



21 February, 2013

MFB File No. 11/02278B

Cheryl Vella  
Coroner's Registrar  
Coroners Court of Victoria  
Level 11, 222 Exhibition Street  
Melbourne, VIC 3000

Email: [cpuresponses@coronerscourt.vic.gov.au](mailto:cpuresponses@coronerscourt.vic.gov.au)

Dear Cheryl,

**Re: Investigation into the death of Geoffrey Kennard, Darren Sporn, Damian McDonald**  
**Court References: 1126/07, 1127/07, 1128/07**

I refer to your letter dated 30 January last addressed to Mr Nick Easy, CEO.

Pursuant to section 72(2) of the *Coroners Act 2008* (Vic), Her Honour Judge Coate made three recommendations relating to the Metropolitan Fire and Emergency Services Board (MFB).

Please find attached the MFB's individual responses to recommendations 11, 12 and 14.

Please do not hesitate to contact us should the coroner require any further information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shane Wright', written over a horizontal line.

**Shane Wright**  
**Chief Officer**  
**Executive Director Emergency Management**



**METROPOLITAN FIRE & EMERGENCY SERVICES BOARD**

450 Burnley St Richmond, Melbourne, Victoria 3121 Telephone (61-3) 9665 4478 Facsimile (61-3) 9420 3886

[www.mfb.vic.gov.au](http://www.mfb.vic.gov.au)

ABN 28 598 558 561

**Recommendation 11**

That CityLink in conjunction with all other relevant agencies regularly assess the CityLink emergency control computer systems to ensure that in emergency conditions, all emergency systems and operators are able to command the emergency in a safe, effective and timely manner.

**MFB Response**

**The Coroner's recommendation has OR will be implemented.**

The recommended intervention has been in place since the opening of the Burnley and Domain tunnels.

The CityLink systems used during an emergency are the same systems used during the normal day to day operations, therefore any failure or degraded operation will be identified by the operators. In regard to the operation of the life safety systems such as deluge, smoke extraction and evacuation these are regularly tested during routine tunnel closures. During these tunnel closures it is very common for members of the MFB to undertake tours of the tunnels and during these tours the systems are demonstrated. The most recent tour was on Saturday 12 January 2013 when approximately 16 fire staff attended a Domain Tunnel closure.

Annually an emergency management exercise is conducted involving representatives from the MFB, police and emergency services. Every three years a field exercise is conducted again attended by MFB, police and emergency services and the CityLink systems are demonstrated. The next field exercise is to take place on the weekend of the 13/14 April 2013. The MFB are involved in this exercise.

**Recommendation 12**

That CityLink and MFB (i) review the deluge system generally to ensure it is operating at its maximum in terms of speed and efficiency and (ii) develop an agreed plan to investigate and respond to the impact on hydrant pressure and volume, of three or more deluge zones operating simultaneously, to assist in preparing response plans for multiple incident (multiple deluge) events.

**MFB Response**

**(i) The Coroner's recommendation has been implemented.**

Please see attached report on deluge performance.

**(ii) The Coroner's recommendation has been implemented.**

The hydraulic design of the deluge and fire hydrant system is as stated in the test report from Aspinal Fire service Testing. Two deluge zones and two hydrants can operate simultaneously and achieve the required hydraulic performance. Testing has also identified that if three deluge zones are operating then the performance of the fire hydrants is compromised.

To assist in preparing a response plan for multiple incidents, (where there are two unrelated incidents occurring at the same time), the operator and the MFB utilize the installed systems to best effect by the development of a strategy and dynamic risk assessment to best fit the incidents. In this case the use of the deluge zones can be in complete isolation and interdependent on each other to mitigate the multiple events.

Re 12



**FIRE INVESTIGATION & ANALYSIS UNIT**

433 Smith Street Fitzroy North, Victoria, 3068.  
Telephone: (03) 94203882 Fax: (03) 94203985  
DX: 211001

26.07.2007

Mr. Geoff McKernan  
Operations Manager  
Translink Operations P/L  
PO Box 1302  
South Melbourne Vic 3205

Dear Geoff

I would like to thank you for your assistance in allowing the deluge and fire hydrant systems, in the CityLink Burnley tunnel, to be tested on the 16 June last. I have received the test report and it would appear that the capability of the installed deluge and hydrant systems to operate simultaneously and at the minimum required performance level has been validated. According to the attached test report from Aspinall Fire Service Testing a total flow rate recorded from the hydrants is in excess of 50l/s at an average pressure over the three hydrants of 686 kPa plus the two deluge zones.

In accordance with your request for a copy of this report, I am pleased to advise that the legal counsel, assisting the Coroner, has no objection to you receiving a copy of this report.

Yours faithfully

A handwritten signature in black ink, appearing to read "Ian D Hunter", is written over a horizontal line.

Ian D Hunter  
Manager  
Fire Investigation & Analysis Unit  
[ihunter@mfb.vic.gov.au](mailto:ihunter@mfb.vic.gov.au)

ATT: AFST Test Report



79 Bittern-Dromana Road,  
Bairnring, Vic. 3920  
Ph: (03) 5983 5533  
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## FIRE SERVICE TESTING Pty Ltd

A.C.N. 008 627 121 A.B.N. 71 008 627 121

AFST 06-07-21  
16<sup>th</sup> June 2007.

Metropolitan Fire and Emergency Services Board,  
433 Fitzroy Street,  
Fitzroy North,  
Victoria 3068.

Attention: The Chief Fire Officer

Regarding: The Citylink Burnley Tunnel Flow Test:

Tested: Saturday 16<sup>th</sup> June 2007 at approximately 9:50pm.

The main was 150mm with 100mm to 80mm droppers.  
The hydrants installed are feed single outlets with storz connections.

Test method: Hydrant branches using 10m hose with various sized nozzles and the results plotted on the attached graph.

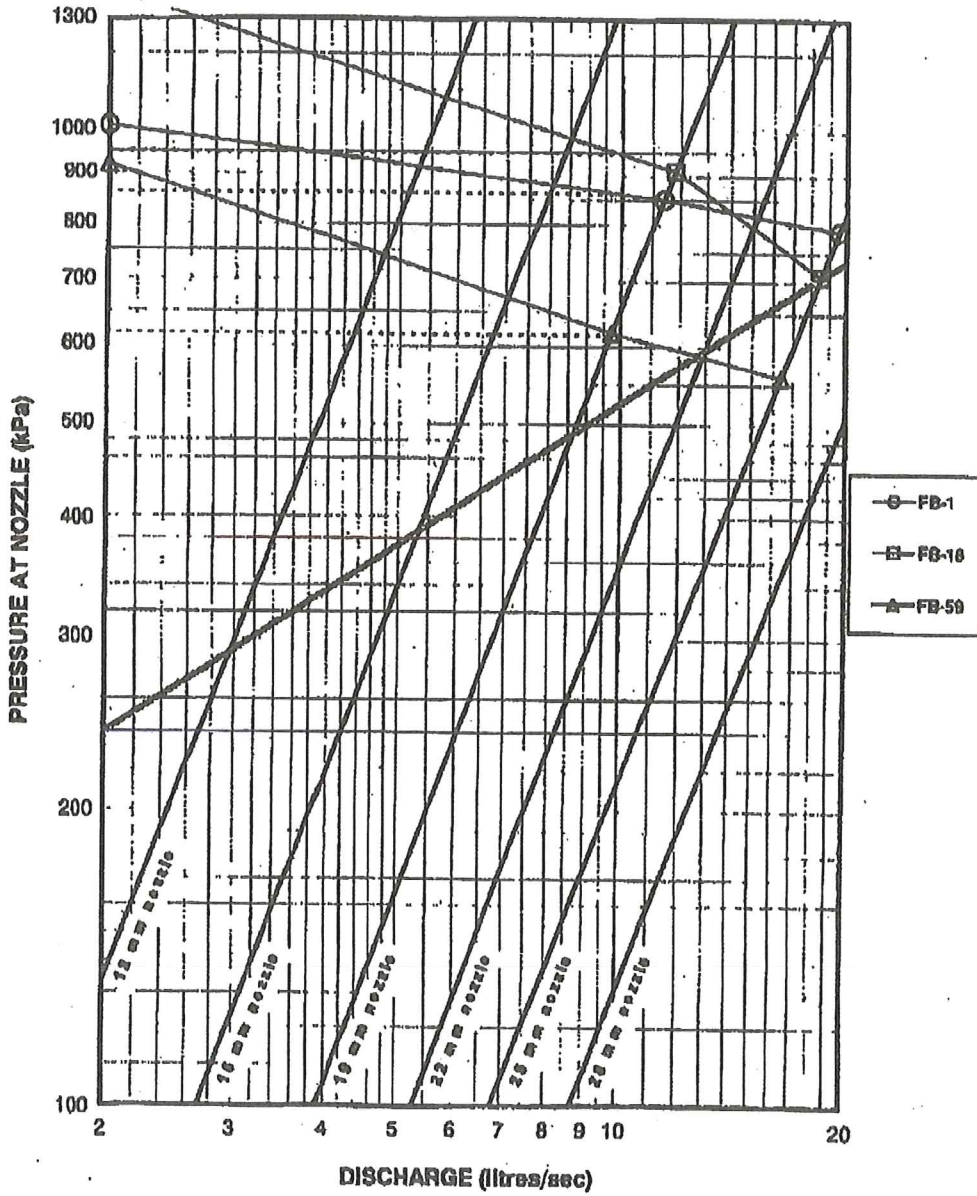
### Results in: kilopascals (kPa):

Nozzle diameter	FB-1 West end outlet A only	FB-18 End of 1 <sup>st</sup> third		FB-59 East end outlet A only	Deluge	Deluge
		Outlet A with outlet B	Outlet A only		1 on ? y/n	2 on ? y/n
Nil (Static)	1,010	N/A	1,390	920	n	n
19mm	850	-	910	620	y	y
25mm	790	-	710	560	y	y
Gauge used:	AFST:05B	-	AFST:02F	AFST:01C		

Residual pressure at FB-18 hydrant (not flowing but charged) with the 2 no. deluges operating simultaneously was 950 kPa..

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3 No. hydrants operating with 2 No. deluge systems operating simultaneously.



— optimum operating pressure range  
NOTE: Nozzle sizes shown are nominal sizes.  
Courtesy of AS 2419.1-1994 Figure C2

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Please refer to the graph in conjunction with the below advice.

The above three hydrant outlets were flowing simultaneously while 2 No. deluge systems were also operating simultaneously. The total flow rate recorded from the hydrants was 54.5 l/s at an average pressure over the three hydrants of 686 kPa plus the two deluge systems.

At 10 l/s while the above total was realised the hydrants produced the following:

FB-1 - 10 l/s @ 860 kPa

FB-18 - 10 l/s @ 950 kPa

FB-59 - 10 l/s @ 620 kPa

We observed that the Static Pressure at FB-18 was more than the 1300 kPa recommended in AS2419.1.

Test carried out by AFST. Report by Greg Aspinall.

We trust that this assists you with your project.



Gregory J. Aspinall  
Aspinall Fire Service Testing Pty. Ltd.

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## **Recommendation 14**

That the MFB satisfy itself, in conjunction with other relevant entities that all relevant emergency communication systems operating inside the Burnley Tunnel have addressed the issues raised by the DIX report at 14.2.12

## **MFB Response**

### **The Coroners recommendation has been implemented**

#### 14.2.12.1

As part of the MMR Extension Project Contract, administered on behalf of the State of Victoria by ESTA, any maintenance of MMR equipment has to be programmed with the Emergency Service Organisations (ESOs). The ESOs should receive fourteen days' notice for any maintenance plus one day's notice for areas where coverage and capacity is affected. In addition, a one hour notice of intention to conduct the programmed works must then be issued by Motorola.

Breakdowns are also rectified to service restoration within a maximum of four hours. Changes to this agreement are to be administered by the ESOs, if it specifically affects the MFB the Manager of Operational Communications must approve the outage time-frame.

#### 14.2.12.2

If the programmed outage is going to affect operational capability, operations are informed and an operational communication strategy is developed as a mitigation measure.

The emergency services communication system within the CityLink tunnels is not maintained by CityLink. Maintenance of the system is carried out by providing access to the Motorola contractor to the required areas of the tunnels. In addition to the MMR radio re-broadcast system there are a number of other communication systems available within the CityLink tunnels should the primary MFB system fail. These systems are as follows:

1. Fire telephones which are located every 120 metres in the tunnels. These connect to the Traffic Control Centre or calls can be made between individual fire phones. During a tunnel emergency, an MFB coordinator will be in the Control Centre.
2. Motorist Emergency Telephones. These blue phones are located every 60 metres within the tunnels and connect to the Traffic Control Centre.
3. Telstra external telephone lines are also available at each of the entry and exit portals of the tunnels, as well as Swan Street and the Operations and Maintenance building carpark. These telephone lines can be patched into the tunnel to provide external telephone lines.

The above systems are maintained regularly (generally monthly) to ensure they are operational.



#### 14.2.12.3

The emergency services communication system operates in the active tunnels, cross passages, emergency egress tunnel and refuges.