IN THE CORONERS COURT

OF VICTORIA

AT MELBOURNE

Court Reference: COR 2015 5716

**FINDING INTO DEATH WITHOUT INQUEST**

*Form 38 Rule 60(2)*

*Section 67 of the **Coroners Act 2008***

I, AUDREY JAMIESON, Coroner having investigated the death of PETER JULIAN LOW

without holding an inquest:
find that the identity of the deceased was PETER JULIAN LOW
born 12 August 1951
and the death occurred on 9 November 2015
at Peak Drive, Harkaway Victoria 3806
**from:**

1 (a) MULTIPLE INJURIES SUSTAINED IN AN EXPLOSION

Pursuant to section 67(1) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances**:

1. Peter Julian Low was 64 years of age at the time of his death. He lived in Healesville with his wife of 41 years, Jenny and they had two children. Mr Low was self-employed as the director of Ribro Blasting Co. Pty. Ltd, an explosives company he had established and run for 30 years. Mr Low had recently undergone an eye procedure and his medical history included panic attacks.

2. At approximately 6.00am on Monday 9 November 2015, Mr Low commenced work at a housing development site on Peak Drive in Harkaway. Mr Low was working as a subcontractor for Delplant Pty Ltd, and had been tasked with blasting rock in a trench to allow for piping works to be conducted. The trench was approximately three metres deep, 10 metres long and 1.5 metres wide, and had metal shields in place along its walls. Excavators had previously attempted to remove the rock in the trench to achieve a 30 degree angle for sewerage piping to be installed, but the rock had been too dense.

3. During the morning, Mr Low entered the trench area and used a pneumatic drill to create approximately 12 holes in the rock, at the base of the trench, which were about 300mm deep. Mr Low loaded these holes with Orica 'Goldet' Non Electric detonators, of which he connected together and attached one electronic detonator. The holes were then backfilled with material removed from the holes, to contain any flyrock. Mr Low exited the trench and detonated the explosives; however only one or two charges fired. A nearby excavator was subsequently unsuccessfully used to try and dig in the trench, which consequently removed the wiring to the live surface connectors. A charge exploded and Mr Low instructed everyone to clear from the site.

4. At approximately 11.30am, after everyone had cleared the site, Mr Low entered the trench and commenced drilling a further five holes using the pneumatic drill to a depth of 550mm. Mr Low started to drill a sixth hole, when the drill went into an existing hole containing a live explosive charge, which subsequently detonated.

5. A project manager was first on the scene after the explosion and entered the trench area to perform first aid upon Mr Low. Emergency services were contacted and Country Fire Authority (CFA) members attended the site. Mr Low was conscious for 10 to 12 minutes after the explosion. Just prior to losing consciousness, Mr Low indicated he was experiencing chest pains and feeling short of breath. Ambulance Victoria paramedics were also in attendance, but were informed by the CFA that it had not been deemed safe to enter the trench. An oxygen mask and cylinder were sent down via a rope into the trench, and the project manager applied the mask to Mr Low's face as instructed by paramedics. Approximately 10 minutes later, ambulance paramedics received permission to enter the trench; a Mobile Intensive Care Ambulance (MICA) paramedic took over from the project manager. Mr Low was found to be unresponsive with no sign of breathing or a palpable pulse. Resuscitation attempts were not made due to the confined space, and the CFA advised that the site may still be unsafe so a monitor or defibrillator should not be used. Mr Low was declared deceased, and ambulance paramedics

were required to leave the trench for safety concerns. Police and Victorian WorkCover Authority inspectors were also in attendance.

## INVESTIGATIONS

*Forensic pathology investigation*

6. Dr Jia Hao Wu, Forensic Pathologist at the Victorian Institute of Forensic Medicine, performed a full post mortem examination upon the body of Mr Low, reviewed a post mortem computed tomography (CT) scan and referred to the Victoria Police Report of Death, Form 83. At autopsy, Dr Wu identified multiple injuries from the blast, including a vascular injury which would have resulted in significant blood loss. Dr Wu also noted that Mr Low had an enlarged heart with coronary atherosclerosis, which would render him more likely to succumb to blood loss than a healthy individual, and would also explain the chest pain Mr Low reported shortly before he passed away. However, Dr Wu did note that microscopic examination revealed no acute myocardial infarction. Toxicological analysis of post mortem blood was non-contributory.[1] Dr Wu ascribed the cause of Mr Low's death to multiple injuries sustained in an explosion.

*Police investigation*

7. Upon attending the Harkaway site, police did not find any signs of third party involvement. Detective Senior Constable Craig Dergacz, the nominated coroner's investigator[2] conducted an investigation of the circumstances surrounding Mr Low's death, at my direction, including the preparation of the coronial brief. The coronial brief contained, *inter alia*, statements made by Mr Low's wife Jenny Low and two ambulance paramedics, and an Emergency Services Telecommunications Authority (ESTA) record of the emergency call.

8. Mrs Low reported that her husband had all the qualifications and licenses required to perform his role as a 'powder monkey',[3] and they were up to date. She stated that Mr Low was taking antibiotic medication in the lead up to his death, as a result of a recent eye procedure. Mrs Low noted that her husband was also taking sertraline to alleviate his panic attacks.

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[1] Toxicological analysis of Mr Low's post mortem blood showed a low level of sertraline, an anti-depressant for use in cases of major depression.

[2] A coroner's investigator is a police officer nominated by the Chief Commissioner of Police or any other person nominated by the coroner to assist the coroner with his/her investigation into a reportable death. The coroner's investigator takes instructions direction from a coroner and carries out the role subject to the direction of a corner.

[3] A 'powder monkey' is a person who works with explosives.

*WorkSafe Investigation*

9. As Mr Low's death occurred in the course of his employment, the Victorian WorkCover Authority (WorkSafe) conducted an investigation into the circumstances of his death. The matter was subsequently referred for internal legal review. By way of letter dated 12 October 2016, WorkSafe provided its brief of evidence, and advised the Court that no prosecution was commenced against any party in relation to this matter. This was due to insufficient evidence, public interest considerations, and because the potential duty holder was deceased.

10. WorkSafe obtained statements from WorkSafe Investigator Russell Tomlin, self-employed shot firer Thomas Clonan, Consulting Engineer at Terrock Pty Ltd Adrian Moore, Delta-V Experts Pty Ltd Senior Forensic Engineer Andreas Sandvik, WorkSafe Inspector Kenneth Clarke, WorkSafe Investigators Nicholas Grosdanis, Thinh Tran and Russell Ames.

11. In the course of the investigation, WorkSafe investigators learned that Delplant Pty Ltd (Delplant) was engaged by Lojac Civil Pty Ltd (Lojac Civil) to conduct civil construction at the Peak Drive location. Delplant had in turn engaged Mr Low's company, Ribro Blasting Co. Pty. Ltd (Ribro Blasting) to conduct blasting at the site.

12. Shot firer Thomas Clonan prepared a report detailing his opinions after attending the Harkaway site on 10 and 12 November 2015. Mr Clonan opined that when, on initiation, only one or two of the charges fired, any experienced shot firer should have recognised there was only a 'thump', rather than a rumble lasting over 300 milliseconds. In addition, if it had been noticed that the excavator pulled out live surface connectors, when it subsequently tried unsuccessfully to dig the trench, this should have rung alarm bells.

13. Mr Clonan suggested that as Mr Low had worked in the industry for so long, he may have become careless and apathetic in relation to his work. He said he did not know anyone in the industry who would do what Mr Low had done on 9 November 2015, and stated that he had made a lot of mistakes that day. Mr Clonan opined that Mr Low's actions may have come about from negligence or apathy.

14. Consulting Engineer Adrian Moore stated that he knew Mr Low and described him as a 'shot firer who cut corners.' Mr Moore said he would try to save money for his customers, and as a result did not always perform his work as safely as he could. Mr Moore attended the Harkaway site. He stated that you should only drill a new hole if all other treatments are not possible. Mr Moore noted that there is a misfire procedure in the Australian Standards, which has an established procedure of steps that should be taken. He emphasised that drilling a new hole is

the last option, and noted it appeared Mr Low had ignored the steps and drilled the new hole anyway.

15. Mr Moore noted that Mr Low had a plain electric detonator with a bell wire firing cable to set off a single tube non electric detonator in the trench. Mr Moore observed that high tension transmission lines were approximately 120 metres from the trench, while the ICI Handbook of Blasting Tables indicates that the recommended safe clearance distance is 300 to 400 metres when carrying out electric firing in their vicinity. Mr Moore said that this should have precluded the use of a bell wire or any firing cable that was not designed to prevent induced current from forming in the firing circuit.

16. Mr Moore stated that it was obvious to him that Mr Low was careless in his approach, and that the explosion occurred because he did not follow procedures that are well known within the industry.

17. Mr Clonan did not know where Mr Low would have obtained Ammonium Nitrate that was located in his utility vehicle, and he did not believe Mr Low had the appropriate licence for this substance.

18. The WorkSafe brief summary identified that Delplant had inducted Mr Low into the workplace on 27 October 2015. However, Ribro Blasting did not appear to have completed a blast management plan which should include a misfire management system. A safe work method statement for blasting works was located at the workplace, but it was not signed and did not address the high risk construction work that was being undertaken by Ribro Blasting. The investigation concluded that Mr Low had not followed the action hierarchy recommended in the Australian Standard AS2187.2 – 2006 'Explosives – Storage and Use Part 2: Use of Explosives' for managing misfires, nor was there a system for doing so. The WorkSafe brief indicated that Ribro Blasting was not prosecuted, as Mr Low and his wife were the directors of the company, and Mr Low was the victim of his own failure. It was also noted that the company did not appear to have any other employees.

**FINDINGS**

Mr Low's death is a stark reminder of the perils of working with dangerous materials and failing to follow safety procedures on worksites. The investigations have identified that Mr Low failed to follow the designated actions in the Australian Standard for managing misfires, and undertook hazardous steps such as not dealing with unfired shots prior to drilling new holes, and leaving a live electric detonator on the surface of the trench during drilling operations. In the circumstances, I find

that Mr Low had a cavalier approach to recognised safety procedures, and this ultimately led to his death.

On the evidence available to me, I accept the medical cause of death identified by Dr Jia Hao Wu and find that Peter Julian Low died from multiple injuries sustained in an explosion, while at work.

Pursuant to section 73(1A) of the *Coroners Act 2008,* I order that this Finding be published on the internet.

I direct that a copy of this finding be provided to the following:

Mrs Jenny Low

Ms Bree Knoester, Adviceline Injury Lawyers

Wisewould Mahony Lawyers

Mr Russell Tomlin, WorkSafe Victoria

Detective Senior Constable Craig Dergacz

Signature:


AUDREY JAMIESON
CORONER

Date: **12 December 2016**