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VFBV Response to Counsel Assisting's Submission on Systemic Issues – Communications

2009 Bushfires Royal Commission Submission

Volunteer Fire Brigades Victoria makes the following submission to the 2009 Victorian Bushfires Royal Commission, in response to the submissions of Counsel Assisting titled "Systemic Issues – Communications."

2009 VICTORIAN BUSHFIRES ROYAL COMMISSION**Letters Patent issued 16 February 2009**

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**VFBV RESPONSE TO THE SUBMISSION BY COUNSEL ASSISTING
ENTITLED: 'SYSTEMIC ISSUES – COMMUNICATIONS, SUBMISSIONS OF
COUNSEL ASSISTING'****VFBV RESPONSE TO THE SUBMISSION BY COUNSEL ASSISTING
ENTITLED: 'SYSTEMIC ISSUES – COMMUNICATIONS, SUBMISSIONS OF
COUNSEL ASSISTING'****VFBV believes:**

There is no aspect of modern emergency management and operations that is not reliant on a capable and reliable telecommunications system.

The ability of members of the public to report emergencies and provide emergency intelligence to the emergency services, the mobilization and dispatch of responders, the two way transmission of operational intelligence, general command and control of assets during operations and providing the capacity for incident controllers to alert and inform the public response and for local command and control of assets is dependent on a capable and reliable telecommunications system.

The submission of Counsel Assisting on Systemic Issues – Communications is noted by the VFBV.

It is the intention of this response to briefly highlight several key issues arising from that submission. We also wish to submit several further matters for the consideration of the Commission.

The content of this response is based on VFBV members' long held views that the provision of capable and reliable telecommunications systems are fundamental to the safe, efficient and effective deployment of fire fighting and emergency assets in the face of dangerous incidents such as bushfire.

In submitting this response to the Commission, the VFBV notes that 'the issue of radio infrastructure relating to bushfire operations was the subject of examination and recommendation by the Inquiry into the 2002-2003 Victorian Bushfires chaired by Mr Bruce Esplin. The Inquiry noted there were a number of black spots across the state where radio reception from fixed transmitters was marginal or non-existent. It made the following recommendation:

21.31 - That the DSE and CFA work with the Bureau of Emergency Services Telecommunications (Department of Justice) to ensure that rural communication issues are appropriately addressed in the Statewide Integrated Public Safety and Communications Strategy, and that priorities and business cases are agreed for critical issues.

As part of its official response to this report and its recommendations on 14 October 2003, the Victorian Government accepted in principle recommendation 21.31 subject to consideration of a business case for a regional telecommunications strategy.

Despite this official response of the Victorian Government to the recommendations, action remains outstanding.

Radio Blackspots:

At the outset, VFBV notes and supports the recommendation of Counsel Assisting on page 18 of their submission regarding Radio Black Spots:

The CFA as a matter of priority complete the review of its Communications Strategy and undertake a refresh of its Coverage Supplementation Project, as recommended in the Mingara Services report 'Investigation into Communications Issues Relating to Major Fires 2008-2009'

VFBV believes that the long time failure of the CFA to adequately address the issue of radio blackspots in critical areas like the Kangaroo Ground ICC catchment, as noted by Lower Yarra Group Officer Lou Simonis, is unacceptable.

The fact that Volunteers had raised concerns over these blackspots and there was no satisfactory response up to Black Saturday runs counter to good management in a volunteer based emergency service in which the knowledge

and experience of its volunteers should be actively engaged and their concerns listened to and acted upon.

Command vehicles:

Command vehicles with appropriate telecommunications facilities to communicate with strike teams and crews under their control and their ICC, are essential for the conduct of bushfire command and control.

VFBV have already noted in previous submissions that there was a failure to pre-position divisional and sector commanders with communications enabled vehicles for deployment as required at a number of locations on Black Saturday.

Many of the existing command and control vehicles in the CFA fleet are brigade owned vehicles, that is, local volunteer brigades raise their own funds to acquire and fitout such vehicles.

The evidence available to VFBV strongly suggests that CFA should increase the number of command and control vehicles in its fleet with appropriate telecommunications fitout covering radio capacity to deal with the various radio platforms which may be encountered in emergency response, a mobile repeater to increase local area radio capacity for teams at incidents and access to mobile data / wireless internet. It would seem to be appropriate that such vehicles be prepositioned as part of planning and preparation for days of high threat.

Emergency Alerting System:

VFBV members have expressed concern over delays in receiving critical operational messages related to wind changes on Black Saturday via EAS.

Evidence adduced in the Commission has identified that the existing pager system in use on the 7th February suffered from performance deficiencies that delayed the transmission of critical operational information, in particular related to the formation and dispatch of Strike Teams. VFBV understands that through a process of “de-linking” some recipients from the distribution of non-urgent operational and administrative paging, the network capability has been significantly improved. VFBV cautions against this approach as a sole mitigation and improvement strategy on the basis that if the recipients were considered to warrant access to the information in the first instance, then “de-linking” should not occur in the absence of a critical risk and impact analysis.

We note the content of the Counsel Assisting’s submission on the evidence provided to the Commission by Mr Lloyd and Mr Powell and documentary evidence tendered to the Commission on this matter.

We particularly note the content of Counsel Assisting's submission at 5.28 on page 34 of the submission summarizing the EAS message performance statistics against contract standards for CFA on Black Saturday. As an emergency alerting system it appears that EAS performed reasonably well with 93.3% of emergency channel messages being delivered within the 30 second contract standard and the longest delay being 76 seconds.

Clause 5.28 goes on to note that the performance for the non emergency page channel was 26.7% delivered within the 120 second contract standard with the longest delay being 161 minutes and for the administrative channel the statistics were 69.7% within the 5 minute contract standard and the longest being 12 hours.

In its examination of this issue VFBV has been advised that the delays experienced by members in receiving urgent operational information was because they were transmitted on the non emergency or administrative channel instead of the emergency channel. Based on the statistics provided compared to the complaints and observations of members this would seem to be a reasonable explanation for the apparent discrepancy of experience compared to emergency channel EAS statistics.

It of course begs the question as to why what were significant operational messages regarding an imminent wind change was not transmitted on the emergency channel. It would seem that the protocols, or their interpretation on the day, as applied to determining which messages should be transmitted on the emergency channel were the reason for late reception of wind change information by our members. This is clearly an area for major improvement in the management and operation of the system.

The fact that the EAS system was restricted to 512bps baud rate in September 2006 down from its contract capacity to automatically step up to transmission speeds of 1200 bps or 2400 bps in response to increased message volume is noted with concern.

Volunteers were briefed on EAS at various times from the date of the Government signing the contract with VEC in June 2004, during its roll out over the next two years and after final acceptance in 2006. We were repeatedly advised that the system's features incorporated a high level of redundant capacity during extreme activity levels associated with multiple all agency emergency incidents across the state. It was noted in our briefings from CFA and Government that the two primary emergency functions of the EAS were call outs of volunteers and emergency updates and that the contract time for delivery of such messages was 30 seconds. Wind change was repeatedly exemplified as a

matter that would be the subject of emergency update in parallel to warnings transmitted by radio. The relegation of wind change information on Black Saturday to the non emergency and administrative channels of EAS has still not been satisfactorily explained.

VFBV notes the content of clause 5.35 of Counsel Assisting's submission outlining Mr Lloyd's evidence that \$21.5 million had been allocated in the 2009-2010 Victorian budget to "...upgrade the EAS to increase network coverage and reduce message transmission delays during peak events". We further note that Mr Lloyd advised the Commission that the preferred option for achieving this outcome is "to increase the transmission rate of the EAS to 1200 bps, and to put in place additional infrastructure – more transmitter sites – to ensure there is no loss of coverage".

VFBV have received advice that this preferred option will likely not proceed because of the delinking process. Consequently, we remain concerned about the operation of EAS in high intensity circumstances like Black Saturday.

VFBV has over a considerable period of time expressed concern at the finite number of pagers available, ostensibly due to contractual arrangements with the service provider. The ability of a volunteer based fire service to respond to an alarm of fire or other emergency is primarily dependent on being able to contact all available personnel who have the necessary competencies to deal with the incident. Arbitrary barriers to the notification of volunteers that they are required threatens the fundamental attribute of sustainable volunteerism and an ability to balance, work, family and social arrangements that enable the community embedded volunteer fire service to function.

In this context VFBV considers that every operational volunteer should have access to a pager or other efficient technology that ensures they are notified of an emergency without delay not reliance on an open public communication system that is subject to degraded performance during periods of extended use.

Automatic Vehicle Location / Global Positioning System and Resource Management and Tracking:

Resource management and tracking in the planning, preparation and response to emergency incidents such as large bushfires necessarily involve a telecommunications platform to monitor the location, availability and engagement of fire fighting assets including crews and appliances.

The use of radio communications to ascertain relevant crew, appliance and/or strike team operational information is one means of managing and tracking

resources. Where fire fighters know their location based on manual map based navigation or local knowledge means they can advise field commanders or ICC's of their location and situation by radio. This is the current approach.

Unfortunately, trucks and crews can get lost because of the situation in which they find themselves such as being enveloped by heavy smoke with restricted vision, particularly for crews operating in an unfamiliar area. The supply and use of GPS systems would enable crews to establish their locations and update their field commanders and ICC by radio. Further, the safety advantages that derive from crews being able to identify and transmit their location in any calls for help are significant.

Automatic vehicle location (AVL) devices are already a feature incorporated into police and emergency service vehicles in the Melbourne metropolitan – Greater Geelong region, which means that such vehicles are subject to continuous tracking. This system is an essential part of emergency dispatch allocation by ESTA. During operational command and control in response to a critical incident an incident controller is in a position to always know the location of his assets for planned deployment. Similarly, the location of vehicles/crew requiring urgent assistance is always available and is a key safety feature of AVL.

The addition of this facility to all CFA and other emergency vehicles, whether as stand alone systems or incorporation into existing or new radios affords not only improved command and control but, importantly enables emergency help to be accurately directed to such vehicles if required.

VFBV has had advice that modern commercial AVL stand alone systems are relatively inexpensive.

VFBV notes that 'the issue of firefighting resource tracking relating to bushfire operations was the subject of examination and recommendation by the Inquiry into the 2002-2003 Victorian Bushfires chaired by Mr Bruce Esplin. The Inquiry had noted limitations in keeping track of firefighting resource availability and deployment both at state and incident level and the need for improvement.

We note the following recommendation of the Inquiry, and the official response of the Victorian Government to it as part of its response to the report and recommendations on 14 October 2003 that is particularly pertinent to Resource Management and Tracking:

21.8 - That DSE, CFA, MFESB and VICSES work co-operatively to establish a common system for resource tracking during major fire and incidents

Accepted by the Victorian Government.

Despite the official response of the Victorian Government to the recommendation, action remains outstanding.

In light of the above factors, VFBV makes the following recommendations to the Commission:

1. By 31 December 2010, the CFA conduct an audit of its brigades to determine which fire fighting resources are fitted with a Global Positioning System (GPS) and/or Automatic Vehicle Locator (AVL) units and the make and model of each such unit.
2. Where a CFA brigade installs such equipment in the future, it should inform the relevant CFA regional office of the details.
3. By 30 June 2012, the CFA ensure that appropriate GPS and AVL equipment is installed in all firefighting resources.

Engaging volunteers as end users in auditing telecommunications performance and forward planning:

Since Volunteers comprise over 97% of CFA's workforce, they are the major users of the CFA's radio systems and their safety and effectiveness in their role is dependent capable and reliable radio systems.

Accordingly VFBV believes that ongoing local and statewide internal auditing of CFA telecommunications systems' performance, formally incorporating representatives of Volunteers as the end users, should be established within CFA.

Further, we believe that it is important that end users are engaged and included in the development, determination and ongoing review of statewide public safety communications strategy based on their knowledge and experience.

We invite the Commission to make recommendations supporting this approach.

Andrew Ford
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