Submission No.482

Supplementary submission

Committee Secretary:
House Select Committee on recent Australian Bushfires

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Contents

Introduction

This supplementary submission has been prepared to outline very serious safety concerns that have been suppressed with the design and construction of CFA tankers. I believe this has the potential to continue to threaten the lives of thousands of volunteer rural fire fighters. I have been able to set fire to the back passenger compartment of the Licola tanker with a sheet of burning toilet paper. This is the area in firefighting vehicles that we have been told offers significant protection if we are trapped by a wildfire. I believe it is inevitable there will be more Linton type deaths if these CFA tanker safety concerns are not addressed.

CFA tanker safety

Some time ago I became aware of very serious safety concerns with CFA fire tankers from sections of a report of 11 October 1999, from Mr David R. Packham, Consultant to State Coronial Services, Victoria, (and CSIRO Bushfire Scientist of over 40 years standing with an Order of Australia Medal). The report is titled: "A Review of Factors with the Linton Fire Entrapment, Victoria. 2 Dec 1998." I understand this document has been suppressed by the State Coroner following argument from the CFA and DNRE Counsel.

I quote from page 44 of the Packham report (this is the same quote I read out from a letter at the hearing in Buchan July 29, 2003):

"45. Tanker protection systems
There is considerable literature and interest in tanker protection systems for burn overs[92]. A visit was made to inspect the NSW tanker protections and it is hard to escape the conclusion that the CFA tankers are inadequate in their safety features.

Heat shields that rely upon the thermal properties of polyester resins (plastic and fibreglass) are probably safe up to a radiant impact of about 8 kilowatts per square meter. Previous studies of radiation in fires suggest that design safety thermal loads of 100 kilowatts per square meter are required[93]. Recent US experiments[94] are suggesting loads of up to 170 kilowatts per square meter. An estimate made in this report[95] suggest loads of 28 kilowatts per square metre for this fire.

Under these loads the fibreglass shields are not only ineffective but also dangerous, as they now become a very effective fuel. Empty fibreglass tanks add to the risk. The plastic content of the shields and tankers make up a secondary fuel load that once ignited would insure little survivability for any crew who escaped the initial radiation from the wild fire.

Unprotected tyres[96] without cooling sprays also greatly decrease the survivability of the current design of tankers.

Crew protection in the bus shelter behind the cab is most unlikely to be effective in a severe fire.

Reliance on hand held sprays for radiation and cooling protection is primitive and uncertain.

Simple woollen blankets are helpful but heat reflective properties are required.

The inability to put up heat screens to protect window glass is also a weakness in current tanker design."

The Recommendations

Page 51

"43 Fire units to have their heat shields immediately abandon fibreglass heat shields immediately and replace them with aluminium or other suitable metal and to have a program of replacing fibreglass water tanks within the next three years. Fire tankers to have a water spray system with at least 200 litre of dedicated water fitted within the next three years. Water sprays to protect tyres to be installed immediately. Heat reflective curtains and the removal of toxic plastic from units to be investigated immediately.

44 Improved woollen blankets with reflective properties to be investigated, developed and provided within one year. The use of balaclavas as now issued in NSW be adopted immediately.

45 Large tankers not to be used in forest areas off formed roads and the CFA to consider the provision of faster, lighter tankers to improve their operating range and speed of response in first attack."

I have taped David Packham being interviewed on Radio 3GG several times and spoke to him personally, he is one of the most credible people on bushfires I am aware of. He

did not supply any of the above material and it would appear he has been legally gagged by the Victorian State Coroner from warning about what happened at Linton.

Along with other Brigade members we have burnt a sheet of fibre glass (much of our tanker is made from this) and have been utterly horrified with the flammability. When this has been preheated it is even worse and burns very hot and fiercely. I suspect even Masonite or similar, and hard cardboard would preform better as a heat shield (I am definitely not recommending these materials).

The back "crew protection area" had "heat shielding" made from thin fibre glass. I have been able to ignite this with one sheet of burning toilet paper. If this survival area was preheated in a bushfire situation, or even possibly a grass fire, from our tests on preheated fibre glass once it ignites, a raging inferno would be likely within seconds. From what I have seen and learnt about the safety of CFA tankers, I cannot see evidence that adequate safety testing for a burn over in a wildfire situation has been done on the back crew protection area and I would suggest most of the rest of the vehicle. The Learning Manual for Basic fire fighting (Minimum Skills) that I have, has the following quote:
"Tankers have a crew protection area in which personnel may take shelter from an approaching fire. These may consist of the vehicles cabin and/or specially constructed heat shielding or roll-over protection component on the back of the vehicle."

I have noted the disturbing comments from the surviving Linton fire fighters quoted in the media that the CFA tanker was burning even during the short time the wild fire was going through.

I have studied media photographs of Linton (especially page 4, The Age, Sat Jan 12, 2002) and noted the burnt out CFA tanker from a fire with an intensity such that it left the leaf canopy intact, even on small trees. Other reports from individuals would suggest that the hottest part of the fire was the fire truck itself burning, I suspect this is so.

It looks to me that the CFA fire fighters who perished on the truck at Linton were incinerated not from the wild fire, but the design and construction of the CFA fire truck with over a tonne of plastics, (fibre glass resin ect.) which has not been rectified and I believe this flammability continues to seriously threaten the lives of many rural volunteer Fire Fighters.

It is most concerning to me as a CFA Brigade Captain, I could be up for "Contempt Of Court" for passing this suppressed report on to my Brigade members and "Industrial Manslaughter" for not passing on a serious life threatening safety concern I am aware of that is putting them at risk.

In the past, before I became aware of these concerns, both myself and other Brigade members placed a blind unquestioning trust in the CFA to supply safe equipment and advise us of any safety concerns with this equipment. The Learning Manual for Basic fire fighting (Minimum Skills) that I have, has the following quote:
"Firefighting vehicles offer significant protection if you are trapped by a wildfire. The vehicle can provide protection from the flames and radiant heat as the safety features installed will help to maximise your safety."
The CFA Training Officers conducting minimum skills training I have worked with, I believe could be described as competent, caring and highly motivated individuals. I suspect it is most unlikely they are aware of what has been suppressed from the Linton inquiry and the dangerous nature of the training they are teaching.

A safety inspection of our Licola fire truck on 30-7-2003, by myself and Lieutenant Winter revealed some frightening, and I would suggest life threatening safety concerns further to those listed above. So serious are these concerns it is hard to comprehend how safety for crew protection from a fire were taken into consideration when tankers like our Licola unit was designed and built.

Our inspection revealed further serious safety concerns:

(1) The synthetic fuel lines and plastic fuel filter essential for the pump when in survival mode, are most vulnerable from a fire fuelled by the coil of rubber hose on the back. In about 1968, the then Licola tanker had the back hoses burnt off from a simple grass fire.

(2) There are serious risks to synthetic fuel lines being burnt through that carry diesel to the pump tank. This has the potential to fuel a fire around the pump that would likely shut it down in a survival situation.

(3) A rubber hose that carries water to the personnel protection fog nozzles in the back passes along the chassis beside the unprotected back tyres. This would be at serious risk from being burnt through from the tyres catching fire as happened to a tanker at the Maoris Brothers Chalet on Jan 2 1998 near Licola.

(4) The instructions for the use of fog nozzles for personnel protection in the back passenger compartment left a very vulnerable pump exposed that is necessary for survival and heat shielded by combustible fibre glass.

(5) An inspection of the cabin revealed a mass of plastic that could ignite and produce an abundance of toxic fumes if the windows caved in from flame contact. It is understood windows on tankers have given out during the recent Alpine National Park fires.

I think it is most unlikely we have found anything like all the safety concerns on our tanker and I think there have been so many safety short-cuts that it may well not be

economically viable to rectify these tankers and cheaper to scrap the lot and start from fresh.

It is abundantly clear that the CFA has been aware of the safety concerns posed by the construction of their tankers with fibre glass since they argued for the suppression of the Packham Report at the Linton Coronial inquiry. I have reason to believe that they may also have known of these concerns at least a decade before the Linton tragedy. Fibreglass is used in aircraft construction and the flammability of polyester resins and their total unsuitability for heat shielding would be well known. With all of this information the CFA continued to produce, and operate tankers with a ridiculous level of highly combustible materials while not warning volunteers using them that they were essentially highly flammable mobile coffins. This is even after three deaths of volunteer fire fighters on the Geelong West tanker at Linton on Dec 2, 1998. The following is a quote from the Herald Sun Jan 12, 2002:
The CFA strongly denied it was to blame for the tragedy, but vowed to fix any problems with its training and safety procedures.

"At the time of the tragedy, the CFA made a commitment to the families of those who died: that we would learn from this tragedy, make sure the necessary improvements were made to help prevent this ever happening again," CFA chairman Len Foster said.

On June 20 this year during an interview on Radio 3GG Minister Andre Haermeyer said:
"The Coroner has the right to intervene in any fire that he sees fit and investigate what in fact occurred and he has been kept very closely informed by the Emergency Services Commissioner right throughout the fires this summer and is keeping a very close eye on the inquiry that is taking place by the Emergency Services Commissioner. If the Coroner deems fit at any stage to intervene - he's entitled to do so, but by all accounts he seems pretty happy with the way this inquiry is being conducted and has had no major issues in the way the fires or the emergency back in January and February was dealt with."

It is of great concern to know that the Coroner is being informed by the Emergency Services Commissioner, essentially investigating his own performance and the performance of his department with almost none of the accepted criteria for a proper inquiry. The Minister also said that the Federal Inquiry with much of the criteria for a proper public inquiry was *"a political Star Chamber exercise."*

The question has to be asked if the safety concerns for CFA tankers is the reason why they were removed from the Cowangie Brigade before the Big Dessert fire, Dec 2002, entered farmland (this left the Brigade to fight the fire with private appliances and farm utilities with water tanks on the back). As well as this it has to be asked if failure to address truck safety is a reason for any of the cases where CFA tankers did not turn up, or were withdrawn from protecting farms and homes during the 2003 fires.

Localised concerns

The Licola area surrounded by Crown and public land especially the Alpine National Park is more at risk than many other places for the crew to be caught in a wild fire and having to rely on our tanker for protection.

In a perfect year like this for cool burning, nothing has happened around Licola. On June 16, two weeks after it was too late (cold and wet) to do controlled burning, I was contacted for priorities on fuel reduction. This should have happened two and a half months earlier.

Risk reduction in the Wellington Valley of the Alpine National Park has been about zero for years. I have been extinguishing camp fires on total fire ban days, abandoned fires, excessively large fires, unattended fires, fires lit and abandoned against box logs which could smoulder for days and many fires with insufficient clearances to surrounding fine fuels. The fuel levels are so high and the country so steep and rough that an escaping fire could be uncontrollable within minutes to trap hundreds of park users with little hope of escape.

So fearful is our Brigade of the Alpine National Park and especially the Wellington Valley, it is unlikely we could get a crew into the area and if we did it would be at considerable risk to ourselves, unless there were mild conditions. We feared for our safety before becoming aware of the combustibility of our tanker.

Recommendations

There needs to be a "Federal" Royal Commission into all aspects of fire suppression and prevention in rural Victoria and the rest of rural Australia. Particular attention should be paid to the performance of the CFA and the following issues from the Linton Coronial inquiry:

(1) Why the CFA succeeded in suppressing and failing to rectify serious design and construction concerns of CFA tankers and why the CFA continued to put lives at risk from failing to pass these concerns on to volunteer fire fighters after the deaths at Linton.

(2) Why a senior CSIRO bushfire scientist was sidelined after filing an honest report to the Coroner critical of a Government department falling down on the job.

(3) Were farms and homes allowed to burn during the recent fires because CFA top management feared the consequences of the combustible nature of CFA tankers if someone was killed.

(4) What, if any, other crucial documents, that would implicate the CFA or the DNRE further with the Linton deaths, other than the Packham Report, has been suppressed by the State Coroner during the Linton inquiry.

(5) Where does all the money go too for the construction of CFA tankers. The Herald Sun, Friday July 18, 2003 stated the cost of a CFA tanker was from $250,000 to $400,000. Clearly little if any of this money is being spent on safety.

(6) The overall finances of the CFA as there was very serious problems with the National Safety Council for some time before the deficiencies in the organisation were exposed.

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