

# FIREPOINT



IAAI JOURNAL



# Firepoint

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**Editor:** Wal Stern

Phone/Fax: (02) 99242411

Mobile: 0412 492 100

E-Mail: [wsfern@optusnet.com.au](mailto:wsfern@optusnet.com.au)

Postal Address: 56 Robinson Street

East Lindfield NSW 2070

## Victorian Association of Fire Investigators Chapter No. 58

[www.vicfire.com](http://www.vicfire.com)

*President:* Andrew Kerr

Phone: (03)9611 8574

Email: [andrew.i.kerr@police.vic.gov.au](mailto:andrew.i.kerr@police.vic.gov.au)

*Vice President:* Trevor Pillinger

Phone: 1300 434 738 (1300 4 fire training)

Mobile: 0417 323 667

E-Mail: [tpillinger@sfa.edu.au](mailto:tpillinger@sfa.edu.au)

*Secretary:* George Cooney

E-Mail: [georgecooney@optusnet.com.au](mailto:georgecooney@optusnet.com.au)

Postal Address: Ian Hunter

Victorian Association of  
Fire Investigators (VAFI)

c/- FIA

Metropolitan Fire Brigade

450 Burnley Street

Richmond, Victoria 3121

## Queensland Association of Fire Investigators Inc. Chapter No. 59

[www.qafi.com.au](http://www.qafi.com.au)

*President:* Brian Richardson

Phone: 07 32370674

Email: [brian.richardson@deir.qld.gov.au](mailto:brian.richardson@deir.qld.gov.au)

*Secretary:* Rowley Ahern

All correspondence via: QAFI

GPO Box 1705

BRISBANE QLD 4001

Phone: 07 3229 6894

Fax: 07 3210 0237

Email: [QAFI@uttrighbke.com.au](mailto:QAFI@uttrighbke.com.au)

## Association of Fire Investigators (N.S.W.) Chapter No. 47

[www.nswafi.com.au](http://www.nswafi.com.au)

*President:* Mark Black

Mobile: 0438 434 456

Email: [mark.black@fire.nsw.gov.au](mailto:mark.black@fire.nsw.gov.au)

*Secretary:* Steve Apps

E-Mail: [secretary@nswafi.com.au](mailto:secretary@nswafi.com.au)

Postal Address: NSW Assocn. of Fire Investigators

P.O. Box 507

Riverwood, 2210

## **FIREPOINT: IF YOU HAVEN'T PAID YOUR FEES FOR THE CURRENT YEAR, PLEASE DO SO NOW.**

### **EDITORIAL**

I would like to express my special thanks this issue to Brian Neal who is standing down as Victorian Liaison Officer for this magazine. Brian has carried out this duty for many years, and I have always found him to be helpful and co-operative. He is however not lost to the VAFI, as I notice he is heading up the Committee to organize our next major Conference in Melbourne, in 2012.

Could I also wish all members a safe and happy holiday season.

*Wal Stern*



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## Laundry Fire – Must be the Dryer??

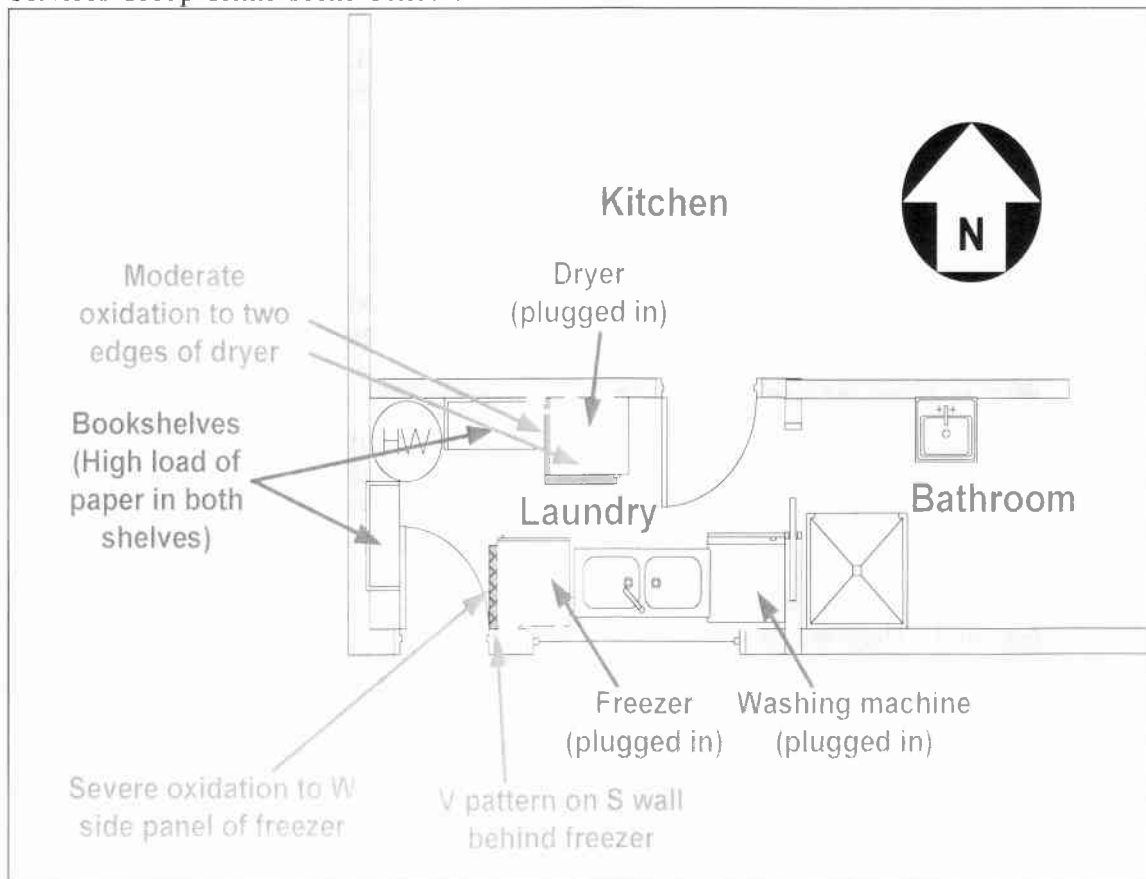
*Michael Forbes  
NSW Fire Brigades  
Fire Investigation and Research Unit*

At a recent incident the New South Wales Fire Brigades Fire Investigation and Research Unit (FIRU) was called to a fire in a residential laundry. The local Station Officer and the Duty Commander Inspector both conducted a preliminary investigation into the cause and origin and suspected that the dryer in the laundry was the source of ignition. But there were suspicious circumstances surrounding the events and so Police and FIRU were called.

The FIRU investigator arrived and commenced his investigation in conjunction with NSW Police Forensic Services Group Crime Scene Officers.

Information from the first arriving crew was that the fire was at the rear of the premises and coming out the window of the laundry. The house was locked and the rear door to the laundry was forced by crews to gain access.

Information from the owner was that the washing machine and the dryer were used earlier that day. The dryer had been used prior to the owner leaving the house and she stated that the dryer had finished the cycle approximately 30 minutes before she departed the premises. The owner also had a freezer in the laundry which was always on as well as an electric hot water system in the North-West corner of the laundry.



**Figure 1: Floor plan of the laundry**



On commencing the investigation it was confirmed that the Area of Origin was the laundry of the house. Inside the laundry there were 4 possible sources of ignition being the washing machine, hot water system, dryer and the freezer.

The damage sustained to the area adjacent to the dryer, as well as to the dryer itself, appeared to be the greatest in the laundry and hence this is why the Station Officer and Inspector gave the initial cause as the dryer. But a full excavation of the laundry was required and this could not be without FIRU and NSW Police in attendance.

When an investigation is conducted Investigators use the Scientific Method in the NFPA 921 – Guide for Fire and Explosion Investigations. This details that a systematic approach is required when conducting investigations. The seven steps are described below:

1. **Recognise the need:** A fire has occurred and the cause needs to be established;
2. **Define the problem:** A proper investigation needs to be conducted by examining the scene, talking to crews and witnesses;
3. **Collect data:** Facts about the fire are collected by observation;
4. **Analyse the data:** Analysis of the data is based on the knowledge, training, experience and expertise of the Investigator;
5. **Develop a hypothesis (Inductive reasoning):** Here the Investigator produces a hypothesis or hypotheses to explain what occurred. They are based on the observations made at the scene and should be able to explain the burn patterns, fire spread, the ignition sequence and the fire cause and origin;
6. **Test the Hypothesis (Deductive Reasoning):** Each provable

hypothesis should be able to stand the test of careful and serious challenge. If no hypothesis can withstand an examination by deductive reasoning, the fire should be considered undetermined.

7. **Select final hypothesis:** Conclusions are drawn as a result of testing the hypothesis.

(NFPA 921 Guide for Fire and Explosion Investigations 2008, p16)

An excavation of the laundry was conducted. Along the Northern wall between the hot water tank and the dryer there was a shelving unit in which a large amount of paperwork was located. Shelving was also located along the Western wall again with a large amount of paperwork located here. The debris on the floor was removed so that low level burning could be observed.

There were four electrical appliances within the laundry providing four possible hypotheses that needed to be tested. The first was the washing machine located in the South-East corner. The fire damage was limited to melting of the plastic top load lid and minor heat damage to the upper parts of the machine. This hypothesis was eliminated as the damage was minimal in relation to the other areas.

The second was the hot water tank located in the North-West corner. This had received moderate fire damage to its outer metal shell but there was a considerable amount of fire load to its East and South, as well as combustible material on top of it. When debris was removed near the base of the tank, there was no low level burning to its outer metal shell, in fact it was not even sooted. This hypothesis was eliminated due to no sign of an ignition point.

The third appliance to be tested was the dryer. If the investigator was working from

least amount of fire damage to most amount of fire damage this would have led them to the Northern wall and the dryer.

The indicating burn patterns here included the render off the Northern wall adjacent to and above the dryer, heat distorted copper pipes above the dryer and oxidation to the front and left sides of the dryer. Inside the dryer there were the burnt remains of some type of material. The first thing to establish with the dryer was did the fire start from within the dryer and burn out, or did the fire start on the outside of the dryer and burn the insides. From the burn patterns to the dryer it was evident that the oxidation observed was mainly from the outside. There was only a minor amount of oxidation inside the dryer; the burn patterns showed the fire was on the outside of the dryer. It is possible that spontaneous combustion of the heated material (reported to be commercial kitchen hand and drying towels) inside the dryer was the source of ignition and the plastic in the door dropped down from the dryer onto the high fuel load below this dryer and the fire then ensued. But for this hypothesis to be accepted an examination of the freezer still needed to occur.

The fourth appliance was the freezer on the Southern wall. This appliance had received extensive damage to its Western side and the whole appliance was removed outside to be examined in closer detail. Extensive oxidation could be seen to its Western and Southern sides and an actual V pattern of this damage was pointing to the base in the South-West corner, near the

compressor of the freezer. The wall behind the freezer also had a V pattern which pointed back to the same rear corner where the compressor was located. The metal outer skin of the freezer was removed and it could be seen in that bottom corner the internal insulation was completely destroyed, pointing back to where the compressor was located. A copper pipe which held the gas of the refrigerant had melted in this lower corner location. A hypothesis was now building to suggest that the most probable ignition source that would fit the fire development throughout the laundry was the condenser of the freezer unit.

Using the hypothesis of the dryer as the ignition source, the damage adjacent to the dryer would certainly suit the hypothesis, but the low level damage to the freezer and the internal damage to the insulation of the freezer would not. Equally, if the hot water service was the source then it did not explain the low level fire damage sustained to the freezer. The dryer hypothesis was eliminated.

Because fire burns up and out, if this area can be identified, then most of the time this lowest level of burning will be very close to the Point of Origin. As debris was removed it was observed that the Western side of the freezer had a burn pattern on it only 3-4 cm above the floor. There was a V pattern on this Western side of the freezer that pointed back to the rear corner. See the V-pattern on the freezer panel (photo 6) and on the wall (photo 8).

**Figure 2 (next page, top): Photo showing the dryer on the Northern wall of the laundry. The dryer and hot water tank can be seen in this photo.**

**Figures 3 and 4 (next page): Photos showing the East and West side of the dryer. Note the greater damage and moderate oxidation to the West side (bottom photo) of the dryer.**

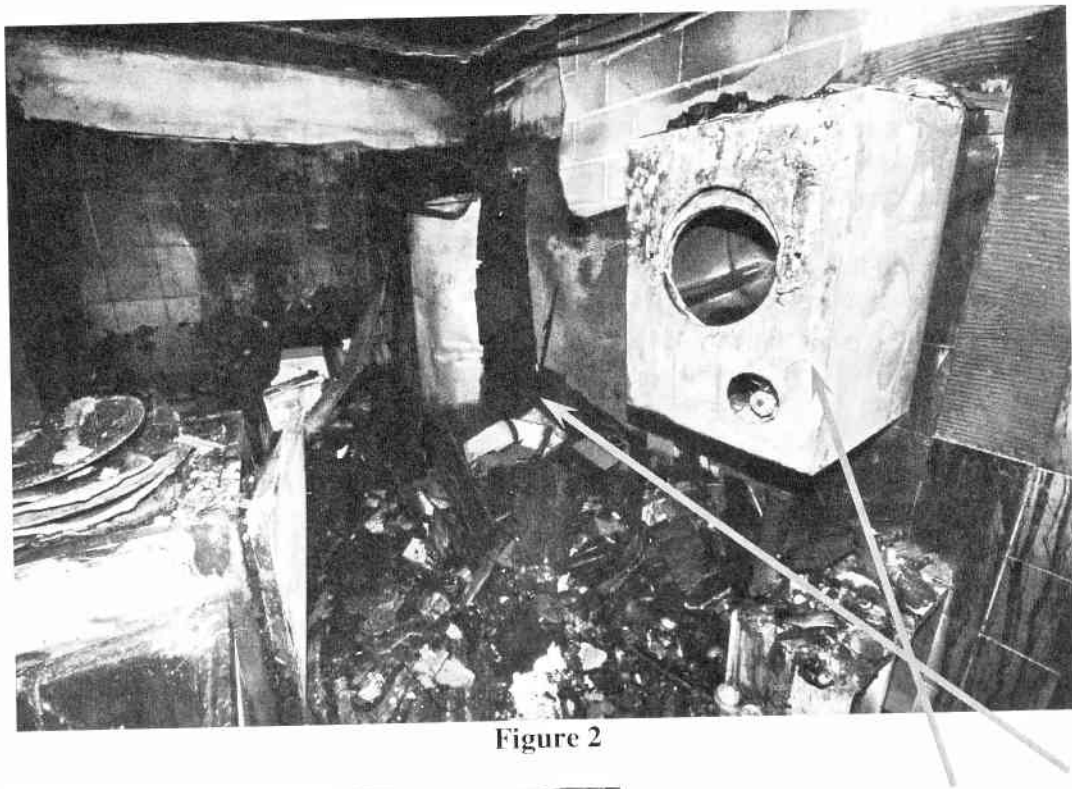


Figure 2

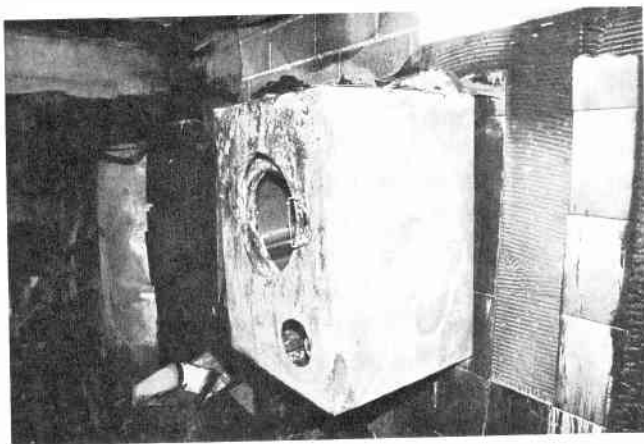


Figure 3

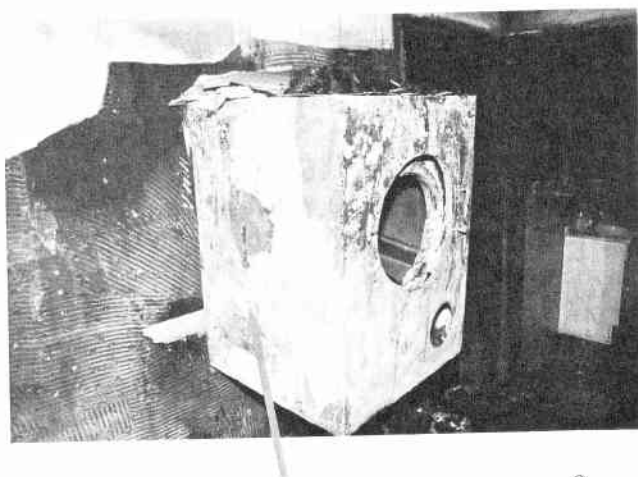


Figure 4



**Figure 5: Photo showing the damage to the wall and copper pipes on the Northern wall adjacent to the dryer. Note the render of the wall had fallen off and the heat distortion of the copper pipes.**

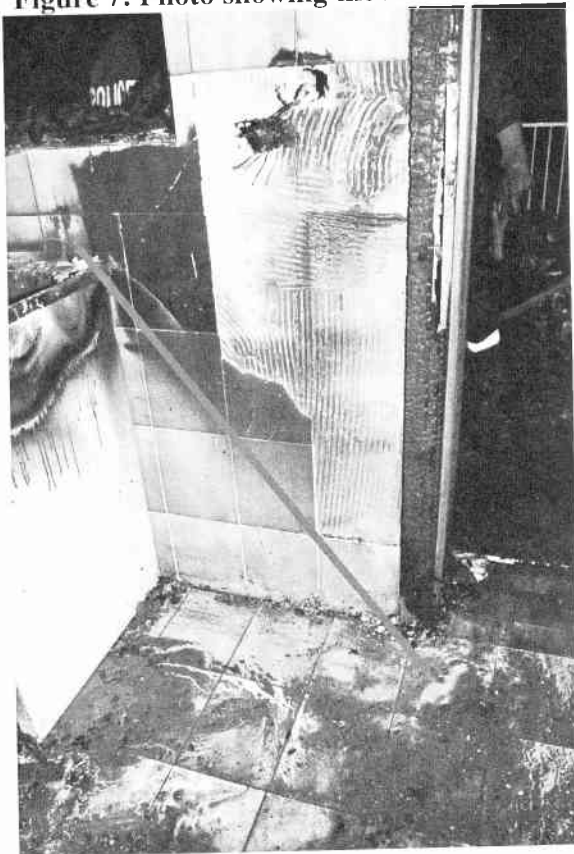


**Figure 6. Western side panel of freezer**





**Figure 7:** Photo showing the freezer located on the Southern wall next to the sink.



**Figure 8** Southern wall behind freezer



**Figure 9: Photo showing the damage to the insulation of the Western side panel of the freezer, with the Point of Origin being the bottom right corner.**

In this incident, by following the basic methodology and using a systematic approach which is the same for each and every incident the cause and origin was identified.

There was a build up of heat within the copper pipe of the compressor and this in turn melted the copper pipe and ignited the combustible insulation of the freezer. The freezer was a GE, Model: C190DM, serial: 010198.

Lessons learned from this incident:

- Observe all burn patterns in the Area of Origin;
- If an excavation is required, do not remove any debris unless you are certain that the incident is NOT deliberate;
- Keep an open mind when conducting an investigation, continue to develop hypotheses and test them.

## QAFI President's Report



Room burn started by radiant heater

The QAFI held its Annual Seminar on 28 October 2010 on "Electrical fire investigation and live burns". The day was well supported with **QEC GLOBAL** and **AUSTRALEC SWITCHGEAR** sponsoring the day, along with the QAFI sponsor **SAA APPROVALS**.

Ninety-nine delegates attended and enjoyed a half day of presentations on electrical theory and electrical causes of fire, case studies, solar systems fire hazards and legal implications of evidence and expert evidence in liability and insurance recovery. The other half of the day involved witnessing a room fire ignited from an electrical appliance (radiant heater with a sheet draped over it – amazing how fast a fire can develop from a simple mistake), scene examination of several pre-burnt rooms to identify the cause of the fire (with a video afterwards to show how each fire really started), watching several electrical appliances catch fire due to a pre-made fault and then X-ray of the equipment to

highlight advances in the examination of electrical equipment involved in fire scenes.

Marlon Bran gave an educative talk on electrical theory and causes of fire such as Resistance heating (excessive current, poor connections), Arcing, Arc tracking with examples of from his own experience in examination of electrical equipment believed to have been the cause of fires.

Ted Spooner presented a session on Photovoltaic (PV) solar panel systems fire hazards outlining the different connection types of these systems and the basic operation and safety implications of DC arcing compared to AC arcing. Ted showed several videos of incorrectly rated equipment used in dc systems and the rapid fire development when ac switches are used in dc circuits. Ted also showed a video of experimentation conducted on solar panels (deliberately damaged to see what effect dc arcing would have on the panel) as well as discussing

several case studies of fires in solar installations that have occurred overseas.

Scott Cowell informed the delegates on a recent case in court where conflicting expert evidence was presented. This highlighted the need to fully test your hypothesis to ensure all possible cases of fire have been considered and any additional testing needed to verify your theory has been undertaken.

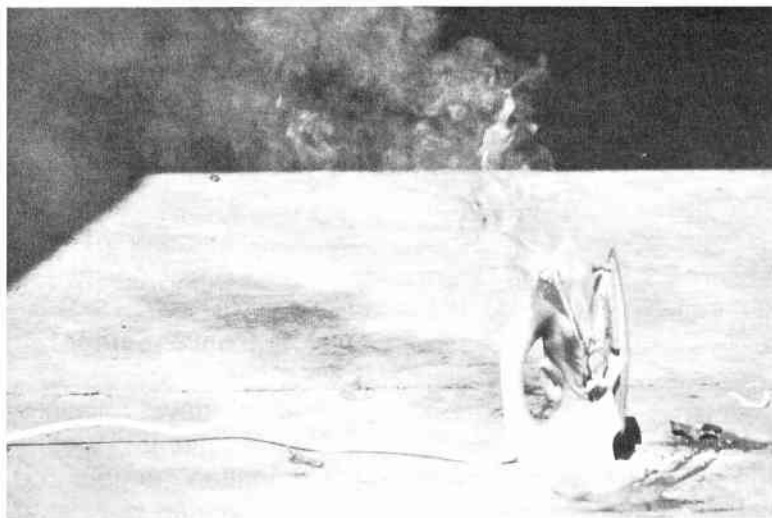
Cases studies were presented by Des Ede, Marty Denham, Gary Nash and Terry Casey to highlight the practical aspects of the day. Carl Porritt oversaw the burning of the electrical appliances with Andy Rowan supplying the X-ray expertise. Chris Markwell assisted the live fire sessions with great help from numerous QAFI members to explain the room burn patterns.

The day was a credit to the QAFI membership, with all committee members assisting as the need arose and then various QAFI members assisting on the day. The interest in the day was such that not all those who offered to present could be

accommodated, but thanks is extended to them as well. With this level of interest the next years for the association will be very good indeed. The use of the Queensland Fire and Rescue Service facilities to conduct the burns was also very much appreciated.

This will be the last "Firepoint" for the year and my last year as President. I would like to thank all those who have helped over the three years that I have been President, and also thank all those who have attended the seminars and breakfasts and case studies we have put on. There is a good dedication to the QAFI by a number of people and I am confident the association will prosper from here on.

I wish you all a safe and happy Christmas and New Year and look forward to more fostering of fellowship, co-operation and learning between the different professional groups that make up the Queensland Association of Fire Investigators. Finally thank you to SAA APPROVALS for their sponsorship of the QAFI for 2010.



Electric iron fire (after a fault was initiated within the iron)

## **Victorian Association of Fire Investigators Inc.**

**Website** [www.vicfire.com](http://www.vicfire.com)

### **VICTORIAN AGM**

The Annual General Meeting was held in conjunction with a Training day at CFA Fiskville on Saturday 23<sup>rd</sup> October 2010. The theme of the training was wildfire investigations and the differences. Les Vearing from DSE spoke about "Operation Coolman" while Acting Senior Sergeant Jason Goddard from VPAES discussed multi agency strategic direction for wildfire investigations.

Following this Fabian Crowe CFA talked about forming the link between origin, path and impact at large wildfires. Mark Gilmore CFA presented a case study of fires in the Bendigo area. This day was finished with a presentation by Senior Sergeant Rod Munro from the DVI Unit and Aspects of safety with electricity in wildfires by Warren Knop from ESV. An overall selection of information for wildfire investigations. The committee wish to thank Nicole Harvey for her organization of the day and the CFA and staff at CFA Fiskville for their contribution towards a great day.

As a result of the Annual General Meeting the following are the changes to the committee. Karen Ireland and Brian Neal have been not re elected to the committee and Trevor Pillinger has been elected to the position of Vice President and Rob Van Dorsser CFA has been elected to the committee. Also Trevor Pillinger was given a Life Membership unfortunately he was not in attendance.

### **VAFI COMMITTEE 2010/2011**

President  
Andrew Kerr VICPOL  
Vice President  
Trevor Pillinger EDUC  
Secretary  
George Cooney VICPOL (Rtd)  
Treasurer  
Rod East MFB

Committee  
Michael Weekes ESV  
Belinda Webb INS  
John Lording INS  
George Xydias VICPOL FOR  
Norm Jackson ESV ( Retired)  
Russell Lee INV  
Scott Barnes VICPOL  
Nicole Harvey CFA  
Rob Van Dorsser CFA  
Geoff Fletcher MFB

In addition to the committee:

Membership Registrar  
Ian Hunter MFB  
Co-Ordinator 2012 AAFA  
Brian Neal CFA  
Member 2012 AAFA  
Karen Ireland VICPOL FOR  
Member 2012 AAFA  
Alex Conway MFB

### **Note from President Andrew Kerr**

Andrew gave special thanks to Brian Neal retiring Vice President and Committee member and thanked him for his dedicated work on the committee for the past 20 years. He was a foundation member of VAFI and is a Life Member.



He has served on the committee as President, Vice President (12 years), Committee member and Liaison Officer for Firepoint Magazine. He will be a loss from the Committee, but would hope that he will continue to serve VAFI in some capacity as his knowledge and experience has been invaluable over the years.

At the VAFI Committee Meeting in November, Brian was seconded to Co-ordinate the formation of the sub committee for the 2012 AAFA Conference and has passed the Liaison Officer role for Firepoint Magazine to Russell Lee.

#### **VICTORIA MEMBERSHIP**

The committee reports that VAFI has 199 financial members and welcomes Saifudin Binn Abdul Samat from the SCDF ( Singapore Civil Defence Force) as a member of VAFI. Other new members are welcomed: Chris Bell CFA, Travis Johnson CFA, Graham Cooper CFA, Anthony Morris Parks, Ray Argento CFA, Kevin Berry CFA and Gary De Vercelli ESV.

A break down of VAFI Membership is as follows 41 MFESB, 75 CFA, 31 VICPOL, 10 PRIV INV, 6 ESV, 4 INS, 14 Non Govt, 1 Priv, 4 Other. = 199 financial members.

Ian Hunter has been officially appointed as the Membership Registrar for VAFI and has requested that any membership correspondence be forwarded to:

Ian Hunter  
VAFI Membership  
c/o FIA MFB  
450 Burnley Street  
RICHMOND VIC 3121

#### **NATIONAL CONFERENCE 2012**

Several members of the VAFI attended the National Conference in Sydney and brought back valuable information. A sub-committee is to be formed to start the process for 2012. More information as it comes to hand. The committee will be selected from VAFI and invited members from interstate Associations.

#### **TRAINING PROGRAM FOR 2011**

**Summer (FEB) Fire Setters / JFIP**

**Autumn (APR)**

**Caravan/Vehicle fires at CFA Huntly**

**Winter (JUN) Alternate Fuels & Investigations**

**Spring (AUG) Road Show/**

**Case Study – Traralgon Area**

**AGM/Training**

**Building Construction & Development**

#### **SIGNING OFF**

I have been the Victorian Editor for Firepoint since it was started in the mid 90's and have supported the magazine trying to impart information and keeping the Victorian members up to date. Thanks to Wal Stern for his reminder emails and keeping me on track. I will still be supporting the Committee, but in the back ground now. All the best for Russell in the future.

Brian Neal



Brian Neal congratulating Trevor Pillinger on becoming the new Vice President and his award of Life Membership to VAFI.



**NSW ASSOCIATION OF FIRE  
INVESTIGATORS INC**  
(IAAI CHAPTER No.47)

**Web:** [www.nswafi.com.au](http://www.nswafi.com.au)

**Email:** [secretary@nswafi.com.au](mailto:secretary@nswafi.com.au)

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### **President's Report**

Welcome to my first report as the President of the NSWAFI. I would like to personally thank previous President, Greg Kelly and Senior Vice President, Mark Pollard for their time and effort given to the NSW Branch over the last 2 years. During their time on the committee, the efforts of Greg and Mark were nothing short of outstanding in particular Mark Pollard as he lives in South Australia and made the effort to travel to Sydney for our committee meetings at his own expense.

Our first National Conference has come and gone, and I would like to thank the organizing committee for the work they put in to make this a success. My own thanks go to Andrew Kerr for being the MC of the conference. The next one in 2012 will be held in Melbourne, so don't forget this.

Congratulations to the previous committee members for NSW who continued on for the next 12 months, and a warm welcome to the new committee member: Jeff Sinton (NSW Police), Morgan Cook (NSWFB), Steve Apps (NSWFB) BJ Jones (Private Industry), Paul Sweeney (NSWRFS), and Michael Forbes (NSWFB).

Christmas and New Year is upon us, so from my family and myself, the committee of NSW and their families, we wish you all a safe and prosperous Christmas and New Year and look forward to the next 12 months.

**Mark Black**

### **NEW PODCAST NOW AVAILABLE ON [CFITrainer.net](http://CFITrainer.net)**

This podcast features:

- An interview with Paul Zipper of the Massachusetts State Police about handling the pressures of a high profile fire investigation
- The results of new research by NRMA Insurance on why people leave a hot stove unattended
- New velocity and temperature combined sensors under development at Worcester Polytechnic Institute

Listen online, subscribe free through iTunes or download for your MP3 player.

## SEARCH AND RESCUE DOGS AUSTRALIA

*A presentation made to the National Educational Conference held in Sydney in August by Julie Crown.*

### WHO WE ARE

SARDA-Search & Rescue Dogs Australia is a self funded volunteer organisation training Scent Discriminating Dog Teams (dog and handlers) to become an Operational Search Team to locate and alert to missing people in both Land Sar and Urban Search & Rescue –disaster. These accredited teams are available as a rescue resource for all Emergency Service Units.

**LandSar;** open area searches where canine teams are deployed to search and air scent open areas in the bush to locate the scent cone of breath and bacteria from the lost person and alert the find to the handler.

**USAR** -Urban Search and Rescue is a specialised technical rescue capability for the location and rescue of entrapped people following a structural collapse. The response capability provides for locating and removing trapped and often injured live casualties or deceased victims from partially or totally collapsed structures or environments and providing emergency medical care, where required.

The types of incidents that may require a USAR response include earthquake, terrorist incident, aircraft crash, disaster or major structural collapse. In a USAR environment the required personnel, the roles they perform and the skills required for the roles are specialised to that environment.

After many years of competition canine obedience and tracking training, in 1994 myself and a fellow trainer, Rudi Klemm who was born

and raised in the Alps of Switzerland had a vision of training Land Search & Rescue (LandSar) dogs to locate and alert to lost people in the bush. During this time Rudi & I started to study the techniques of training a Cadaver Dog via manuscripts from a trainer in the USA – Bill Tolhurst who had revolutionised the successful deployment of Cadaver dogs for USA Emergency Agencies.

We used as much 'cadaver' as we could similarly use i.e.; hair, fingernail, teeth, Sigma product "Pseudo Corpse" and continued to train our dogs, Rudi with his German Shepherd and me with my Labrador at the time. A member of the Victorian Police Force who had his dog at the local obedience dog club was very interested in our training and came along to a few training sessions observing the cadaver training techniques. Victoria Police Cold Case Unit was made aware of our training via the Police Officer and invited us to travel to a central Victorian bushland reserve of 700 acres to try and locate human remains that had been buried in the area five years earlier.

After 6 hours we successfully located the remains and from that deployment we were invited to assist in a number of successful results where victim remains were eventually located again assisting Victoria Police Cold Case unit. This relationship extended from 1994 until 1999 when Victoria Police Dog Squad indicated that they would internally train Cadaver Dogs for deployment.

After the 1997 Thredbo disaster, we realised that there were no certified Urban Search & Rescue Dogs in Australia and from that time I started to pursue the training of an Urban Search & Rescue Dog by attending training seminars and training units in North Carolina and the eastern states of USA for three months in 1999. All the units I trained with were deployed at the World Trade Centre (9/11) in

2001. A lot of training techniques used were deemed unsuccessful from this deployment and from this everyone learnt where their good and bad points came to the fore.

We continued to train and acquire as much knowledge possible and in 2000 I travelled to Europe to attend workshops conducted by the German Redcross Dog Unit and also Dutch and Polish Urban Search & Rescue Units.

In February 2001, Rudi Klemm passed away as a result of Mesothelioma and I continued to lead the teams into the next phase of training accredited Usar dogs. In May, 2001 we funded an International Trainer from Scotland who has been conducting workshops internationally for 35 years in UK, Scotland, Wales and Europe to come to Australia to conduct workshops and Assessments for four weeks. I continued to travel overseas to maintain all training requirements to lead teams to their accreditation. We also continued to fund travel and accommodation for different International trainers and Assessors to come out to Australia until 2008.

## WHAT WE DO

SARDA "Scent Discriminating Dog Teams" continue to train toward their Operational Status. We are all volunteers are totally self-funded, supplying our own training equipment, personal protection equipment, canine maintenance and travel requirements. It is extremely hard on the volunteer to maintain this physically and financially. A lot of volunteers come to SARDA with their pet dog and expect that they will eventually be a deployable team. This is not the case in many instances.

To produce the operational canine is a very delicate task where you really have to have the dog from a puppy, have the right ingredients and have a degree of dog training experience. This discipline is one of the hardest areas of dog training as you need a dog to have and abundance of Prey Drive, Play Drive, Hunting

Instinct, love people and have an intelligent and biddable nature.

Dog breeds suitable are the Labrador, German Shepherd, Golden Retriever, Border Collie, Kelpie just to name a few. The Border Collie and Kelpie are "sight" dogs and have to be trained to use their noses first unlike, the Labrador, German Shepherd & Golden Retriever whose first instincts are using their noses. Other breeds and cross breeds have been successful search & rescue dogs but the main sources are the breeds above.

The statistics of the success of an Operational Search & Rescue dog is around one on every 100.

To train the successful search & rescue dog requires multiple areas of training, using rubble piles, bushland areas, deserted and occupied buildings and buildings that have been trashed. This gives the dogs the training on broken glass and excess odours attached to disused buildings. The dogs have to discriminate between the odours in and around the area plus locate and alert to the victim at hand. We add smoke, chainsaw noise, pop guns and the like to simulate an actual disaster site with rescue personnel.

The dogs are taught to alert, by the way of the bark, to breath and the bacteria from the victim which is air borne from either a person trapped in a rubble pile or in the bush search. For the rubble (disaster) search, the dog has to be very agile and confident on unstable surfaces. He can locate the breath and bacteria from a victim trapped beneath a collapsed building through voids that work their way to the surface. The area (LandSar) search dog is able to locate air borne bacteria via a scent cone from the lost victim. The handler directs the dog into the area by testing the wind direction on both the rubble area and the bush area.

To be able to complete the Operational Status, all handlers have to pass all regulation safety and training requirements. This is where the

Victorian Country Fire Authority has allowed our teams to complete their Category 1, safety and training status through their programs. The teams are not allowed on to any disaster site without this certification.

## **HOW WE DO IT**

SARDA prefers to have dogs from the puppy age of 8 weeks onwards. The puppy has to have the correct ingredients as described previously and the training is all play games of hide and seek. Puppies are encouraged to play with a squeaky tug toy and then seeing the victim run a short distance away, sent to the victim and is allowed to play with the tug toy. Once this is set in stone (doesn't take long) the victim hides the toy on his/her body and the puppy has to try and find it. Once frustration sets in the puppy with start to whine and the toy is released. This process turns into a bark once the puppy realises that the longer he has to wait the louder he has to bark. The handler then appears and asks "what have you found?"

This training is continued expanding on the search area and more difficult scent scenarios until the dog has reached a Foundation Skills Level.

Obedience, Agility and Directional Skills are an added test to the Operational Search Dog accreditation which is Basic Operation and Advance Operation.

We have handlers who have their mature age dog who want to become operational members, but many handlers have breeds that are not suitable for this work and face rejection and are advised to pursue another discipline. Even dogs that are a suitable breed are often rejected because of their previous education in other disciplines which is often detrimental to search dog criteria.

## **WHY WE DO IT**

SARDA volunteers are always seeking to produce the best trained dog teams who are ready for any emergency that requires a canine rescue resource.

A fully trained search & rescue dog is equivalent to 30-40 human searchers in a LandSar deployment. The search dog is able to range for 200-300 metres from their handler, casting from side to side trying to locate any breath or bacteria coming from the lost victim that dissipates in the air and is spread via wind direction.

In the Usar discipline, a Category 1 practical exercise was conducted by the CFA where there were 18 searchers on a pile the size of 100m x 50m with tunnel access enlisted a line search. The line searchers on the pile took 30 minutes to eventually locate the victim under the pile. When the search dog was deployed to search and locate the victim it took him two minutes.

For these reasons we would like to assist in any way to try and provide a quick and efficient rescue resource for the vast community.

## **AUSTRALIAN QUALIFICATIONS REQUIRED FOR USAR CANINE OPERATIONAL STATUS**

In May 2009 the National USAR Working Group endorsed the Australian Urban Search and Rescue Canine Capability Best Practice Guideline. This guideline offers a framework for the development of a canine search team suitable for deployment to a USAR incident as part of a USAR Task Force. A canine search team consists of a canine search specialist and a disaster search canine.



The Australian Urban Search & Rescue Canine Capability Best Practice Guideline requires that by 2011 each jurisdiction with a USAR canine capability will have achieved at least basic operational level and be working towards the advanced operational level as defined in the Guideline.

During 2008 – 2009 extensive consultation with canine urban search and rescue operational experts was undertaken with regard to the competencies required to effectively implement canine search and rescue strategies in urban environments. The consultation included reviewing existing units of competency and proposing new units of competency. Feedback from the consultations was collated and included in draft units, which were then worked on by the **National USAR Technical Working Group – Canine Technical Committee**, with support from the **South Australian Metropolitan Fire Service**.

To support the development of each jurisdiction's USAR canine capability to basic operational level, four USAR canine units of competency have been developed to provide the training framework under which canine search teams can be assessed as competent to basic operational level. Version 8 of the PSTP will see these new units endorsed:

- Select and maintain canines to part of a canine search team for Usar incidents
- Develop a canine search team for Usar incidents
- Train canines to work in Usar environment.
- Search as part of a canine team at Usar incidents

The future goal is that by 2012 all jurisdictions that have canine capabilities will be operating at the advanced operational level as the minimum level for deployment. Through the continuous improvement process it is planned to introduce at a later stage a unit of competency to support the advanced operational level.

## **ACCREDITATION AND DEPLOYMENTS BY SARDA**

In 2004 SARDA gained its first Internationally Accredited Operational LandSar and Usar Canine team with the team assessed by National SARDA UK Assessor Mr. Tom Middlemas. In 2005 another SARDA canine team was accredited with Operational Usar Canine team status.

These teams have continued to pass bi-annual assessments required until 2009 when Usar canine capabilities will be able to be assessed by their own jurisdictional Assessors. At present, these two canine teams are the only two Internationally Accredited LandSar and Usar Usar Search Specialist team in Australia.

In 2007 Victorian CFA Usar Task Force deployed two SARDA Search Specialist teams to a double storey house fire in Melbourne's south eastern suburbs. It was believed that a male person living in the house set fire to it intending to kill his parents. His parents escaped the burning house but CFA personnel and Police were unable to locate the missing male. Victoria Police believed the male had not escaped the inferno so we were asked to see if the dogs were able to ascertain whether his remains were in the debris.

Our scent discriminating dogs are able to ascertain if bacteria is present on the burnt remains for up to 36 hours depending

circumstance and weather. It was mild weather and we were able to access the site within 5 hours of initiation of the fire. Both operational dog teams were deployed and neither showed any interest in any areas allocated but did show interest in a mattress that had been used by the male. Unable to access dangerous areas to complete the deployment, we were asked to return the following morning. Due to their extensive search of surrounding areas and transport modes, Victoria Police still maintained that the male had not escaped so we were given more area of the site to cover the next day but the dogs still showed no interest in any areas at all. The result was that the male was taken into custody from a psychiatric hospital in Sydney a week later for questioning and later charged with the crime.

In 2008 SARDA was deployed by Victoria Police Search & Rescue to assist in a LandSar deployment to locate a missing bush walker at Mt. DomDom near Healesville in Victoria's east. The two Operational canine teams were both deployed along with six SARDA personnel. Each SARDA member has a role in the search structure including navigation and communication skills plus first aid accreditation and are all deployed as support crew to the Canine teams.

SARDA was deployed in the area for four days until the search was scaled down and was reignited a month later for another final sweep of all areas that had been searched and possible new areas.

Unfortunately the missing bushwalker was never located.

## **BLACK SATURDAY DEPLOYMENT**

On Monday, February 9<sup>th</sup>, 2009 I received a call from Mr. Bill Drysdale, Usar Manager, Metropolitan Fire Brigade requesting the availability of a trained Cadaver dog. I advised that we did not have Cadaver Dogs but we did have "Scent discriminating Dogs". I also advised him that the bacteria would still be present on the remains for up to 36 hours depending on weather conditions

The weather conditions were very positive for our deployment, not too cold but quite humid with a slight chill for that time of the year.

We agreed to deploy our two Operational Usar dogs but I requested that we be able to test the dogs first but allowing them to locate and alert to positive finds at Kinglake. This request came to fruition and both dogs, being a little hesitant at first, certainly knew exactly what they were searching for from that positive find and subsequent reward.

We continued to work with the combined MFB/CFA Usar task force at rural properties with the dogs using their skills in their training by skimming over the burnt disaster sites alerting to remains that were located underneath rubble, saving so much time for the Forensic Teams.

We used one dog for the original location and alert with the second dog as confirmation.

At one location there was nothing left of the building except ashes and the Forensic teams were positive that remains were still present. Sardog Gus was very keen in an area at the rear of the premises but all that was visible were springs from a mattress, the rest of the area was ash.

Sardog "Gus" continued to alert to the corner of the premises in the proximity of the mattress. Gus was brought on to the area from four different directions but continued to give the positive alerts. Second sardog "River" was then brought in and confirmed the same area, with the same search strategy as sardog "Gus". Forensic teams decided to box the area and take the ashes for analysis and it was confirmed that they were a positive find.

On Thursday morning, February 12<sup>th</sup>, 2009 we were requested to re-locate to Marysville as there had been three unaccounted victims in the Cumberland resort and the Queensland Police Cadaver Dogs who were on site but unable to cope with the massive debris.

Upon our arrival at Marysville, we were totally shocked at the mass destruction that stood before us, in Kinglake we were deployed to rural properties but this was a mass destruction site.

We were asked to search the Cumberland Resort at approximately 4.30pm on the Thursday afternoon with only sardog "Gus" being deployed. It was presumed that the three victims may be located in the front area of the resort but it was a massive pile of glass and debris.

"Gus" was confident with his agility over the debris due his massive training on areas like this and did not hesitate to continue to search under these conditions.

There was no indication from "Gus" of the presence of bacteria in the areas initially allocated so "Gus" was given other areas at the rear of the resort to continue to search. At the rear of the resort along a massive brick tower like area, he gave an indication that there may

be bacteria present. The MFB/CFA Usar Task Force Incident Controller indicated that the area was too dangerous and that they would bring in one of their structural engineers to assess the area.

At 5.30pm the MFB/CFA Structural Engineer indicated that the area was unsafe and that a wall enclosing the towers that sardog "Gus" had indicated the possibility of bacteria present, would have to be demolished to allow the Canine team to work safely.

After a briefing by Police Commanders at 9.00am on Friday February 13<sup>th</sup> it was decided that the rear north east wall of the Cumberland Resort would be demolished to allow access for the dog team to continue searching. At 10.00am sardog "Gus" gave a positive indication alongside the tower he was originally interested in after further access was made after the demolition of the rear north east wall.

Sardog "River" was then brought in to search the area and also gave positive indication at the same site confirming the indication of "Gus".

Confirmation was given to us that the tree victims were found in the area the two dogs indicated.

We completed our deployment at Marysville on Friday afternoon when I consulted with the Victoria Police Dog Squad representative Sgt. Sean McGovern that due to the weather conditions, our sardogs would no longer be a viable asset and that Cadaver Dogs should now be able to continue with the deployment.

We were very pleased with the work ethic and determination of the Operational Usar canines deployed as they continued this massive task with all the energy and enthusiasm from start to finish that we have trained them for.