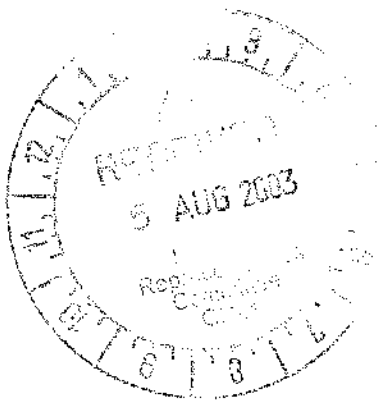

5 August 03

Matt Carroll

04 August 2003

To: Committee Secretary
Select Committee on the Recent Australian Bushfires
Parliament House
CANBERRA ACT 2600
Via Email **bushfires.reps@aph.gov.au**

Submission No.460

Cc: The Hon. Wilson Tuckey MP
Minister for Regional Services, Territories and Local Government
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PROPOSED FIXED WING AIRBORNE FIRE FIGHTING STRATEGY

I politely request the Select Committee on the Recent Australian Bushfires please accept this late submission for consideration.

Summary of Main Points

- This submission proposes to improve Australia's bushfire fighting capability by introducing the concept of a fixed wing aerial firefighting capability.
- It briefly explains why a fixed wing aerial firefighting capability would potentially bring a significant improvement to Australia's firefighting capability at a lower cost than existing arrangements.
- Other benefits that exist utilizing a fixed wing aerial firefighting capability are discussed.
- It concludes by proposing the next step to take to justify this proposal.

Terms of Reference

This submission addresses the following Terms of Reference for the Select Committee on the Recent Australian Bushfires:

- Ref c: the adequacy and economic and environmental impact of hazard reduction and other strategies for bushfire prevention, suppression and control.
- Ref e: any alternative or developmental bushfire mitigation and prevention approaches, and the appropriate direction of research into mitigation.
- Ref g: the adequacy of current response arrangements for firefighting.

- Ref h: the adequacy of deployment of firefighting resources, including an examination of the efficiency and effectiveness of resource sharing between agencies and jurisdictions.

Introduction

During the latter part of the 2003 summer season in Eastern Australia, a number of catastrophic bushfires in the ACT, NSW and Northern Victoria occurred. The nature of the fires that impacted the ACT on 18 Jan 03 were particularly ferocious and demonstrated the need for a fast, flexible and responsive approach to complement existing fire-fighting capabilities. This submission proposes a strategy that will enable similar firestorms to be effectively suppressed using a resource that can be rapidly deployed anywhere on the Eastern seaboard to augment overstretched local fire-fighting units.

Scope

This submission proposes a more effective fire fighting strategy that is cost effective and provides a rapid response capability to Australia's firefighting units. It proposes the investigation of the costs and capabilities of a fixed wing aerial firefighting capability. To aid in this submission, a particular fixed wing aerial firefighting option is used to illustrate the unique benefits of utilizing this type of capability. There is no particular preference to the specific aircraft type discussed in this submission; - its individual capabilities are discussed to highlight the potential benefits of adapting a fixed wing aerial firefighting capability to promote consideration of the broader concept of a fixed wing aerial firefighting strategy within Australia.

Brief Summary of Canadair 415 Aircraft Capabilities

For the purposes of illustrating the potential of a fixed wing aerial firefighting option, the following data is provided on the purpose built Canadair 415 aircraft. This submission does not seek to promote it as a preferred option, rather to highlight the potential benefits of a fixed wing aerial fire fighting option. It is emphasized that a number of other fixed wing options exist, some already utilized in Australia (or have the potential to be utilized), as an Initial Attack vehicle, and would be subject to the analysis this submission recommends.

The Canadair 415 is the only aircraft designed and built specifically to fight fires, and is extensively used very successfully in Canada and the USA. It is ideal to provide an initial attack on an fire that is getting out of control by getting to the fire quickly and repeatedly dropping large amounts of water or suppressing foam.

Each aircraft is capable of delivering 75,000 litres an hour to a fire front about 20 kilometres away. It collects water by skimming along a suitable water source. It only requires approximately 400m to fill up, can scoop water sites as shallow as two metres, go around river bends and scoop in rough ocean conditions.

Being a twin turbo prop fixed wing aircraft, the Canadair 415 offers significant savings in operating costs and versatility in comparison to rotary wing aircraft.

Other Uses

The Canadair 415 is a multi role aircraft and can be configured to conduct search and rescue operations, transport operations, marine oil spill recovery and coastal patrols, which can be undertaken during the "off-season" if needed, making it far more versatile than other aerial options such as Sikorsky helitankers. Furthermore, the aircraft resources could be shared between Australia and Canada, as each country's respective bushfire season complements eachother, further reducing annual running costs.

Brief Comparison to Sikorsky 'Elvis and Georgia Peach' Leased Helitankers

Compared to a Sikorsky Helitanker, in general a fixed wing aircraft is far more responsive (eg from task notification to actual fire suppression, it takes approximately 4-5 hours for a Sikorsky helitanker to respond, compared to approximately 45-60 minutes for a Canadair 415 aircraft under similar conditions), has far less operating costs and can carry a greater payload of water.
It is understood that the current Sikorsky arrangement involves the Commonwealth and NSW government sharing the cost of leasing the helitankers. I suggest that it would be far cheaper to purchase/lease a fixed wing aerial firefighting vechicle, which would also provide a far more effective capability.

Suggested Concept of Operations

The following scenario is proposed as "food for thought' for a concept of operations.

The purchase/lease of five Canadair 415 aircraft; - one stationed at Canberra International Airport and maintained by Qantas Defence Services (who are already providing maintenance and engineering support to another Bombardier (Canadair) aircraft type (Challenger 604) on behalf of the Department of Defence), two stationed at Tullamarine Airport, and two stationed at Mascot Airport. In a situation similar to that experienced in the ACT region in January 2003, where a timely and highly effective response was required, all available aircraft could converge on, and suppress the fire danger, in a quick and far more effective manner, leaving ground crews to 'mop-up', likely minimizing the extent of deaths and property loss incurred. With the benefit of hindsight, it appears that any number of ground crews would have had little effect on the recent Canberra fires. The concept of an Initial Attack to suppress a brewing fire hazard aligns with findings in the McLeod inquiry into the recent ACT bushfires.

Other Fixed Wing Firefighting Aircraft

Numerous other potential fixed wing aerial fire fighting options exist to my knowledge and should be included in the analysis proposed below, as for example the firefighting aircraft offered at Masling Aviation (ACT), and as described in Submission 84 - quantity three Thrash and two Air Tractor 802 aircraft.

Recommendation to Committee

Due to their unique characteristics, it is recommended the option of utilizing fixed wing aerial fire fighting options be explored, with the goal of identifying potentially cheaper and more effective firefighting strategies for Australia. This could be achieved by conducting a cost-benefit analysis, or similar study, to evaluate the consequences and options of integrating a fixed wing aerial firefighting capability into Australia's overall firefighting strategy. A number of aspects should be considered in such an analysis, including obvious issues such as aircraft type fire suppression capability, reconnaissance capability, logistic support and response times. Additionally, further consideration should be given to the potential benefits of utilizing a multi-role fixed wing aircraft such in "off season" activities. This could include, search and rescue operations, coastal patrol, agriculture tasks or general-purpose cargo movement. Other aspects such as sharing the prime assets to reduce costs, for example, between Australian States and/or between other countries that experience a similar fire threat (eg Canada) deserve consideration.

Conclusion

The available evidence indicates that a fixed wing aerial firefighting capability has a place in Australia's bush fire suppression strategy. Exactly where, and in what form, is to be determined. Such a capability would likely improve the effectiveness to suppress bushfires before they reached firestorm status, similar to that experienced in Canberra in January 2003, as well as provide a rapid

response to Australia's unique bushfire circumstances. As such, in my view, a fixed wing aerial firefighting option should be given serious consideration by the Committee.

Finally, I would like to highlight one of six Recommendations from a report from Ian Dicker investigating the *practices and procedures of fire services and industry in the United States of America and Canada* dated 2001, that was supported by the NSW Rural Fire Service:

> "The safety and effectiveness identified within the practices employed by the Canadian land management agencies is very impressive and considered valid for Australian conditions. The recommendations for consideration in this section are numerous , including:
>
> - Using air attack whose performance is suited to the fire bombing aircraft. This may mean only using fixed wing aircraft for the role of air attack."

Yours Sincerely,

Matt Carroll
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