud at 1100 feet may not have been heard by the crew due to the notoriously difficult affects of HF transmissions and the ionosphere. What was received and recorded by Aucklands’ large aerial, and used as the basis of the attribution of the flight crew may not be the same as what the crew heard because of the aircraft whip antennae.

I have first-hand experience of this flying helicopters using HF. In designated remote areas of Victoria during the drug crop seasons, and on extended range overwater Search and Rescue operations the whip antennae would not fully receive and understand Melbourne Flight Information Service, however my transmissions were received and re-transmitted by other aircraft.

This analysis is based on “outcome bias”. Outcome bias is where you wish a particular outcome to be put and only the factual information which supports that argument is included in the report. Clearly, safety critical information has been deliberately omitted in order to support the ATSB argument in their analysis and findings.

I have included the following extract from the research of Dr Margaret Stringfellow who conducted doctoral level research in Accident Analysis and Hazard Analysis for Human and Organisational Factors in the Aeronautics and Astronautics Department at Massachusetts Institute of Technology in 2010. I have underlined and bolded the most relevant to this investigation. She states:

“1.3 Limitations in Accident Analysis Practices

Accident analysts also lack a method for framing and connecting human and organizational factors to the technical system failure or loss event [77]. Accident analysis is used to examine the safety of a deployed system after it has failed. Safety professionals have attributed 70 to 80% of aviation accidents to human error [75]. Recently, accident analysts have also begun to cite organizational factors as contributory causes of accidents. While analysts have long known that the human and organizational aspects of systems are key contributors to accidents, they lack a rigorous approach for analyzing their impacts.

*In particular, accident analysts justify blaming operators based on confusion between data availability and data observability [19]. Data availability is information that was present at the time of an accident but could have been buried deep in a hierarchical user interface or obscure dial, for instance. Data observability is data that could actually be observed given all of the pressures and tasks that were actually occurring. Without being inside the mind of an operator, it is impossible for analysts to know which data was available but not observable. **It is common in accident reports to blame the operator for missing important information.** For example, in a recent oil company accident, the operator had two level gauges available to him. The operator used one of the gauges to make control decisions but did not know that it was broken. The second, redundant gauge information was obscured within the user interface. Nevertheless, the operator was deemed negligent [85].*

*Many accident analysts strive for blame-free reports that will foster reflection and learning from accidents **but struggle with methods that require direct causality, do not consider systemic factors, and seem to leave individuals looking culpable** [77] [79] [80]. Safety professionals make do with ad hoc methods that do not help guide investigations or help them determine which human and organizational data is relevant and which is not. In particular, investigators are not sure which people to interview or what questions to ask [62]. An accident investigation method is needed that will guide investigations, aid in the analysis of the role of humans and organizations in accidents, and promote blame-free accounting of accidents”¹.*

To quote the above research “It is common in accident reports to blame the operator for missing important information” but goes on to say “do not consider systemic factors, and seem to leave individuals looking culpable”

The ATSB have using “hindsight bias” and “outcome bias” in blaming the crew on the basis of what information was available without explaining what information the crew actually observed.

The extract from the above research on what data is observable and what is available is critically important in this accident.

Despite the crew only having a good forecast, and subsequently being given wrong weather, which was superseded by three later reports, the Fiji ATC only passed on the SPECI because the pilot queried the time of the 0630 weather report.

¹ Accident analysis and hazard analysis for human and organizational factors
Margaret v. Stringfellow MIT October 2010

Despite the 0803 Amended TAF being issued fifteen seconds after the Fiji ATC told the pilot the SPECI was the latest weather, the ATSB suggest the pilot should have then requested an updated forecast. The ATSB later amended their 30 August report with the correction identified, however the ATSB offer NO analysis on the mistake of the Fiji ATC of giving the incorrect cloud height and what this meant in the mental model process of the pilot and co-pilot.

This quote from the ATSB website is also deliberately misleading and incorrect:

“On 31 August 2012 a clarification was added to page 6 para 3. The report did not make it originally clear that air traffic control communicated an incorrect cloud height”

The ATSB did not make it “originally clear” is false. They failed to mention it at all. It was not picked up by the ATSB until brought to their attention.

The ATSB also fail to point out that the en-route section AIP does not require an alternate on weather reports, only forecasts:

*“AIP ENR 73 – Alternate Aerodromes section 73.2.12 required the pilot of an IFR aircraft to provide for a suitable alternate aerodrome when arrival at the intended destination would be during the currency of, or up to 30 minutes prior **to the forecast commencement of any of the following weather conditions:***

d. cloud - more than SCT [4 OKTAS] of cloud below the alternate minimum^[39]...; or

e. visibility - less than the alternate minimum^[36]; or

f. visibility – greater than the alternate minimum, but the forecast is endorsed with a percentage probability of fog, mist, dust or any other phenomenon restricting visibility below the alternate minimum^[36]; or

g. wind - a crosswind or downwind component more than the maximum for the aircraft.”

AIP ENR 73 specifies absolutely, that forecast conditions apply to alternate aerodromes. Yet AIP ENR 1.10 Flight Planning, states forecasts and reports, however, that it appears only applicable to the Flight Planning stage.

AIP 73.2.12 is applicable to this case, as the pilot was already En route, it only says the “pilot of an IFR aircraft to provide a suitable alternate when arrivalto the forecast commencement”

It says no-where in this section to apply observations or reports. The ATSB and CASA cannot have this both ways. This is a demonstration of how poorly written the AIP is. There is no correction planned by CASA. “I Would of, he should of, I could of”, in other words CASA’s opinion, appears to correlate with a breach and ZERO tolerance when it suits CASA in this case where pilot Dominic James does not legally require to nominate an alternate in flight is not good enough. The AIP must be changed to reflect the AIP ENR 1.10 Flight Planning requirements to include reports as well as forecasts if CASA want pilots to require an alternate.

Contradicting rules, poor guidance and no operations manual policy on alternate planning to remote islands (as found by CASA Special Audit) all contribute the ATSB with hindsight bias and outcome bias.

There is no explanation on why the crew did what they did.

**“Manual of Aircraft Accident and Incident Investigation
Appendix 1 to Chapter 1
6.12 FORMAT AND CONTENT OF THE FINAL REPORT**

2.2 The analysis part should contain an evaluation of the evidence presented in the factual information part and should discuss the circumstances and events that existed or may have existed. The reasoning must be logical and may lead to the formulation of hypotheses which are then discussed and tested against the evidence. Any hypothesis which is not supported by the evidence should be eliminated; it is then important to clearly state the reasons why a particular hypothesis was rejected. When a hypothesis is not based on fact but is an expression of opinion, this should be clearly indicated. As well, the justification for sustaining the validity of a hypothesis should be stated and reference should be made to the supporting evidence. Contradictory evidence must be dealt with openly and effectively. Cause-related conditions and events should be identified and discussed. The discussion in the analysis should support the findings and the immediate and systemic causes of the accident”

The ATSB have failed to state why fatigue was not considered as the cause of the errors made by the flight crew when contemporary research on fatigue states clearly that it affects decision making and delays in decision making. Fatigue has been casually dismissed by the ATSB. It is as though there is no flight crew that survived to be interviewed.

The justification of the ATSB position in its analysis on the pilots ATPL syllabus which he did in the early 1990's, is there because the ATSB know that the CP and PNR training and ongoing surveillance on these aspects was not conducted. This lack of training and on-going supervision, or contradictory evidence, is dismissed by the ATSB by suggesting that the operator was not required to record this training because it was consistent with the operations manual procedure not to do so. This is outcome bias.

The supporting evidence of the ATPL syllabus is weak and the analysis is poor. It is similar to saying that a police officer who did target practice at recruit training 14 years prior and never doing any assessments for nearly 14 years, still should have shot a weapon and hit the target every time.

Currency and recency in aviation is crucial. These skills like any skill, is perishable if not used frequently. To fall on the ATPL syllabus argument is weak and shows a significant absence of evidence in their argument. This is more outcome bias.

**“Manual of Aircraft Accident and Incident Investigation
Appendix 1 to Chapter 1**

6.13 FORMAT AND CONTENT OF THE FINAL REPORT

“2.3 Also, discuss and analyse any issue that came to light during the investigation which was identified as a safety deficiency, although such issue may not have contributed to the accident.”

Largely ignored by the ATSB. There is a dearth of information in the CASA Special Audit.

**“Manual of Aircraft Accident and Incident Investigation
Appendix 1 to Chapter 1**

6.14 FORMAT AND CONTENT OF THE FINAL REPORT

3. CONCLUSIONS

This part should list the findings and the causes established in the investigation. The conclusions are drawn from the analysis. However, it is essential to maintain the same degree of certainty in a conclusion as was established in the analysis. For example, if the discussion in the analysis indicates that an event or circumstance was likely, then the finding should contain the same qualifier (likely)”.

The conclusions are not justified by the analysis. In the case of the wet drill assisting in the survival of the crew and occupants, It would have assisted if it had been done at all. Clearly, this was not attributed to their training, it was more likely luck.

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Appendix 1 to Chapter 1

6.15 FORMAT AND CONTENT OF THE FINAL REPORT

3.1 Findings

3.1.1 The findings are statements of all significant conditions, events or circumstances in the accident sequence. The findings are significant steps in the accident sequence, but they are not always causal or indicate deficiencies. Some findings point out the conditions that pre-existed the accident sequence, but they are usually essential to the understanding of the occurrence. The findings should be listed in a logical sequence, usually in a chronological order.”

“Contributing safety factors

1. • The pilot in command did not plan the flight in accordance with the existing regulatory and operator requirements, precluding a full understanding and management of the potential hazards affecting the flight”.

.

Using the ATSB analysis course guidelines for formation of safety factors, they use the following algorithm:

Existence + Influence = Contributing Safety Factor

Examine factor 1

Yes + yes = Contributing Safety Factor

“2 • The flight crew did not source the most recent Norfolk Island Airport forecast, or seek and apply other relevant weather and other information at the most relevant stage of the flight to fully inform their decision of whether to continue the flight to the island, or to divert to another destination”

Examine factor 2

No + no = Not a Contributing Safety Factor.

In the test for existence, the operators’ manual did not have any guidance for in-flight weather updates or when they should be conducted. The Australian AIP only requires an Alternate aerodrome for forecasts, not reports or observations. (AIP ENR 73.2.12)

The Australian AIP states in GEN 3.3-4 (dated 12 March 2009)

“2.4 In-flight information

2.4.1 The in-flight information services are structured to support the responsibility of pilots to obtain information in-flight on which to base operational decisions relating to the continuation or diversion of a flight. The service consists of three elements:

a. ATC initiated FIS

- b. Automatic Broadcasting Services; and
- c. An On-Request Service

2.5 ATC Initiated Flight Information Service

- a. Meteorological conditions and the existence of non-routine MET Products “

(A TAF is routine, an Amended TAF is non-routine when it is issued inside of the 6 hour TAF period. A METAR is routine every half hour, and a SPECI is not routine).

The flight crew had a valid forecast. The pilots TAFS were valid for Nadi and NOTAMS. The pilot requested updated reports and was given the wrong weather, and it was superseded by two further reports. When the Fiji ATC finished their transmission with the SPECI, it was approximately nine seconds after 0803 ticked over.

Pilots do not ask for amended TAFS every 5 mins on the radio, and as the aircraft was non-RVSM, Fiji do not give updated weather (see CASA Special Audit). The AIP only requires a pilot to hold an Alternate on a forecast, not an observation or report.

Extract from the NZ AIP

“2.2 Auckland Oceanic FIR

2.2.1 Airways provides ATS (**definition in 3.1.1**) throughout the Auckland Oceanic FIR (NZZO), **except** in the Cook, McMurdo, Samoa, and Tonga sectors **and at Norfolk Island.**

Norfolk Island

2.2.9 Norfolk Island is contained within the Auckland Oceanic FIR and administered by Australia.

2.2.10 For Norfolk Island MBZ procedures refer to the Australian AIP and use Norfolk Island aerodrome QNH.

3.1 Services Provided

3.1.1 The ATS provided are:

(a) Air Traffic Control (ATC) services, to prevent collisions and maintain an orderly flow of traffic, to:

- (i) IFR flights in Class A, C, and D airspace;
- (ii) VFR flights in Class C and D airspace;
- (iii) aerodrome traffic at controlled aerodromes.

(b) Area Flight Information Services (FIS), to give advice and information useful for the safe and efficient conduct of flights.

(c) Aerodrome Flight Information Services (AFIS) to aircraft operating on or in the vicinity of an aerodrome at which a Flight Service Station is in operation.

(d) Alerting services to all flights that have filed a flight plan and to all flights known to ATS to initiate and/or assist in search and rescue action.

3.3 Area Flight Information Service (FIS)

3.3.1 FIS will be provided whenever practicable to all aircraft that are known to be affected by the information.

3.3.2 FIS is provided as follows:

- (a) IFR flights: by the relevant ATS unit.
- (b) VFR flights in Class C and D airspace: by the relevant ATC unit.
- (c) VFR flights in Class G airspace: by the relevant FIS sector.

3.3.4 **For aircraft in flight, flight information is normally confined to information concerning the route being flown up to and including the next attended aerodrome.** This includes available information regarding nominated alternate aerodromes and unattended aerodromes enroute at which a landing is planned.

3.3.5 **FIS does not diminish the responsibilities normally vested in the pilot of an aircraft,** including that for making a final decision regarding any suggested alteration to flight plan.

3.3.6 Where ATC units provide both FIS and ATC service, the provision of ATC service will take precedence over the provision of FIS whenever the provision of ATC service so requires.

3.3.7 FIS **will include** the provision of available and relevant information concerning:

- (a) SIGMET;
- (b) weather conditions reported or forecast, at departure, destination, and alternative aerodromes;**
- (c) changes in the serviceability of navigation aids;
- (d) changes in the condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice, or water;
- (e) unmanned free balloons;
- (f) pre-eruption volcanic activity, volcanic eruptions, and volcanic ash clouds;
- (g) release into the atmosphere of radioactive materials or toxic chemicals;
- (h) traffic to aircraft likely to be affected; and
- (i) other activities likely to affect safety”.

Although Auckland Oceanic FIS is not required to provide air traffic services (ATS) at Norfolk Island, they were required to pass on weather IAW 3.3.7 (b), 3.3.4, & 3.1 (b) of the New Zealand AIP. This is not mentioned in the ATSB report and is indicative of more “outcome bias”.

3 • The flight crew’s delayed awareness of the deteriorating weather at Norfolk Island combined with incomplete flight planning to influence the decision to continue to the island, rather than divert to a suitable alternate

Examine factor 3

This is a combination of factors 1 & 2

“Other safety factors

4 • The available guidance on fuel planning and on seeking and applying en route weather updates was too general and increased the risk of inconsistent in-flight fuel management and decisions to divert. [Minor safety issue]

Existence + Importance= Safety Factor

Examine factor 4

Yes + No = Not a safety factor.

This should be a contributing safety factor. It existed and influenced the outcome. As detailed in this report, the AIP ENR 73.2.12 is not being amended by CASA’s response.

5• Given the forecast in-flight weather, aircraft performance and regulatory requirements, the flight crew departed Apia with less fuel than required for the flight in case of one engine inoperative or depressurised operations

Examine factor 5

Yes + No= Not a safety factor.

The test of importance is has the safety factor occurred or existed before?

The aircraft did not suffer an engine failure or depressurisation. The extra fuel carried would have only prolonged the ditching by 10 mins or so.

6• The flight crew’s advice to Norfolk Island Unicom of the intention to ditch did not include the intended location, resulting in the rescue services initially proceeding to an incorrect search datum and potentially delaying the recovery of any survivors

Examine factor 6

Yes + yes= Safety Factor

7• The operator’s procedures and flight planning guidance managed risk consistent with regulatory provisions but did not effectively minimise the risks associated with aeromedical operations to remote islands. [Minor safety issue]”

Examine factor 7

No + yes= Not a safety factor

Should be a Contributing Safety Factor, as it did not meet the regulations and influenced the outcome

The operators’ procedures and flight planning did not manage risk consistent with the regulations. They were in breach. See CASA Special Audit.

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Appendix 2 to Chapter 1

6.16 REPORT WRITING CONVENTIONS

2. EDITORIAL STANDARDS

2.1 Convey an attitude of impartiality and write objectively “

Impartiality appears to be favoured for CASA and the operator, definitely not the flight crew.

“2.1.1 The report should not favour any party involved with the accident, e.g. the pilot, the operator, the aircraft manufacturer or special interest groups, such as advocates for noise abatement, nor should it reflect prejudice against any party.”

The report favours CASA, ATC and the operator.

“2.2 Clarity

2.2.8 The findings and statements in the report must be unambiguous and subject to only one interpretation.”

“Operational oversight relies inter alia on procedures that ensure compliance with an operator’s procedures. In this instance, there was significant variation in pre-flight planning procedures by flight crews that would have made it more difficult for the operator to oversee the consistent conduct of flights. Although not required by the operator’s procedures, closer review of flight documentation and how it was being applied would have increased the likelihood that inconsistent interpretation and application Parts A and B of the operations manual concerning fuel management would have been identified.”

“The inconsistent interpretation and application of the regulatory and other guidance by a number of pilots, ATPL trainees and operators that were involved in similar long range operations was consistent with the general nature of that guidance. Any inconsistent interpretation and application of the intent of that guidance by pilots increases the risk of incorrect methods being used when deciding to divert or to continue to an unsuitable destination. In order for pilots to more consistently interpret and apply the intent of the existing regulatory and other guidance, particularly in the case of flight to a remote island, such operations would benefit from more specific guidance.”

Here the ATSB say a lot without actually saying it. The last paragraph quoted above sounds like the famous speech given by Donald Rumsfeld:

“There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know”

How is this last paragraph unambiguous and subject to one interpretation?

2.3 Conciseness

2.3.1 Long sentences might make it difficult for the reader to comprehend the point the writer is trying to make. This does not mean that the report should consist entirely of simple sentences. Long sentences are acceptable if understandable. Any sentence which must be re-read to be understood is too long.”

See 2.2.8 Above

“5. TONE OF EXPRESSION

5.1 Blame or liability

5.1.1 Annex 13 states that it is not the purpose of the investigation to apportion blame or liability. Nevertheless, blame or liability might sometimes be inferred from the findings. When such is the case, it is essential that all the causes established be clearly presented in the report. To do otherwise would jeopardize the objective of the investigation which is the prevention of accidents and incidents.

The causes are not clearly presented in the report (CASA's prior and operators' lack of oversight) and this does jeopardize the objective of the investigation to prevent accidents. Major organisational and regulatory deficiencies are totally absent in the final report.

5.2 Contravention of regulations and orders

5.2.1 Deviations from the accepted norms of compliance with regulations and procedures should be clearly identified when relevant to the accident. The nature of the regulation and the extent of the deviation should be described in sufficient detail in order to explain the safety implications of the deviation. The analysis should explain the reasons why the deviation created a hazard.

Any deviations from operators' procedures and regulations are clearly identified by the ATSB against the pilot however, no breaches of the Act and of the Regulations are identified at all of the operator.

5.2.2 For a contravention to be included as a cause, it should be clear that complying with the regulation or procedure could have prevented the accident or lessened the consequences of the accident.

5• Given the forecast in-flight weather, aircraft performance and regulatory requirements, the flight crew departed Apia with less fuel than required for the flight in case of one engine inoperative or depressurised operations

According to the finding of this safety factor, and as outline in 5.2.2, how would have carriage of the depressurised fuel prevented or lessened the consequences of the accident?

7.0 Analysis

I include the following research quotes for the committees' inquiry (my bold):

*"The stage for an accidental course of events very likely is prepared through time by the normal efforts of many actors in their respective daily work context, responding to the standing request to be more productive and less costly. Ultimately, a quite normal variation in somebody's behaviour can then release an accident. Had this 'root cause' been avoided by some additional safety measure, the accident would very likely be released by another cause at another point in time. **In other words, an explanation of the accident in terms of events, acts, and errors is not very useful for design of improved systems**"²*

In this accident, the pilot is singled out as the attributor, but clearly the evidence the ATSB and CASA did not want published indicates otherwise.

I also include these quotations on organisational accidents which are relevant to this accident:

² Rasmussen, J. (1997). "Risk Management in a Dynamic Society: A Modelling Problem." Safety Science 27(2/3): 183-213.

“The choice to create a context-based approach for a human and organization hazard analysis was inspired by the work of skilled accident analyzers. High quality accident investigations do more than identify inadequate control actions made by the operator. The writers of these reports go beyond blame of individuals and organizations, and analyze the context in which decisions and actions were made. Analysis of the context points engineers to flaws in the system that can be changed to prevent future accidents. Furthermore, system changes can prevent entire classes of accidents from occurring, rather than just the reoccurrence of the accident under investigation.”

“increased risky decisions lead to short-term gains and increasing risk tolerance. Furthermore, as in many complex systems, decisions-makers are not aware of leading indicators of risk, so their risk tolerance increases until an accident occurs. Safety groups act as counter-forces to increasing risk tolerances”

“Often times, the benefits of risk-taking are experienced by a decision-maker in the short term while the consequences to other stakeholders are experienced or not discovered (or measured) for years”³

This report does not go beyond the attribution of the accident to the pilot. According to the research above, this report demonstrates that it is not high quality. No context of the decisions or actions was made by the ATSB, at all. The movement of the operator from the standards of its own procedures, various failings of regulatory risk controls and the rewards of commercial benefits operating an aircraft which was not capable of the operation is obvious.

The safety actions in this report are only “intent to change” the guidance material in the CAAP and the same rhetoric about regulatory reform. I have demonstrated the same type of statements going back over 11 years. The regulations and the AIP are not being amended. This demonstrates that the accident can happen again across the entire aviation safety system. These safety actions are operator specific and not industry specific.

The 2014 proposed change from Aerial Work for air ambulance operations is a visible sign of regulatory incompetence. The industry has had enough of the same personnel in CASA who have survived under various Directors placing barriers in their way to keep their own agendas’ and who have wilfully obstructed safety improvements by blatant mistruths, and who are in my opinion indirectly attributable to this accident sequence.

The public response by CASA which indicated the post accident Special Audit had no relationship or links to the accident sequence is now very problematic for aviation safety and CASA.

Any future regulatory action by CASA against an operator with similar classes of regulatory failings or breaches of s28 of the Civil Aviation Act, puts those operators’ in a position to legally argue that CASA took no action against an operator nor did they believe those failings or breaches caused an accident sequence.

At one time in the not so distant past, the ATSB would have been regarded as one of the pre-eminent investigative bodies.

All the improvements we have seen since the 70’s and 80’s have been completely wiped away with the head-kicking of the flight crew by the ATSB and CASA in this report.

³ *Accident analysis and hazard analysis for human and organizational factors: Margaret Stringfellow, MIT 2010 doctoral thesis*

Almost no organisational aspects were covered, and any prior criticisms were removed from the drafts. CASA do not even appear in this complex organisation accident. By whom and at who's direction?

The 1970's and 80's approach to safety was all about pilot error or mechanical error. Barely any organisational issues were raised or investigated. The work of Professor James Reason, Professor Bob Helmreich and others as well as the lessons of many aviation and non aviation organisational accidents, appear to have been almost wiped from the ATSB corporate memory with this report.

It appears the head-kicking approach to aviation safety is back and in full force.

I would describe the capital R regulator as a capital R for revenge. Just Culture is dust in the past with this new direction. Can the committee require CASA to detail how many people they have prosecuted since 2009 who submitted incident reports to the ATSB under the TSI Act with CASA using that ATSB information as the basis for their evidence gathering which has been shared?

Is the industry aware that the ATSB have been supplying Air Safety Incident Reports to CASA for over the last 12 months with the aircraft registration, date, time and location and summary of the incident?

The ATSB may just as well be the media unit for CASA.

The aviation industry is sick of hearing the same rhetoric and motherhood statements about safety being the number one priority of the government. Here we have our aviation safety agencies involved in behaviour for a specific outcome. Any omission or coercion is an offence against the TSI Act and an investigation needs to identify who.

Just a single example of this reports omissions is how can serious defects with life jackets not be a Safety Alert or Safety Action or Safety Recommendation? Where is the industry learning for these types of life jackets and the manufacturers' advice on maintenance? Was servicing even performed?

The ATSB and CASA have an extremely serious credibility problem. The industry is suffering from Safety Conference Spin fatigue. What the industry needs is action not more speeches and spin at conferences about "worrying trends". How about these organisations do their primary function under their respective Acts and not spin blatant un-truths on the industry?

We have the quite bizarre situation of zero tolerance aviation security legislation at airports taking nail files and knitting needles off children and grandmothers, yet the operational safety oversight of the aircraft they can board allows the aircraft operators' to not have Regulated Take-Off Weight charts used by the flight crew, pilots operating at the equivalent fatigue levels of 0.05%, aircraft operating at separation distances that are a threat to aviation safety in RVSM airspace they are not approved to be in and safety devices such as life jackets that don't work?

How did we get to this?

8.0 Conclusion

Having been involved in aviation since 1983, I cannot recall a situation where our investigation body has deliberately omitted safety critical information and where a report has used biased investigative methods to single out individual attribution on a pilot. It flies in the face of modern research and organisational accident investigation.

The reason there were not six fatalities was because the pilot had a waterproof diode torch.

That is just luck.

The ATSB's comments' that their rescue was most fortuitous is perhaps the most accurate analysis in the entire report. It was also most fortuitous that CASA did not have these regulatory failings in front of a coroner.

The CASA Special Audit is evidence based, appears thorough and is very comprehensive and is indicative of the high quality capabilities of the CASA operational staff.

The committee needs to know why CASA's previous oversight audits of the operator failed to identify these shortcomings earlier.

I told anyone who I worked with at CASA that they should write every report as though it was going to be read in a court or by a coroner.

I was told laughingly by one CASA supervisor "you worry too much".

I think they should think very carefully about that torch.

If I were to advise the Minister, it would be to ignore the information presented to this inquiry at the governments' peril.

I have been listening to other highly seasoned aviation safety experts who tell me and others' privately how backwards our aviation safety system has headed, but who will not put their hands up to be counted.

It is time the industry stood up to be counted. We are not going to believe the spin. We need straight talking with safety.

Aviation safety in this country is just a statement not a reality. We are running on luck Minister. If you believe the spin of your advisors, you are being ill-advised. Take it from people out in the field.

We cannot afford to go back to the 70's style of regulation and investigation.

We are told by government if we have done nothing wrong we have nothing to fear. Why is it then that our government chose to keep this operators safety breaches a secret?

Those who refuse an Inquiry are those with the most to fear.

9.0 Recommendations

- 1. Institute a Commission of Inquiry into the ATSB investigation of the accident involving VH-NGA at Norfolk Island in 2009 and establish who coerced the ATSB investigation and who directed the deliberate omission of safety critical information. Investigate an amendment of the Transport Safety Act to amongst other things to make draft reports and directly interested parties submissions public with the same provisions of protection.**
- 2. Institute a Commission of Inquiry into the CASA oversight of the aviation industry over the last decade with a terms of reference to include the Model Litigate responsibilities of CASA, the internal Complaints Commissioner process, the staff turnover of CASA, and its abject failure to inform past Directors of Safety of regulatory reform processes and its reluctance to regulate air operators fairly and transparently. Investigate why the**

confidence of the travelling public is maintained by keeping critical safety information secret from the travelling public. Examine the feasibility of an external permanent standing Corruption Commission much like the ICAC process which is independent to CASA and ATSB and their powers under their Acts, who has the power to direct CASA and the ATSB to be accountable and transparent for their actions and/or findings.

- 3. Recommendation 1 could form part of the other Commission of Inquiry.**
- 4. Recommend the ATSB report AO-2009-072 be withdrawn and re-investigated as per ICAO Annex 13 (5.13).**
- 5. Change aviation safety legislation from being treated as a national secret.**

I thank the committee for receiving my submission.

Yours sincerely,

Bryan Aherne