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Environment, Natural Resources and Regional
Development Committee

Inquiry into the CFA Training College at Fiskville

Final Report

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Environment, Natural Resources and Regional Development Committee

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Committee functions

The Environment, Natural Resources and Regional Development Committee is constituted under section 10 of the *Parliamentary Committees Act 2003*.

The committee's functions are to inquire into, consider and report to the Parliament on any proposal, matter or thing concerned with:

- a. the environment
- b. natural resources
- c. planning the use, development or protection of land
- d. the provision of services to regional Victoria
- e. the development of regional Victoria.

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Chair's foreword

'Firefighters are the embodiment of commitment to the community. Whether in the middle of the night, during the working day, or at times when families and communities are celebrating special events, Victoria's firefighters step into difficult and dangerous situations to protect property and save lives.'

Mr David O'Byrne, Victorian Fire Services Review 2015

Although written by someone separate from this Committee, these words from David O'Byrne rang true throughout our Inquiry into the CFA Training College at Fiskville. Yet it is this sacrifice and selflessness that makes the CFA's treatment of firefighters and their families so disappointing. Instead of ensuring the safety of the people who protect us, some CFA senior management and Board members allowed firefighters and their families to be exposed to toxic chemicals with known links to cancer and other illnesses. This exposure also spread beyond Fiskville's boundaries, affecting families living on neighbouring properties and those who attended Fiskville State School.

When a well-respected organisation is questioned there are some who will reject the notion of wrong doing. Instead of welcoming the search for the truth, they attack the credibility of those who dare to speak up. The Fiskville tragedy is no exception. I hope the clear evidence contained in this Report will end such doubts.

Members of the Committee, many of whom are also CFA members or have a long association with the CFA, read and listened to over 500 submissions and witnesses. The Committee heard repeatedly that Fiskville was a special place for many, where lifelong friendships were forged, as well as making an important contribution to the local community. We were saddened by what we heard from firefighters and others with first-hand experience of Fiskville, and struck by their courage to speak up.

Witnesses were driven by a need to know the truth, to have suspicions confirmed or myths dispelled. Equally striking, then, was witnesses' confusion and even self-doubt, with many stating: "I don't know if my illness is caused by my time at Fiskville, but ...". The thought of a trusted organisation such as the CFA being responsible for the ill health of firefighters and their families seems unimaginable. How could anyone accuse an organisation that is so well loved of such terrible things? How do I really know that my illness is due to contamination at Fiskville? Am I mistaken?

This Report validates the testimony of everyone who gave evidence of contamination, exposure and ill health. To the question: “Could unsafe practices at Fiskville have caused my illness?” – the answer is, in all likelihood, yes. To the question: “Did CFA management and Board members know that practices at Fiskville were unsafe or contravened standards and safety regulations” – the answer is yes, some did.

This Report makes strong findings about the behaviour of the CFA. However, I stress that the findings are not directed at the many thousands of courageous volunteers and paid staff that form the grassroots of the CFA, but rather those professional managers who should have known better.

The link between hazardous materials and ill health is never absolute. As one witness explained, even the link between asbestos and mesothelioma has never been proven in the laboratory, yet there are few today who would deny it exists. The Committee heard extensive evidence highlighting the relationship between exposure to hazardous materials at Fiskville and ill health. (It is the same evidence used to support presumptive legislation for firefighters.) While this evidence may not have been as certain in the 1970s or 1980s, there is no doubt that it was common knowledge that exposing people to such toxins would in some way harm their health.

This Inquiry also revealed poor oversight of the CFA's conduct at Fiskville by those with the statutory responsibility to regulate that conduct. At least since 1980, Victoria has had laws in place protecting the safety of workers and the environment. Yet statutory authorities, such as WorkSafe and EPA Victoria, did little to protect the community.

The Committee thanks everyone who gave evidence to this Inquiry and pays respect to those who have been unable to participate because illness has already taken their lives. I would like to acknowledge the late Mr Brian Potter, who first drew attention to chemical exposure at the training centre, and his wife Diane, who continues his struggle to uncover the truth. Also, I thank Mr Mick Tisbury, who has relentlessly fought for justice for victims and the right of current and future generations of firefighters to train safely.

Members of the Committee worked collegially to hear and thoughtfully consider all of the evidence, deliberate on our findings, and make recommendations. This was in many ways an unusual Inquiry, in that it was a forensic investigation into allegations of unsafe practices, past health studies and remediation efforts. I thank all members for their commitment and genuinely open-minded approach to this Inquiry.

In undertaking this task we were well supported by a team of dedicated and talented Secretariat staff, legal interns and expert advisers. In addition to usual Committee duties, they worked tirelessly to review, search and piece together the crucial documents needed for our investigation. I thank them for their hard work.

The Terms of Reference for this Inquiry required the Committee to conduct an historical study of events at Fiskville, what people knew and the health impacts of the contamination. We were also asked to assess remediation options for the site and provide justice to those affected by Fiskville. Nothing can bring loved ones back or ensure a return to good health. This Report, however, includes recommendations that will prevent a reoccurrence of unsafe firefighter training practices in Victoria. Crucially, it concludes with a recommendation on how to provide justice to those affected by events at the CFA Training College at Fiskville.

A handwritten signature in blue ink that reads "Bronwyn Halfpenny". The signature is written in a cursive, flowing style.

Bronwyn Halfpenny MP
Chair

Terms of Reference

Inquiry into the CFA Training College at Fiskville

Received from the Legislative Assembly on 23 December 2014:

That, under s 33 of the *Parliamentary Committees Act 2003*, an inquiry into the CFA training college at Fiskville be referred to the Environment and Natural Resources Committee for consideration, inquiry and completion of an interim report no later than 30 June 2015 and a final report no later than 1 December 2015* and, in particular, the inquiry will include, but not be limited to the following —

1. a comprehensive historical study of pollution, contamination and unsafe activities at Fiskville between 1970 and the present day;
2. a study of the health impacts on employees, residents and visitors between 1970 and the present day;
3. a study of the role of past and present executive management at Fiskville;
4. an assessment of the feasibility of decontamination/rectification of the training site; and
5. recommendations as necessary to mitigate ongoing harm and to provide justice to victims and their families.

** On 10 March 2016, the reporting date was extended to 16 May 2016.*

Executive summary

For over 40 years, the CFA Training College at Fiskville trained thousands of people from many different organisations across Victoria and Australia. The training activities and related health and safety practices at the College are the focal point of this Final Report.

The CFA is not simply a uniform organisation or corporation. It is made up of hundreds of individual brigades, over 60,000 volunteer firefighters and a smaller number of paid firefighters, whose skills and service Victoria cannot do without. It is also comprised of professional senior executives and a number of levels of paid full-time managers, as well as an operational hierarchy.

Overarching these is the CFA Board, which currently includes five members appointed by the Minister and four selected from a panel nominated by Volunteer Fire Brigades Victoria. Throughout this Inquiry the Committee learnt of times when various Board members were aware of contamination at Fiskville. Unfortunately, the Committee did not have the opportunity to question a large cross-section of CFA Board members regarding their knowledge. This was because of the difficulties the Committee encountered in accessing Board papers in a timely manner (as discussed in this Final Report).

It has been difficult for the Committee to reach the findings it has because of the respect it holds for the work of the CFA and its members. Most members of the Committee are CFA members themselves or have strong family connections with the organisation developed over many generations. Firefighters and other operational members have been exemplary in carrying out their responsibilities to protect communities, recently battling some of the biggest fires in Victoria's history - the Hazelwood Mine fire, Black Saturday and Wye River. For this they have the Committee's utmost gratitude.

However, the Committee believes it is possible to separate the work of grassroots members from the actions of senior executives and the Board. This Final Report, guided by facts, reaches the conclusion that, in respect of the Training College at Fiskville, some senior executives and Board members did not meet their responsibility to keep CFA members and staff and the surrounding community safe from contamination.

The Committee has relied on the personal submissions it received and witnesses it heard from at public hearings. All of these people provided invaluable first-hand evidence of their experiences at Fiskville. The Committee is grateful for the volunteer and paid firefighters, their families, and others from the local community near Fiskville, who were willing to discuss so frankly events that cause great emotional and physical pain. Without them it would not have been possible to produce this Final Report.

The Committee heard mainly from people who are looking for answers. Some want to know if the illnesses they or friends and family have are due to exposure to contamination at Fiskville, while others are concerned that their health may suffer in the future. As such, their evidence features strongly in this Final Report.

The Committee has no wish to deny that positive Fiskville stories exist and the Committee clearly has not heard from everyone who attended the site. Nonetheless it has a responsibility to listen to those affected by unsafe practices at Fiskville and provide recommendations and findings based on the evidence and facts. The evidence and findings throughout this Final Report give weight to their claims that there is indeed a connection between chemical exposure and particular illnesses.

It is important to note that this Inquiry is not an investigation into one event at a particular point in time or one specific policy area. Rather, the Committee has examined a number of different moments in Fiskville's history which best illustrate what happened and how it was allowed to happen. From this the Committee can state that the health risks and environmental degradation that arose at Fiskville are two-fold: risk from the products of combustion (including unsafe handling of fuels); and risk from water contaminated by the products of combustion and firefighting foam used to extinguish fire.

Throughout this Final Report the Committee presents evidence regarding specific people at the CFA at distinct points in time. Some of these individuals, across the CFA, knew about contamination and failed to take action or inform others within the organisation about the dangers at Fiskville. Unfortunately, these are not isolated incidents. Rather they show a pattern of behaviour that continued over many years at Fiskville. The consequences of this behaviour were: that people who lived and worked at Fiskville were placed at unnecessary risk; and that the corporate knowledge that should have prevented exposure to contamination was either not passed on or was lost.

Equally concerning is the advice received by the Committee from the Victorian Government Solicitor's Office that the CFA did not spend any funds on remediating Fiskville prior to December 2012 (that is, there was no spending on remediation in the 2010-11 and 2011-12 financial years). This is despite the fact that several consultants commissioned by the CFA recommended a variety of remediation activities be carried out at Fiskville prior to that date. For example, the need to remediate sludge in Dam 1 was raised in 1996, 2009 (by two consultants) and February 2012 (this matter is discussed in more detail in Chapter 4). This fact lends weight to the Committee's conclusion that the CFA did not respond as it should have to contamination at Fiskville (see Chapter 6 for specific examples of CFA inaction).

Following the courageous decision of Mr Brian Potter to speak out and the publication of a *Herald Sun* story in December 2011, the CFA responded to the contamination by commissioning Professor Robert Joy to conduct an investigation into past - or 'historical' - practices at the Training College between 1971 and 1999. The report, *Understanding the Past to Inform the Future*, has become known as the 'Joy Report'. Although the Committee has relied to some extent on the research undertaken by Professor Joy, the Committee considers the

CFA's appointment of Professor Joy and his investigation's Terms of Reference troubling for a number of reasons. These are discussed throughout this Final Report. One of the aims of this Inquiry has been to fill in the gaps left by the Joy Report.

The Committee's Final Report provides a comprehensive history of events at Fiskville and in doing so attempts to uncover the truth of what happened at the site. Combined, these events create a catalogue of poor safety practices at Fiskville that studies suggest are likely to have harmed people's health. The probability that the CFA's actions at Fiskville caused illness, along with the regulatory failures of WorkSafe and EPA Victoria, is strong enough to necessitate the creation of a dedicated Fiskville redress scheme to provide some justice to the people harmed by events at Fiskville. This Final Report systematically presents the facts, chapter by chapter, in order to support this important recommendation.

Chapter 1: Introduction to the Inquiry

Chapter 1 provides the background to this Inquiry. It lists the Terms of Reference and explains the history of the Fiskville Training College - including its position as the CFA's 'spiritual home' - leading up to the speaking out by Mr Brian Potter and the media coverage that brought widespread attention to seemingly high incidences of illness among people connected to the site. Some of these illnesses, and concerns about further health problems in the future, are listed using first-hand evidence of people who lived and worked at Fiskville. The Chapter then introduces two major themes of the Inquiry covered later in this Final Report: the epidemiological evidence of illness at Fiskville; and the role played by Victoria's regulators overseeing the Fiskville site.

Chapter 1 also provides a brief overview of firefighting in Victoria, the events that lead to the creation of the Country Fire Authority in 1945 and its current responsibilities. The Chapter then comments on the direct link between high-quality training and safe, effective firefighting - while noting the debate on whether training should involve 'real fires' or simulated fires - followed by examples of how past reviews following catastrophic fires have shaped approaches to firefighting in Victoria. These issues are placed in the context of the CFA's occupational health and safety responsibilities for everyone who lived and worked at or visited Fiskville.

The Chapter concludes by discussing the reason for Fiskville's closure - that is, the Board's loss of confidence in the safety of the site - and how the closure has reduced Victoria's capacity to train the number of firefighters it needs.

Chapter 2: Inquiry process

Chapter 2 outlines the Inquiry's process since the Terms of Reference were handed to the Committee on 23 December 2014. It includes information on: the 476 submissions to the Inquiry; the more than 20 public hearings, site visits and informal briefings throughout the Inquiry; and the Committee's study tour to Germany at the end of 2015.

In order to conduct the ‘comprehensive’ study required by the Terms of Reference the Committee requested a range of CFA documents (internal reports, Board minutes etc.) However, the Committee encountered many difficulties in obtaining the documents, which led to it taking the unusual step of tabling a ‘Special report on the production of documents’ in November 2015.ⁱ

This Inquiry was therefore delayed by the time taken for the Committee to receive the documents it needed. Further delays were caused by the large number of frequently unnecessary redactions throughout the documents imposed by the Victorian Government Solicitor’s Office. The slow release of documents combined with tactics designed to ‘swamp’ the Committee with material forced the Committee to request two extensions to the Inquiry’s reporting date. This frustrated both the Committee and the many people waiting for the outcome of this Inquiry.

Chapter 3: Fiskville - the site, contamination and people’s experiences

Chapter 3 begins with an overview of the events preceding and following the publication of a *Herald Sun* article in December 2011 that brought allegations of unsafe practices at Fiskville to the attention of the wider Victorian public. The CFA responded to the allegations by commissioning Professor Robert Joy to lead an investigation into Fiskville. However, the ‘Joy Report’, as it became known, was limited to examining training practices only up to 1999.

The Chapter then examines the hazardous fuels used at Fiskville and the possible human health effects of these materials. It follows this with a detailed discussion using the first-hand experiences of people who lived and worked at Fiskville or nearby and those who attended Fiskville State School. The discussion covers:

- The nature and experience of training activities
- Health conditions and concerns of their link to Fiskville
- People’s trust in the CFA to do the right thing
- How the CFA treated people who raised concerns.

In order to get to the truth it is important that the experiences of the people who lived and worked at Fiskville are told. Although it may be argued that many of the worst practices at Fiskville occurred decades ago - what some have dismissively referred to as ‘historical practices’ - the repercussions of those practices for the people affected are ongoing and powerful.

Chapter 3 concludes with a summary of the CFA’s community engagement program, which informed local residents near the site of the risks posed by the contamination at Fiskville. The Committee found that the CFA’s community engagement program was not to the same standard as programs from similar agencies that the Committee examined.

ⁱ See: Environment, Natural Resources and Regional Development Committee, Inquiry into the CFA Training College at Fiskville, *Report and Response*, (www.parliament.vic.gov.au/enrrdc/article/2526)

Chapter 4: Contamination - history of training activities and how the Fiskville site was contaminated

Chapter 4 examines the practical training methods employed at Fiskville. It explains how the use of fuels, recirculated water and firefighting foams containing perfluorinated chemicals (PFCs) contaminated the site. However, the exact kind of fuels, many of them donated, remains unknown because of poor record keeping. This makes it difficult to determine with certainty the health effects caused by the contamination.

The Chapter goes into a great deal of detail to clarify several issues of confusion surrounding the CFA's use of water at Fiskville. For example, prior to 2012, contaminated firefighting water was recirculated through a number of dams and filtration devices. At some stage in 2012, Fiskville began using mains water only without any recirculated water. Lack of clarity over the exact date this happened caused confusion and mistrust. These problems were made worse by unclear and sometimes contradictory statements from Fiskville staff at the time about whether Class A recycled water was being used or not.

The Committee is also critical of CFA senior management for its decision not to remediate contaminated sludge in Dam 1, as requested by staff at Fiskville.

Chapter 5: CFA organisational culture and approach to health and safety

Chapter 5 examines how the concept of governance is relevant to: the CFA as a statutory authority; and how the CFA allowed the pollution to happen. Governance is strongly tied to the culture of an organisation, which itself determines how an organisation behaves. The CFA's culture is slowly changing from that of a 'paramilitary' organisation - often a positive when fighting fires - to that of a more specialised organisation. Yet there is still room for improvement in: how senior management and the Board respond to and manage internal criticism; and how responsibility for change at management level does not end with merely deciding on a policy - implementation of policies must be overseen to ensure they are followed throughout the whole organisation. This Chapter touches on oversight of the CFA by Victoria's regulators and the need to improve this oversight while maintaining the CFA's independence - including strengthening the CFA's performance reporting requirements.

The Chapter then examines how maintaining the trust of its people and the broader community is crucial for the CFA's long-term strength as an organisation. It contrasts the community engagement activities of the CFA with those of the Department of Defence regarding land it has contaminated.

The Committee heard an opinion that the CFA was 'reviewed out' and is therefore mindful not to recommend further reviews. Rather, the Committee has identified and discussed several examples of CFA policies and recommendations from reviews by outside organisations that were either not implemented across the CFA as a whole or ignored completely. These are listed in the Chapter followed

by an examination of the CFA's poor handling of buried drums at Fiskville containing chemical contaminants. This example is one illustration of the CFA's failure to take action to prevent and manage contamination at Fiskville.

Chapter 5 concludes by providing examples of occupational health and safety issues at Fiskville handled poorly by the CFA.

Chapter 6: The role of past and present CFA executive management

Chapter 6 begins by explaining the CFA's organisational structure over time, including executive management and the CFA Board. The Committee notes that the structure of the CFA Board has changed over recent years and now contains a greater number of members with expertise in governance issues (as opposed to strictly 'operational' experience). This 'modernisation' process of the CFA Board has in part been an attempt to improve the flow of information from training grounds such as Fiskville up to the Board. However, the Committee observed that the 'semi-autonomous' nature of Fiskville remained largely intact throughout this process.

The Chapter then provides an overview of CFA senior management and Board knowledge of: chemical contamination; occupational health and safety; dangerous goods storage and disposal; and concerns surrounding water supply and quality. It shows that some individuals across all levels of CFA executive management, including the Board, had knowledge about contamination at Fiskville prior to the December 2011 *Herald Sun* article.

The second half of Chapter 6 analyses the CFA's reaction to the contamination of the site through both historical and recent examples. This serves three purposes: to provide an understanding of how the CFA operated across the years at Fiskville; to show that there was often a poor flow of information up through the CFA (from training facilities to senior management and then the Board); and to provide examples of inadequate responses to knowledge when it did flow properly.

The Chapter concludes with a finding that some CFA senior executive managers did know about contamination at Fiskville. Their failure to address the contamination unnecessarily exposed further generations of Fiskville trainers and trainees to risk.

Chapter 7: Regulation of Fiskville by WorkSafe

Chapter 7 focuses on legislation enacted in Victoria to protect workers and others from dangers to their health and safety at workplaces. It highlights sections of the *Occupational Health and Safety Act 2004* and the *Dangerous Goods Act 1985* most relevant to Fiskville. The Chapter then considers the manner in which the legislation was applied and enforced at Fiskville by the regulator WorkSafe and its predecessors.

The Committee became aware of several examples of notices issued by WorkSafe inspectors that were not followed up by either WorkSafe or the CFA Board. The Committee also examines evidence showing WorkSafe was not involved in investigating an incident at Fiskville in March 2002 in which buried drums containing hazardous material were accidentally dug up.

Other conclusions reached by the Committee include: WorkSafe should have been involved in the CFA's decision to increase its acceptable level of E. coli in 2009; and WorkSafe provided a 'letter of assurance' to the CFA regarding Fiskville. These are further examples of the Committee striving to clarify issues of contention that arose throughout this Inquiry.

Chapter 7 also examines two requests from the United Firefighters Union (UFU) to investigate Fiskville. The first, in July 2012, involved the UFU's concerns over the safety of the firewater at Fiskville. WorkSafe found that no breaches of the *Occupational Health and Safety Act 2004* had occurred.

The second UFU request, in December 2012, asked WorkSafe to investigate the CFA for a further possible breach of the *Occupational Health and Safety Act 2004*. WorkSafe decided not to prosecute, in part because of concerns over the integrity of the CFA's system for testing water. In taking nearly two years to make its decision, WorkSafe did not abide by the law that requires it to conclude an investigation of possible breaches of the *Occupational Health and Safety Act 2004* within three months.

The Chapter concludes with the Committee's finding that WorkSafe, as Victoria's occupational health and safety regulator armed with extensive powers conferred by the legislation it administers, should have been proactive - rather than reactive - in regulating practices at Fiskville. In particular, it is telling that WorkSafe was not involved in the decision to close Fiskville. This finding is particularly important, as the CFA was selective in the information it provided to WorkSafe about occupational health and safety issues at Fiskville.

Chapter 8: Regulation of Fiskville by other regulatory agencies

Chapter 8 continues the discussion of regulators and shifts the focus onto EPA Victoria, the Moorabool Shire Council, and other regulators and public bodies that have interacted with Fiskville. It also highlights sections of the *Environment Protection Act 1970* most relevant to Fiskville.

The Committee identified two separate eras of EPA Victoria's involvement at Fiskville: prior to a 2011 compliance and enforcement review and publication of the Joy Report in 2012; and following these reports. In the first era, there is evidence that EPA Victoria played only a minor role regulating activities at Fiskville despite being aware of contamination. In the second era, EPA Victoria began to take a more proactive approach to compliance and enforcement. However, the Committee believes that EPA Victoria has not fully used its powers under the *Environment Protection Act 1970*.

The Chapter also notes that the CFA did not need a licence to operate from either EPA Victoria or Moorabool Shire Council. This was because it was generally assumed to have had 'existing use rights', which come into effect after 15 years of continuous use of a site.

Chapter 8 includes an analysis of how a number of regulators responded to the detection of PFOS in stock on a property adjacent to Fiskville. The Committee disagrees with the decision taken by the Department of Environment and Primary Industries to issue a Contaminated Stock Notice (which was rescinded two days later). Further, the Committee notes that: the Chief Health Officer did not access scientific advice independent of the CFA; and the Department of Environment and Primary Industries was unprofessional in involving the CFA in its statutory decision making.

Fiskville is located in Moorabool Shire, whose Council was called upon to execute its responsibilities under the nuisance provisions of the *Public Health and Wellbeing Act 2008* and enforce prohibition against littering under the *Environment Protection Act 1970*. These responsibilities arose in relation to a complaint from a separate neighbouring property at Fiskville. The Committee found that although Moorabool Shire Council played a role in helping the CFA and its neighbour reach an agreement, the Council should have acted much sooner than it did. The Committee also found that neither Moorabool Shire Council nor EPA Victoria issued a litter abatement notice under the *Environment Protection Act 1970*, despite both bodies having the power to do so.

The Chapter concludes with a discussion on the relationship between Emergency Management Victoria and Fiskville. The Committee learned that the CFA has yet to adhere to its requirement to report to the Emergency Management Commissioner every six months because of Emergency Management Victoria's delay in publishing standards.

Chapter 9: The consequences - human health

Chapter 9 begins with a brief discussion of two common health risks faced by firefighters: cancer and lung disorders. The International Agency for Research on Cancer has linked firefighting to three cancers - testicular cancer; prostate cancer; and non-Hodgkin lymphoma - and classified firefighting as possibly carcinogenic to humans. Lung disorders arise through firefighters inhaling the products of combustion. This makes firefighters susceptible to lung disease following acute events of extreme exposure.

The Chapter then looks at the health effects of four chemicals that firefighters are commonly exposed to and which were used in firefighter training at Fiskville - benzene, toluene, xylene and phenol - and the role of epidemiological research in health studies.

The discussion then turns to an examination of several health studies related to Fiskville and Australian firefighters:

- Cancer Council Victoria analysed the cancer risk for 599 men who worked and trained at Fiskville. The study identified 61 men diagnosed with cancer and four with secondary cancers. Of this group, the most common cancers diagnosed were prostate cancer and melanoma.
- The CFA commissioned researchers at Monash University's Centre for Occupational and Environmental Health to investigate the risk of cancer and mortality for individuals who worked and trained at Fiskville. The study focused on a cohort of 606 people and found that the observed number of all cancers was slightly in excess of the expected number of cancers with a significantly increased risk of brain cancer and melanoma.

The Centre for Occupational and Environmental Health has also been commissioned by the Australasian Fire and Emergency Service Authorities Council to conduct a national study of firefighters' mortality and cancer risk. The study examined just over 230,000 current and former Australian firefighters and found that compared to the Australian population, the incidence of cancer was eight per cent higher for male full-time firefighters and 11 per cent higher for male part-time firefighters. Compared to the Australian population the incidence of cancer for male volunteers was lower.

While national studies show lower rates of cancer in firefighter trainers, studies at Fiskville place trainers there as being at a 'high risk' of developing cancer. This suggests that trainers at Fiskville have been exposed to chemicals to which trainers at other sites have not been exposed.

The studies also examine the 'healthy worker effect'; that is, firefighters are more likely to have higher than average fitness due to the demands of their work. The evidence suggests that if it weren't for the dangers inherent in firefighting the 'healthy worker effect' would be such that firefighters would live even longer than they do; that is, the dangers negate the healthy lifestyle of most firefighters.

Chapter 9 also provides a summary of two CFA health programs initiated following the Joy Report:

- The CFA Health Surveillance Program was established in 2012. It is ongoing and monitors individuals for a period of five years following their acceptance into the program.
- The CFA Health Check Program was established in March 2015. It involves a single health check by either the CFA Medical Officer or the individual's own medical practitioner (overseen by the CFA Medical Officer). The CFA Medical Officer can also recommend that a person be moved to the CFA Health Surveillance Program.

A contemporary health concern at Fiskville was the risk posed by firefighting foams containing PFCs. The concern about PFCs centres on their persistence, bioaccumulation and toxicity (PBT) characteristics. Although there is general agreement about the persistency and bioaccumulative properties of PFCs, the Committee heard a great deal of debate about their toxicity. The variety of conclusions on risk reached by health experts is ascribed to the lack of scientific certainty regarding the behaviour of PFOS and PFOA.

Regardless, two of the biggest manufacturers of PFOS in the past no longer manufacture the chemical because of health and environmental concerns. Further, the Committee heard agreement from experts that the persistent nature of PFCs means they should be avoided wherever possible. The Committee was advised that the CFA has not used firefighting foam containing PFCs at Fiskville since 2007.

Chapter 9 also discusses attempts by regulators around the world to determine safe levels of PFCs in soil, water, blood and food. Levels vary depending on the jurisdiction, with the main challenges in determining safe levels being: understanding the chemical properties of PFCs and how they affect humans; and understanding how PFCs exist in the environment, including the most likely pathways to entering the human body. Germany recently defined threshold levels for blood as 5 nanograms / ml for PFOS and 2 nanograms / ml for PFOA. Australia has yet to determine safe values for PFCs.

The Chapter concludes with a discussion recommending that the Victorian Government: increase its use of human biomonitoring to gather data and investigate the health effects of exposure to PFCs; and monitor PFC levels in all firefighters in Victoria. Such monitoring will also allow individuals to take precautionary action, such as regular testing for illnesses that may be associated with PFCs, thereby allowing early diagnosis and treatment.

Chapter 10: Remediation

Chapter 10 provides an overview of the remediation that has occurred at Fiskville following two EPA Victoria Clean Up Notices issued to the CFA in January 2013. These require a 53V audit and a 53X audit to be carried out on the Fiskville site.

The 53V audit forms an early part of a process to investigate, remediate, and verify the environmental condition of the site and its suitability for existing and potential uses. It found that the most widespread contaminants at the site are PFCs, particularly PFOS and PFOA. It also found that the risk from PFOS (and other PFCs) at the site for the exposure scenarios assessed are low, but PFCs may have a negative impact on the beneficial use of the site and surrounding area for agriculture and irrigation.

Work on the 53X audit began in January 2015 and is due to be completed prior to 30 June 2017. The 53X audit determines if the site has been suitably cleaned up for its proposed use.

Chapter 10 then outlines the mixed views heard by the Committee on the CFA Board's decision to close Fiskville permanently. The CFA and the Victorian Government have decided to purchase land for a new practical training facility in western Victoria. Although Fiskville will not be reopened as a practical training facility it may serve some use in the future. This use will partly be determined by the findings of the EPA Victoria Clean Up Notices. The Committee makes no recommendation about a future use for Fiskville, given the ongoing remediation of the site.

Terms of Reference (4) of this Inquiry instructs the Committee to assess the feasibility of remediating the Fiskville site. Chapter 10 concludes with the Committee's examination of how the following contaminated sites, similar to Fiskville, have commenced remediation (including the methods used and examples of costs):

- RAAF Base Williams, Point Cook, Victoria
- Jersey Airport, United Kingdom
- The Möhne and Ruhr rivers, North Rhine-Westphalia, Germany
- Düsseldorf and Nürnberg, Germany.

Chapter 11: Justice for Fiskville's victims

Chapter 11 concludes this Final Report by arguing that the preceding facts oblige the Victorian Government to create a tailored redress scheme for people affected by the contamination of the Fiskville site. The existing avenues of compensation for firefighters will be difficult to access due to poor record keeping by CFA management and will not cover everyone affected, such as family members, neighbours and school children.

The Committee learnt that justice means different things for different people. However, for people affected by the CFA training activities at Fiskville the concept of justice broadly covers all or a combination of: a direct personal response that recognises the differing needs of those who seek redress from the CFA; access to appropriate health treatment (physical and mental); or a financial payment.

Considering the time restraints of this Inquiry the Committee is not in a position to prescribe a redress scheme. However, based on evidence received, including a detailed information paper provided by a workers' compensation expert, the Committee believes that the necessary elements to consider when determining such a scheme are that it must:

- Be designed in consultation with stakeholders
- Avoid negative components of the civil justice system
- Provide flexibility for outcomes
- Acknowledge that claimants often seek more than just a financial payment
- Be responsive to a wide range of people and harms.

There have also been calls for the CFA to apologise to those harmed by the unsafe practices at Fiskville. The Committee received a supplementary submission from the VGSO on behalf of the CFA containing an apology to those who suffered trauma, sickness or injury from their time at Fiskville. Apologies have positive psychological and physical health benefits. However, they must involve a sincere acknowledgment by a senior person within the organisation of the gravity of the events for the people affected, an acceptance of responsibility and an expression of regret.

The Committee also heard from submissions and independent evidence that it is important for any redress scheme to be independent of the CFA and the Victorian Government Solicitor's Office.

Chapter 11 then includes an analysis of the latest evidence on presumptive legislation for firefighters. Presumptive legislation reverses the onus of proof around workplace diseases. In the case of firefighters and cancer, it presumes that a cancer was caused by being a firefighter. The first Australian jurisdiction to introduce presumptive legislation for firefighters was the Commonwealth, whose legislation lists 12 cancer types with associated qualifying periods.

Firefighters who trained at Fiskville may qualify under future presumptive legislation. Although, the Victorian Government has committed to introducing presumptive legislation for firefighters in this Parliament, in most cases presumptive legislation is not retroactive. As such, legislation would not apply to the remaining Fiskville-affected people.

Key issues for jurisdictions to decide on when introducing presumptive legislation for firefighters are:

- Which diseases to cover
- How to cover both paid and volunteer firefighters
- Whether to make the coverage retroactive or not
- Determining a fixed process for a periodic review of scientific research and knowledge around firefighters and cancer
- How frequently to review scientific evidence related to the legislation.

The Inquiry also identified that the current disease schedule in Victoria applying to workers' compensation legislation is inadequate and has fallen behind other jurisdictions.

Case Studies

The Committee has included five Case Studies at the end of this Final Report. The experiences revealed by the Case Studies are relevant to a number of substantive issues dealt with throughout this Inquiry. They also give a voice to individuals, allowing them to speak to a wide audience about how the events at Fiskville affected them. Essentially, the Case Studies are personal illustrations of key moments in Fiskville's history.

Recommendations

2 Inquiry process

RECOMMENDATION 1: That the Victorian Government, in responding to this Final Report:

- (a) Provide an update on Departmental and agency compliance with the directive from the Secretary of the Department of Premier and Cabinet (as set out in the Government’s response to the Interim Report) to provide individuals with access to records and documents relating to their involvement at Fiskville
- (b) Provide an assessment of the CFA’s compliance with the Model Litigant Guidelines when people seek access to documents, and
- (c) Provide an assessment of the Victorian Government Solicitor’s Office’s compliance with both the Secretary’s directive and the Model Litigant Guidelines. **38**

RECOMMENDATION 2: That the Victorian Government amend the Model Litigant Guidelines on the State of Victoria’s Obligation to Act as a Model Litigant so that the Guidelines extend to the conduct of Departments, agencies and their legal representatives’ dealings with Parliamentary Committees, particularly when conducting a document discovery process. **56**

RECOMMENDATION 3: That the Department of Premier and Cabinet amend the *Guidelines for Appearing Before State Parliamentary Committees* so that they contain some standards for conduct when a Parliamentary Committee requests information and documents. The standards should reflect relevant principles contained in the Model Litigant Guidelines. **57**

3 Fiskville — the site, contamination and people’s experiences

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4 Contamination — history of training activities and how the Fiskville site was contaminated

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RECOMMENDATION 6: That the Victorian Government introduce potable water as standard for firefighting training water to be complied with at all firefighting training facilities. **116**

RECOMMENDATION 7: That EPA Victoria conduct regular environmental testing of firefighting training facilities across Victoria ensuring records are properly maintained for future use. 116

RECOMMENDATION 8: That the Victorian Government audit all CFA training facilities to assess their capacities, capabilities and infrastructure needs to ensure a safe workplace that meets firefighter training demand. 116

5 CFA organisational culture and approach to health and safety

RECOMMENDATION 9: That the CFA contact the driver who was exposed to chemicals in the early 2002 drums incident, ascertain his current state of health and offer him the opportunity to participate in its health surveillance program. 154

RECOMMENDATION 10: That the Victorian Government conduct an audit of CFA occupational health policies – both those by the CFA Board and those recommended by external reviews – to determine if they have been implemented effectively throughout the organisation. 158

RECOMMENDATION 11: That the CFA review its occupational health and safety management structure. 162

RECOMMENDATION 12: That the Emergency Management Victoria Inspectorate be given responsibility for overseeing compliance with occupational health and safety requirements at CFA training facilities. 163

7 Regulation of Fiskville by WorkSafe

RECOMMENDATION 13: That the Victorian Government amend the *Occupational Health and Safety Act 2004* to require WorkSafe to include in its annual report under section 131(6):

- (a) The number of cases in which WorkSafe fails to meet the three-month time limit in section 131(2)
- (b) In each such case, the time the investigation has taken and the reason why WorkSafe was unable to meet the deadline

In addition, WorkSafe should be required to report to the responsible Minister in each case it fails to meet the deadline imposed by section 131(2). A copy of the report should be provided to the applicant. 228

RECOMMENDATION 14: That whenever feasible, WorkSafe should reduce its reliance on reports by consultants engaged by employers it is investigating and should utilise its statutory powers to conduct its own tests where relevant. 231

RECOMMENDATION 15: That the Victorian Government examine laws in the United States of America and elsewhere requiring companies to provide regulatory agencies with any internal studies that produce results of concern for public health, with a view to amending Victorian law to impose similar reporting requirements. 234

8 Regulation of Fiskville by other regulatory agencies

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RECOMMENDATION 29: That, in recognition of the closure of the Fiskville site and the need for a new ‘spiritual home’ for the CFA, the Victorian Government in consultation with CFA members fund the relocation of the firefighters’ Memorial Wall at a suitable and easily accessible location. **325**

11 Justice for Fiskville’s victims

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RECOMMENDATION 31: That the Victorian Government establish a dedicated redress scheme for Fiskville-affected persons and ensure:

- (a) That a register of Fiskville-affected persons is created
- (b) That the scheme is developed in consultation with Fiskville-affected persons
- (c) That a timeline for implementation is developed
- (d) That there is broad eligibility including people from neighbouring properties and other nearby sites
- (e) That there is a low evidentiary requirement so that it is not onerous for people to access, reflecting the fact that supporting records may be difficult for some people to produce
- (f) That a range of redress options exist, such as access to health services, a financial payment, and / or a meaningful apology
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3 Fiskville — the site, contamination and people’s experiences

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Glossary of terms

AFFF	Aqueous film-forming foams
Association	When a relationship between two or more variables has been identified
BA	Breathing apparatus
BOD	Biological oxygen demand
Bund	An outer wall designed to prevent the contents of a structure (such as a dam) affecting its surrounds
Causation	When a change in one variable directly causes a change in another variable
CFA	Country Fire Authority
Class B firefighting foam	Foam designed to extinguish flammable liquids
Compound	A substance formed when two or more chemical elements are chemically bonded together
F3s	Fluorosurfactant-free foams
Firewater	Water used to extinguish fires
Fiskville-affected persons	<ul style="list-style-type: none"> • Firefighters who provided training to others and engaged in training • Employees of private companies who provided training to others and engaged in training • Employees of other government agencies who provided training to others and engaged in training • Families of firefighters who lived at Fiskville • Landowners and others who lived in the vicinity of Fiskville • People who attended Fiskville State School
Flash point	The lowest temperature at which a substance will ignite
Fog attack	A process whereby fine water droplets are sprayed into a layer of smoke to cool and dilute unburned hot gases
HAZMAT	Hazardous materials
HSO	Health and Safety Organisation
IFI	Independent Fiskville Investigation
LPG	Liquefied petroleum gas
MFB	Metropolitan Fire Brigade
MoU	Memorandum of understanding
OH&S	Occupational health and safety
Overhaul	The process whereby firefighters search for burning embers at the end of a fire
PAD	Practical area for drills
PBT	Persistence, bioaccumulation, toxicity
PFCs	Perfluorinated chemicals
PFOA	Perfluorooctanoic acid (also known as C8)

Glossary of terms

PFOS	Perfluorooctane sulfonate
PIN	Provisional Improvement Notice
PPC	Personal protective clothing
PPE	Personal protective equipment
Presumptive legislation	Legislation that reverses the onus of proof around workplace diseases such that, for firefighters, it presumes that an illness was caused by being a firefighter
RTGs	Regional training grounds
SOPs	Standard operating procedures
Surfactant	A substance that reduce the surface tension of a liquid
UFU	United Firefighters Union
VFBV	Volunteer Fire Brigades Victoria
VGSO	Victorian Government Solicitor's Office

Timeline of key events

Time	Event
22 December 1970	<i>Environment Protection Act 1970</i> (Victoria) assented to
1971	CFA purchases Fiskville site
1 September 1972	First training course conducted at Fiskville
1974	Construction of Practical Area for Drills (PAD) and fire building
circa 1975–78	'Muck truck' first used to collect donated fuels
5 January 1982	<i>Industrial Safety, Health and Welfare Act 1981</i> (Victoria) assented to
23 December 1982	Fiskville staff member Mr Alan Bennett was tasked with burying stockpiled fuel drums and was temporarily overcome by the fumes
30 July 1985	<i>Occupational Health and Safety Act 1985</i> (Victoria) assented to <i>Dangerous Goods Act 1985</i> (Victoria) assented to
16 September 1987	Mr Bennett wrote to the CFA about health problems he was experiencing, seeking information about the chemicals he was exposed to in 1982
1 July 1988	AS James Geotechnical Pty Ltd provided the CFA with the results of tests carried out on the contents of the drums Mr Bennett was involved in burying. The report recommended a company that could be employed to remove the drums.
8 September 1988	Memo titled 'Waste Disposal Site – Fiskville' was written by the Deputy Chief Officer and addressed to the Acting Chief Officer. It referred to discussions with EPA Victoria about buried drums, and recommended leaving the buried drums undisturbed
Mid-January 1991	Approximately 75 drums and 253 tonnes of contaminated soil were removed from landfill areas on-site. These were the drums Mr Bennett was involved in burying in 1982, and the drums that AS James Geotechnical Pty Ltd analysed the contents of in 1988
January 1994	The CFA employed their first occupational health and safety officer: Mr Jeff Green
31 May 1996	CFA Fire Officer Mr David Clancy finalised a report of his audit of health, safety and environment at Fiskville (<i>Report: Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit</i>) (the 'Clancy report')
17 June 1996	CFA Board records discussing aspects of occupational health and safety at Fiskville, which may have included a discussion of Mr Clancy's report
23 July 1996	EPA Victoria conducted a site investigation of Fiskville. A report of the investigation was provided to the CFA on 21 August 1996
28 November 1996	A consultant's report by CRA ATD recommended that: 'contaminated soils from the drum burial pits be excavated, and subject to the presence of drums, be treated on-site, or otherwise disposed of off-site to appropriate landfill'
11 December 1997	A report by consultant Rio Tinto developed a remediation action plan for the PAD and the old fire training pits
17 February 1997	The Chairman of the CFA Board (Mr Len Foster) sent a letter to EPA Victoria titled 'Use of Fire Retardants and Foams in Victoria' asking how to deal with potential environmental impact of the chemicals contained in firefighting foams

Timeline of key events

Time	Event
20 October 1997	The CFA Chief Officer (Mr Trevor Roche) provided a report to the CFA Board that raised occupational health and safety concerns with Class A firefighting foam
2 December 1998	Death of five firefighters in the Linton wildfire
1998–99	PAD redevelopment
19 April 1999	CFA Board was provided with an audit of occupational health and safety due diligence conducted by the National Safety Council of Australia (dated January 1999). The findings of the audit were summarised in the audit report as: 'a number of OH&S System deficiencies and non-compliance with OHS Law'
1999	Training practices at Fiskville shifted from using flammable liquids (including donated fuels) to using LPG for most of Fiskville's training exercises
15 August 2001	Discussion of WorkCover improvement notices and the likelihood of the CFA being fined at a meeting of the CFA People Strategy Committee
11 January 2002	Report of the Coronial Inquest into the deaths in the Linton wildfire in December 1998
March 2002	Buried drums discovered when a contractor hired to dig up soil for planting trees tore open a drum. The buried drums and contaminated soil were subsequently removed from the site
2003	Australia's <i>National Industrial Chemicals Notification and Assessment Scheme</i> issues alert recommending that foams containing Perfluorooctane sulfonate (PFOS) be discontinued for use in training
21 December 2004	<i>Occupational Health and Safety Act 2004</i> (Victoria) assented to
28 August 2006	Information paper titled 'Evaluation of Alternative Class B Foam for Use in Firefighting' was prepared for the CFA Board
2007	Use of firefighting foams containing Perfluorinated chemicals (PFCs) was discontinued at Fiskville
24 January 2008	The Metropolitan Fire Brigade (MFB), CFA and EPA Victoria agreed to the <i>Class A Recycled Water Management Plan</i> (the plan was signed by the CFA on 12 September 2007, the MFB on 10 October 2007 and EPA Victoria on 24 January 2008). An information paper was prepared for the CFA Board about the plan on 25 February 2008
March 2008	Fiskville Firefighting Water Management Plan released (first version)
17 April 2009	Wynsafe Occupational Health Services prepared a report for the CFA recommending the remediation of Dam 1 and indicating that the 2008 Fiskville Firefighting Water Management Plan was not being complied with
28 August 2009	The CFA changed their standard for E.coli bacteria from < 10 organisms per 100 ml to < 150 organisms per 100 ml of water
29 April 2010	Airservices Australia wrote to the Chief Executive Officer of the CFA (Mr Mick Bourke) advising that they were no longer planning to invest \$12 million in infrastructure at Fiskville due to the detection of PFCs in the soil
June 2010	Fiskville Firefighting Water Management Plan released (second version)
July 2010	Report of the 2009 Victorian Bushfires Royal Commission
June 2011	Meeting arranged between Mr Brian Potter and CFA Board member Mr David Gibbs was cancelled by Mr Gibbs. Mr Gibbs informed the Herald Sun that he had cancelled the meeting with Mr Potter due to reasons beyond his control
6 December 2011	The <i>Herald Sun</i> raises concerns about possible links between firefighting training at Fiskville and adverse health impacts
14 December 2011	CFA commissioned the 'independent Fiskville investigation' by Professor Robert Joy

Time	Event
February 2012	ALS Country Fire Authority, Fiskville Training College, Water Reuse Investigation Report provided to the CFA, which revealed that Dam 1 contaminants were classified 'Category A Industrial Waste' (the most hazardous of EPA Victoria's three waste classifications). The report recommended the remediation of the sludge in Dam 1
May 2012	Fiskville Firefighting Water Management Plan released (third version)
June 2012	<ul style="list-style-type: none"> • First water storage tank installed at Fiskville • CFA reduced the standard for E.Coli bacteria back to < 10 orgs per 100 ml. This was documented in a revised Water Management Plan prepared by Cardno Lane Piper in October 2012
20 June 2012	The MFB ceased training at the Fiskville because of concerns about water contamination
25 June 2012	The <i>Herald Sun</i> published an article about the MFB's decision to stop training at Fiskville
July 2012	<ul style="list-style-type: none"> • Professor Joy's independent Fiskville investigation report published (<i>Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation</i>), as was the CFA's response to the report • CFA engages environmental engineering firm Cardno Lane Piper to undertake environment and human health risk assessments as a response to Professor Joy's Report
25 September 2012	Stock contamination notice issued by Department of the Environment and Primary Industries (DEPI) in relation to Mr and Mrs Lloyd's sheep
27 September 2012	Stock contamination notice on the Lloyd's sheep rescinded by DEPI
15 October 2012	Second water storage tank installed at Fiskville
15 November 2012	Davies Lawyers, acting on behalf of the United Firefighters Union, requests that WorkSafe investigate the CFA under s. 131 of the <i>Occupational Health and Safety Act 2004</i> (Victoria)
January 2013	EPA Victoria issues two Clean Up notices and an EPA-accredited Environmental Auditor (AECOM Australia Pty Ltd) is appointed to audit the Fiskville site
May 2013	Victorian Government announces \$16.8 million in the State budget for upgrades at Fiskville and other training campuses. The funding became available on 1 July 2013
October 2013	CFA released began emailing weekly Hot Fire Training Notices to neighbouring property owners in accordance with the Operations Guideline for Hot Fire Training Advice (PAD Operations Guideline 2.11)
20 January 2014	Mr and Mrs Lloyd lodged a freedom of information request asking for all documents related to the testing carried out on themselves and their property
11 April 2014	The EPA-accredited Environmental Auditor completed an audit of Fiskville under s. 53V of the <i>Environment Protection Act 1970</i> (Victoria) and submitted the report to EPA Victoria. The report made 26 recommendations
June 2014	Cancer Council Victoria report released (<i>An analysis of cancer risk experienced by fire fighters who were trained at Fiskville</i>)
7 July 2014	EPA Victoria releases the Environmental Auditor's report, along with all of Cardno Lane Piper's Fiskville assessment reports
December 2014	Monash University completes a report on an Australia-wide study of firefighters' cancer risk (<i>Final Report Australian Firefighters' Health Study</i>)
17 December 2014	WorkSafe advised the MFB of their decision not to prosecute the CFA
23 December 2014	Parliamentary Inquiry into the CFA Training College at Fiskville announced
January 2015	Monash University releases a study into the cancer risk of Fiskville firefighters (<i>Fiskville Firefighters' Health Study</i>)

Timeline of key events

Time	Event
2 March 2015	CFA Board decides to suspend all training at Fiskville following the receipt of a report about PFOS. The tests were conducted by Senversa and their report was finalised on 28 April 2015 (<i>Potable Water Assessment</i>)
26 March 2015	The Victorian Government announced the closure of Fiskville, based on a recommendation by the CFA Board
24 June 2015	The Committee's Interim Report was tabled (<i>Inquiry into the CFA Training College at Fiskville Interim Report</i> (Report No.1, 58th Parliament))
October 2015	Report of the Victorian Fire Services Review provided to the Victorian Government (the report was not made publicly available until 16 March 2016) (<i>Report of the Victorian Fire Services Review - Drawing a line, building stronger services</i>)
12 November 2015	The Committee's Special Report was tabled (<i>Inquiry into the CFA Training College at Fiskville Special report on production of documents</i> (Report No.2, 58th Parliament))
9 February 2016	Victorian Government response to Committee's Interim Report tabled
16 March 2016	<ul style="list-style-type: none"> • The Environmental Health Standing Committee (enHealth) releases Guidance Statements on PFCs • Report of the Victorian Fire Services Review made available to the public • Victorian Government response to the Victorian Fire Services Review released
9 May 2016	The German Environment Agency defined threshold levels for PFCs
30 June 2017	Expected date for the finalisation of the EPA Victoria appointment Environmental Auditor's report under s. 53X of the <i>Environment Protection Act 1970</i> (Victoria)

AT A GLANCE

Background

This Chapter outlines the issues that arose in the evidence before the Inquiry. It includes a brief overview of the Country Fire Authority's (CFA's) role fighting fires in Victoria and the importance of firefighting training. It contains a brief history of the Fiskville site, including the events that lead to the site's closure in March 2015. It also provides an introduction to the key issues addressed throughout the remainder of this Final Report, such as the ill health suffered by many people who lived and worked at Fiskville and the medical evidence about the links between that ill health and the conditions at Fiskville.

This Chapter addresses Terms of Reference (1) and (2).

Key findings

- That Fiskville was one of several CFA training grounds and was valued for delivering training in a location that became the CFA's 'spiritual home' and formed an iconic part of the CFA and firefighting history in Victoria.
- That it is because of the importance of Fiskville to the CFA, its employees and volunteers that there is a high degree of anger, betrayal and frustration on the part of many firefighters, their families and community members who provided evidence to the Inquiry.
- That concerns about safety at Fiskville were often not addressed by the CFA.
- That many people who lived and worked at and near Fiskville have suffered numerous debilitating illnesses, including cancer, and want to know if Fiskville contributed to their ill health.
- That others are not currently ill but are anxious about their future health and that of their family members.
- That epidemiological evidence suggests that the contamination at Fiskville is likely to have caused cancer and other illnesses.
- That best practice firefighter training can be achieved in a controlled, safe training environment.
- That from 1981 onwards, the law required the CFA to do what was (reasonably) practicable to protect its employees, contractors and volunteers while they were engaged in providing and receiving training.
- That public sector employers should be exemplars in relation to compliance with occupational health and safety laws.

- That following a series of concerns about the safety of the site over several years, Fiskville was closed by the CFA Board in March 2015 after perfluorooctane sulfonate (PFOS) was found in parts of the site where it had been previously undetected, causing the Board to lose confidence in the safety of the site.
- That Fiskville's closure has had negative economic and social consequences in the Ballan region.
- That the closure of Fiskville has placed a great strain on the capacity of the remaining training centres to meet firefighting training demands in Victoria.
- That the closure of Fiskville has inconvenienced many trainees in western Victoria by forcing them to travel further to other training sites.

1.1 The Inquiry's Terms of Reference

On 23 December 2014, the Victorian Government referred an Inquiry into the CFA Training College at Fiskville to the Environment and Natural Resources Committee¹ ('the Committee'). The Inquiry's Terms of Reference instructed the Committee to provide:

- (1) a comprehensive historical study of pollution, contamination and unsafe activities at Fiskville between 1970 and the present day;
- (2) a study of the health impacts on employees, residents and visitors between 1970 and the present day;
- (3) a study of the role of past and present executive management at Fiskville;
- (4) an assessment of the feasibility of decontamination/rectification of the training site; and
- (5) recommendations as necessary to mitigate ongoing harm and to provide justice to victims and their families.

The Committee was required to provide an Interim Report no later than 30 June 2015, which the Committee did.² The Final Report was due no later than 1 December 2015, however this was not possible due to the reasons outlined in Chapter 2.

¹ The Committee was renamed the Environment, Natural Resources and Regional Development Committee on 21 April 2015

² Parliament of Victoria, *Joint Investigatory Committees, Inquiry into the CFA Training College at Fiskville, Report and Response*, (www.parliament.vic.gov.au/enrrdc/article/2526), viewed 15 April 2016

1.2 The CFA's Fiskville Training College



Source: Professor Robert Joy, CFA, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012). Used with permission.

The CFA Training College at Fiskville (referred to in this Final Report simply as Fiskville) is located around 80 kilometres north-west of Melbourne in the Shire of Moorabool. It is close to the large regional centre of Ballarat and just south of the smaller town of Ballan. The land, around 150 hectares in size, was purchased by the CFA in 1971 and training began in September 1972.³

Prior to the purchase of the Fiskville site local CFA brigades across Victoria carried out their own training with little support from the organisation as a whole. Fiskville was designed to remedy this situation, with then Chairman Richard Eason establishing a Training Wing to coordinate training on a statewide basis. Professor Robert Joy writes that Fiskville was a new facility considered to be delivering cutting edge training activities:

From its early days, Fiskville's aim was to provide training that would equip CFA staff and volunteer firefighters to respond efficiently and effectively to a variety of fire and emergency situations and to anticipate and manage associated risks. Fiskville provided a venue for both theoretical and practical firefighting and emergency response training.⁴

The larger size of the Fiskville site and the ability to use a wider variety of training 'props' than other CFA sites, such as Bangholme (in Melbourne's south-east) and Peshurst (in western Victoria), contributed to Fiskville becoming the CFA's

³ Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, p.255

⁴ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.32

principal training facility. It also provided accommodation and this is important in terms of bonding and spirituality. Murray and White in their book, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria* add that Fiskville was also designed to train a new generation of CFA leaders, as those who had joined the organisation following World War II began to retire. As well, specialised practical training was needed to tackle the growing number of chemical fires and spills faced by firefighters across Victoria.⁵

Fiskville developed a reputation for delivering innovative training practices. Mr Ben Hatfield from the Ballan Fire Brigade told the Committee that Fiskville was equipped to deliver a much higher level of training than that of local brigades: “Fiskville’s strength is in the scenario-based training which gives rise to leadership, communication, information sharing and specialist skills that produces highly proficient firefighters, both career and volunteer.”⁶

Similar evidence was presented by Mr Chris Bigham, Acting Operations Manager at Fiskville. He told the Committee that “... lessons learnt at Fiskville have been applied to save countless lives and properties across Victoria and interstate”.⁷

Victoria’s Emergency Services Commissioner Craig Lapsley added: “Why Fiskville was even put there was to establish that [the CFA] were good at what they do. The first building at Fiskville was all about urban firefighting and then it grew to be other things.”⁸

This is an important point, as the community may think that the CFA fights solely rural fires. A firefighter is exposed to different hazardous materials depending on the fire they are fighting. For example, vegetation produces cellulose-based fuel, which is less carcinogenic than the fuel produced by structural fires found in urban areas.⁹ However, CFA paid and volunteer firefighters are exposed to both bush and structural fires in rural and urban areas. (For example, along with its 950 rural fire stations the CFA has 32 ‘integrated fire stations’, comprised of career firefighters who support local volunteers, which mostly service large urban areas.¹⁰)

Despite the contamination of the Fiskville site, exposure to toxic chemicals and the illnesses which are likely to be attributable to Fiskville, many people’s attachment to Fiskville remains strong. For example, Mr Bennett listed the negatives of living at Fiskville before adding: “... but it still is a place that people want to go to and I would dearly love to see it remain open”.¹¹

5 Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, p.255

6 Mr Ben Hatfield, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, p.5

7 Mr Chris Bigham, Acting Operations Manager, CFA, *Transcript of evidence*, 27 July 2015, p.3

8 Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.9

9 Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.14

10 CFA, *What we do*, (www.cfa.vic.gov.au/about/what-we-do/), viewed 18 December 2015

11 Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.13

Fiskville is often referred to as the ‘spiritual home’ of the CFA, a common location that unites the more than 1,200 fire brigades across Victoria.¹² The site has been a workplace, home and training facility for thousands of people since 1972 and, importantly, has the emotional draw of housing a memorial to firefighters who have lost their lives. Mr Bigham described Fiskville as a “home” for all CFA members, no matter where they live in Victoria.¹³

Mr Kevin and Mrs Deborah Etherton lived and worked at Fiskville from 1985 to 1988 and their children attended Fiskville State School. The Ethertons’ evidence was similar to that of many witnesses the Committee heard from in describing the positive memories they have of Fiskville, including the outdoor lifestyle and strong sense of community enjoyed by the families living on-site. Mr Etherton said: “... you do not mention the CFA without mentioning Fiskville”.¹⁴

The Committee recognised this emotional attachment to Fiskville at an early stage of its Inquiry. Its June 2015 ‘Interim Report’ states: ‘... many submitters to the Inquiry view their time at Fiskville as a happy one and the site itself as forming an iconic part of CFA and firefighting history in Victoria’.¹⁵

It is precisely because of the importance of Fiskville to the CFA, its employees and volunteers that there is a high degree of anger, betrayal and frustration on the part of many firefighters, their families and community members who provided evidence to this Inquiry. This has been caused by what many consider to be the unwillingness of the CFA to share the information it had about the nature of the chemicals used at Fiskville, water contamination and the concerns firefighters have about Fiskville’s contribution to their poor health, both now and in the future. These matters are discussed below.

FINDING 1: That Fiskville was one of several CFA training grounds and was valued for delivering training in a location that became the CFA’s ‘spiritual home’ and formed an iconic part of the CFA and firefighting history in Victoria.

FINDING 2: That it is because of the importance of Fiskville to the CFA, its employees and volunteers that there is a high degree of anger, betrayal and frustration on the part of many firefighters, their families and community members who provided evidence to the Inquiry.

1.3 Background to the Inquiry

The CFA operated a training facility at Fiskville from 1971 until March 2015. During that time, thousands of firefighters received training in firefighting techniques at Fiskville.

¹² Mr Adam Barnett, Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.7

¹³ Mr Chris Bigham, Acting Operations Manager, CFA, *Transcript of evidence*, 27 July 2015, p.3

¹⁴ Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.4. The Ethertons also had negative experiences while at Fiskville as outlined in Chapter 3

¹⁵ Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville, Interim Report*, (2015), p.ix

In addition to being used by the CFA, Fiskville was used as a training facility by the Metropolitan Fire Brigade (MFB), government agencies and private companies. It is difficult to determine how many firefighters have trained at Fiskville, although Professor Joy estimated that firefighters made approximately 87,000 visits to the site between 1971 and 1999 – including for practical fire training, classroom-based training and conferences – noting that many firefighters would have attended more than once.¹⁶ During this period the site was also used to train emergency services personnel from government agencies and industrial fire officers and wardens employed by private companies throughout Australia.

The Committee heard evidence that there was “noise”¹⁷ about safety at Fiskville and attempts by CFA staff members to raise concerns about chemical exposure. However, these concerns were ignored. In December 2011, an article in the *Herald Sun* newspaper described the experiences of the late Mr Brian Potter. Mr Potter had been the Chief Officer of the CFA and a Fiskville Instructor. The article referred to the serious ill health including multiple cancers that Mr Potter was suffering from and also noted that many other firefighters who had worked as instructors at Fiskville had passed away as a result of cancer or were now suffering from cancer. The article also discussed a report that had been provided to the CFA in 1996 detailing the chemicals that firefighters at Fiskville had been exposed to and raised the question of whether that information had been passed on to the firefighters, especially those now suffering from cancer.¹⁸

The CFA’s response to this article and resulting negative publicity was immediate. It established the ‘Independent Fiskville Inquiry’, which was chaired by Professor Robert Joy (and became known as the Joy Report). The Independent Fiskville Inquiry’s Terms of Reference were limited to the period between 1971 and 1999. It reported in June 2012 and described in considerable detail the manner in which firefighting training had been conducted at Fiskville between 1971 and 1999. The report was critical of the CFA’s failure to conduct that training in a manner that minimised the exposure of firefighters and the environment to harmful chemicals.

In June 2012, a further article was published in the *Herald Sun* about Fiskville. This article, which addressed the quality of the water being used at Fiskville for firefighting training, led to an investigation by WorkSafe. That investigation is considered in Chapter 7 of this Final Report.

Almost immediately after the CFA announced Professor Joy’s Inquiry, questions were raised about its independence from the CFA.¹⁹ Professor Joy had been the Deputy Chief Officer at the Environment Protection Authority (EPA Victoria) and worked there with Mr Mick Bourke who was, in 2011, the CEO of the CFA. Critics of Professor Joy’s appointment, such as the United Firefighters Union (UFU),

16 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.32

17 Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.12

18 See Case Study 3 on Mr David Clancy

19 Stephen Drill, ‘Probe Conflict Denied’, *Herald Sun*, 16 December 2011, p.16

pointed out that a thorough examination of practices at Fiskville that resulted in environmental degradation would necessarily have to consider the role of EPA Victoria. Professor Joy, as a former senior officer of EPA Victoria, could be perceived to have a conflict of interest. Another concern raised was the limitation to the period under examination, being only until 1999. If, as the *Herald Sun* article of June 2012 strongly suggested, there were questions about the current safety of the site, why would the investigation be time-limited in that way?

It was against that background, and the ongoing concerns about the safety of Fiskville that were raised during 2013 and 2014 by the UFU on behalf of firefighters - both CFA and MFB - and others, that this Inquiry was referred by the current Victorian Government to the Committee.

FINDING 3: That concerns about safety at Fiskville were often not addressed by the CFA.

1.4 The concerns of victims

As discussed in Chapter 3 of this Final Report, the Inquiry heard from a large number of witnesses at the Committee's public hearings. Many of the witnesses had worked, lived and trained at Fiskville and a number are now suffering from cancer and other illnesses. The witnesses spoke of former colleagues who had died as a result of similar cancers and other illnesses.

Mr Colin Cobb worked for the CFA for 32 years having joined as a junior in 1962 before working as a senior instructor at Fiskville between 1984 and 1987. He detailed the health experiences of some of those with whom he had worked at Fiskville:

The first officer in charge of Fiskville was assistant chief officer Chester Nevett. He died of lung complications. His 2IC, Jack Scott, died of leukaemia, cancer of the face and emphysema. His wife, who also lived on the property, died of pancreatic cancer. Senior instructor Bob Dixon died of kidney cancer. Senior instructor Gavin Maguire died of brain tumours. Instructor Bob Penna died of oesophageal cancer ... Instructor Colin Pinkerton died of multiple myeloma and heart disease. PAD operator and nearby resident Maurice Conlan died of cancer. Henry Hume, a contractor, also died of cancer, and Steve the gardener died of cancer. Those suffering serious health problems – Alan Bennett, who I have spoken about, and others like Rod Waters and myself — have melanomas.²⁰

This evidence was not limited to employees of the CFA. Mr Alistair Allan worked for BP Petroleum in the late 1980s when he conducted a number of firefighter training courses for the Australian Institute of Petroleum at Fiskville which required him to live at the site. He has suffered from melanomas which he thinks may have been caused by his service at Fiskville.²¹

20 Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.87

21 Mr Alistair Allan, *Transcript of evidence*, 18 May 2015, p.27

Mr David Card attended the Fiskville State School in 1991 as one of nine students. The school was located on the grounds of the training facility. He has had both of his testicles removed due to testicular cancer and he described his experience at Fiskville:

My potential exposure to carcinogenic materials may not have been as high as that of the training firefighters, but I was a child. I turned 11 at Fiskville and I was heading into puberty, and I was there every day. I drank the water, breathed the air, stood on the side of the training area, waded through the water on the golf course and I wonder, 'Is the exposure to a carcinogen on a child's developing body more serious than in adults?'.²²

Mr John Cutler lived with his family at a property six kilometres south of Fiskville between 1981 and 2010. He told the Inquiry that he has been diagnosed with bowel and liver cancer, one of his step-daughters has been diagnosed with breast cancer and another with bowel cancer. Another member of his household has breast cancer.²³

While some of the witnesses attributed their illnesses to exposure to chemicals while engaged in firefighting training at Fiskville, others were uncertain but suspected that Fiskville may be the cause. For example, Mr Cutler accepted that he had no professional ability to claim that Fiskville was the cause of the various illnesses that afflicted his family. However, he informed the Inquiry that there are "very strong indications at the moment" that he wants investigated.²⁴

Mr Cory Woodyatt trained at Fiskville as a recruit firefighter in 2000 and returned as an instructor in 2006. He has subsequently been diagnosed with psoriasis. He gave disturbing evidence of a number of colleagues from his 20-person recruit course who have, or whose partners have, given birth to children with serious birth defects.²⁵ In response to a question from Committee member Mr Simon Ramsay about whether he could provide evidence that these various conditions are directly linked to Fiskville and the time spent there, he replied:

To answer your question truthfully, no, I cannot. I can provide the evidence from doctors' comments on the ailments that have occurred, but I cannot provide evidence to say that they were attributable to Fiskville. I also cannot provide evidence to say that they were not attributable to Fiskville. It is up in the air at the moment ...²⁶

A number of other themes emerge from the evidence of the victims. Firstly, many of the witnesses who worked for the CFA for large parts of their lives are now angry about their experience of Fiskville. Some of them feel betrayed by the CFA to which they gave years of dedicated service. Professor Joy, who met with many of the same people that spoke to the Committee, summarised their emotions:

22 Mr David Card, *Transcript of evidence*, 18 May 2015, p.44

23 Mr John Cutler, *Transcript of evidence*, 18 May 2015, p.56

24 *Ibid.* p.57

25 Mr Cory Woodyatt, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.189

26 *Ibid.* p.193

There is a great deal of anger and a great deal of fear amongst many of these people, particularly the older people who had worked there in the 70s and the 80s and knew they had been exposed. There is no doubt that they had been exposed to a whole range of chemicals. They did not know what they were. Now it is being raised, and they read in the *Herald Sun* — probably for the first time because they may not have been in touch with their old colleagues — that there are X number of cancers amongst this population.²⁷

Professor Joy’s assessment is consistent with the evidence to the Committee from the victims and their families. Mrs Diane Potter told the Inquiry: “... it just seems to be that total denial [by the CFA] that there is a problem ...”²⁸ and that “... the CFA handling of the whole thing has been the biggest disappointment to a lot of people”.²⁹

Mr Kevin Etherton joined the CFA in 1975 and worked at Fiskville as an instructor between 1985 and 1988. He and his wife Deborah lived at Fiskville with their children. Mr Etherton is angry that the CFA did not pass on the information it had about the chemicals to which those at Fiskville were exposed:

That unknown flammable liquids were delivered and used at Fiskville to me is not the issue. When it became known later about the nature and the hazards of those fuels and the fact that that information was not passed on to people who had been exposed to them, to me that is the issue ... Many of my colleagues and friends who worked with me at Fiskville and who are currently seriously ill or deceased may not have been seriously ill or deceased had that information been passed on 24 years ago.³⁰

The manner in which the CFA has responded to events at Fiskville and those who are suffering ill health is further examined in Chapter 3.

A second theme that emerges from the evidence of victims is that many live in fear of the future - they do not know if they or their loved ones will succumb to cancer or other diseases. Mr Gavan Knight was an employee of the Department of Primary Industries, which delivered courses at Fiskville to “probably close to a thousand people” working for the Department.³¹ He told the Inquiry that he and those he trained swam in the dams at Fiskville.³² Mr Knight expressed concerns about the potential for those he trained to have future illnesses, saying: “Who knows when it will rear its ugly head and how? That is what is concerning me. Is it six months, is it six years, is it 16 years? I do not know.”³³

This concern is particularly strong for parents who raised children while living and working at Fiskville. Mrs Potter holds fears for her four children.³⁴ The owners of a neighbouring farm, Mr Matthew and Mrs Beccara Lloyd, stated that

27 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.143

28 Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.25

29 *Ibid.* p.15

30 Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.35

31 Mr Gavan Knight, *Transcript of evidence*, 18 May 2015, p.49

32 The water quality in the Fiskville dams is examined in Chapters 4 and 5

33 Mr Gavan Knight, *Transcript of evidence*, 18 May 2015, p.51

34 Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.18

they are “... just really concerned about [their] children. What is going to happen to them in 30, 20 - who knows what is going to happen? ... what happens if they grow up and cannot have children or have something wrong with them?”³⁵

A third theme is that there is a need for some form of redress for Fiskville’s victims. Many witnesses were asked about the Inquiry’s fifth Terms of Reference: ‘recommendations as necessary to mitigate ongoing harm and to provide justice to victims and their families’. Not surprisingly, the responses varied. Mr Michael Whelan, who worked for the CFA between 1978 and 1994 and had dealings with the CFA Board and senior management about Fiskville in his capacity as a UFU representative, told the Inquiry that he would “... just like the CFA to wear some pain in relation to the rest of it, and probably as much as anything I think an apology”.³⁶ However, in answering a question from the Chair, Mrs Potter questioned the value of an apology at this time:

The CHAIR—Have you had an apology from the CFA?

Mrs POTTER—That does not mean anything.

The CHAIR—You have or you have not?

Mrs POTTER—No, and I would not expect that, so, no.³⁷

Mrs Potter wants acceptance by the CFA that “... there was a problem there [at Fiskville] ... [and] Brian was right”.³⁸

Others, like Mr Card, are seeking answers:

The things that I would like to see, not just on my own behalf but on everyone’s behalf are: that if there is a link between the time spent at Fiskville and any illnesses of any nature, the inquiry provides those people with justice and answers³⁹

A number of witnesses thought that Fiskville victims should receive financial compensation but found it difficult to quantify the amount. Mr Etherton said:

You mentioned compensation. How do you put a value on compensation? People have suffered fatalities within their families. I know in our own family we have had excessive costs in travel, in medical and in surgical. We need some form of compensation to cover us for those cost[s]. We are out of pocket. I do not know how you would put a figure on it or what form of compensation it would be, but surely all the people who have been exposed to these substances, which it is evident has been covered up, are eligible for some sort of compensation.⁴⁰

See Chapter 11 for the Committee’s recommendation for a dedicated Fiskville redress scheme to provide justice for the victims and their families.

³⁵ Mr Matthew Lloyd, *Transcript of evidence*, 18 May 2015, p.70

³⁶ Mr Michael Whelan, *Transcript of evidence*, 15 June 2015, p.217

³⁷ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.24

³⁸ *Ibid.* p.20

³⁹ Mr David Card, *Transcript of evidence*, 18 May 2015, p.47

⁴⁰ Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.37; see also Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.77 and Dr John Ferrier, *Transcript of evidence*, 25 May 2015, p.104

FINDING 4: That many people who lived and worked at and near Fiskville have suffered numerous debilitating illnesses, including cancer, and want to know if Fiskville contributed to their ill health.

FINDING 5: That others are not currently ill but are anxious about their future health and that of their family members.

1.5 Epidemiological evidence

The Joy Report did not consider in any detail the health effects of chemical exposure at Fiskville. It did, however, determine a rudimentary classification system for those who were exposed to risks while involved in providing or receiving training. Professor Joy classified people into high, medium and low risk categories. This classification system is discussed in Chapter 9 of this Final Report.

The CFA commissioned Monash University’s Centre for Occupational and Environmental Health to conduct a study of cancer and mortality rates of people who had trained and worked at Fiskville compared with the general population. The results of the study are examined in Chapter 9. In summary, the study found that:

- Members of the high risk group had almost double the risk of cancer that would be expected taking into account their age and other characteristics
- The major types of cancer that accounted for this excess were melanoma and testicular cancer
- In the medium risk group, the overall rate of cancer was not elevated to an extent that was statistically significant although there was an excess of brain tumours in that group
- There was no excess of cancer found in the low risk group.⁴¹

Professor Malcolm Sim, who oversaw the conduct of the study, explains that its results demonstrate an association between Fiskville and the higher rates of cancer at least among the high risk group: ‘... epidemiology is around showing association, so we take some exposure variable, we take an outcome such as cancer and we can show that the two are associated [however] this does not show causation’.⁴² Before one can identify a causative link, other considerations apply. The criteria that are generally applied are the ‘Bradford Hill’ criteria first developed in 1965.⁴³ In the present case, as Professor Sim notes, there are three features of the data that gave his research team strong indication of a causal link between the findings:

⁴¹ Prof Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.4

⁴² Ibid. p.5

⁴³ Sir Austin Bradford Hill, *The Environment and Disease: Association or Causation?*, (1965) Proc R Soc Med, 58(5), pp.295-300

- The strength of association — ‘when you find very high excess, as we found here for some of the individual tumours and the almost doubling of the overall tumour rate, that is what we call a strong association’⁴⁴
- The exposure response (sometimes referred to as the ‘dose-response’) — here ‘we found quite a strong exposure response relationship between the different groups’⁴⁵
- The results are consistent with the published literature which demonstrates that there are high rates of cancer in firefighter groups in the USA and Europe.⁴⁶

It was for these reasons that Professor Sim concluded that the results supported a finding of causation in addition to association.

However, it is important to be aware of certain caveats placed by Monash University on the results of its study. The first is the small sample size. The second, and related concern, is that, at least in the medium and low risk groups, there were many employees and volunteers who did not participate in the study for a number of reasons primarily because they were not identified.⁴⁷ Finally, the researchers had little if any information about the lifestyles of the participants that could reveal other cancer risks (for example, smoking).

There is a growing body of evidence worldwide that firefighters are exposed to chemicals and toxic materials that can lead to various cancers and other industrial diseases. That is why firefighter presumptive legislation is being introduced throughout the world, including Australia, and why the organisations and individuals that made submissions and gave evidence to this Inquiry supported the need for firefighter presumptive legislation in Victoria.

Presumptive legislation reverses the onus of proof around workplace diseases. In the case of firefighters, it presumes that a cancer was caused by being a firefighter. This Inquiry, as instructed by the Terms of Reference, investigates the connections between particular chemicals and illness. In one sense this is not necessary, if the premise on which presumptive legislation in this context is based is accepted. The question then becomes more about establishing how people at Fiskville were exposed to such chemicals and to what extent. This Final Report does this and in doing so determines how justice for victims must be provided.

The Monash study shows the same association between people who worked and trained at Fiskville as firefighter studies (with some additional cancers and illnesses). People living and working at Fiskville and in the surrounding areas were exposed to the same chemicals as firefighters but without the benefit of protective clothing or equipment. Justice, then, must be provided to everyone exposed to the chemicals that cause cancer and other illness in firefighters.

44 Prof Malcolm Sim, et al., Monash University, *Fiskville Firefighters' Health Study*, (2014), p.5

45 Ibid.

46 Ibid.

47 Ibid.

Presumptive legislation and justice are discussed in Chapter 11 of this Final Report.

FINDING 6: That epidemiological evidence suggests that the contamination at Fiskville is likely to have caused cancer and other illnesses.

1.6 Regulation of the CFA's activities at Fiskville

In fulfilling Terms of Reference (1), the Committee received a considerable amount of evidence about the manner in which the activities at the Fiskville site were regulated by those State agencies charged with oversight of the CFA during the period of Fiskville's operation. The relevant regulatory agencies include WorkSafe Victoria, which regulates the *Occupational Health and Safety Act 2004*, and EPA Victoria, which regulates the *Environment Protection Act 1970*.

The evidence before the Committee is that WorkSafe inspectors visited Fiskville frequently between 1990 and 2011 but did not consider the serious occupational health and safety issues, such as buried drums, water contamination and site pollution, that have taken up so much of the time of this Inquiry. This inaction was partly explained by poor information flow from the CFA to WorkSafe about consultants' reports the CFA had obtained addressing these issues and partly by a failure on the part of the CFA to report incidents and proposed changes to exposure standards to WorkSafe. However, the inaction was also due to a failure by WorkSafe to exercise its statutory powers, for example to test the quality of the water, proactively. WorkSafe's involvement at Fiskville increased dramatically after December 2011 when the first *Herald Sun* article was published. These matters are detailed in Chapter 7.

The role of EPA Victoria is examined in Chapter 8. Its inspectors rarely visited the Fiskville site throughout its operation. On several occasions between 1988 and 2011, EPA Victoria became aware of significant pollution issues at Fiskville. However, its follow-up was inadequate. Subsequent to the publication of the Joy Report in 2012, EPA Victoria has been far more active and has issued two Clean Up Notices to the CFA requiring the Fiskville site to be remediated.

The role of the then Department of Primary Industries in responding to the detection of perfluorooctane sulfonate (PFOS) in livestock on a farm adjoining Fiskville in 2013 is also examined in Chapter 8 as is the role of the Moorabool Shire Council, which responded to complaints from another adjoining landowner about activities at Fiskville.

1.7 The Country Fire Authority

Victoria is one of the most bushfire-prone areas in the world. This is due to a combination of meteorological conditions and Victoria's flora. In summer, cold fronts along the southern coast interact with warm fronts further inland to drive hot, dry winds from the deserts of central Australia across Victoria. These northerly winds blow over dry eucalypt forests and grasslands which, especially

during periodic droughts, easily catch alight in high temperatures (often more than 45 degrees). Unpredictable changes in wind further complicate the conditions.⁴⁸ Scientific consensus indicates that climate change will increase the frequency and intensity of bushfires in the future.

Bushfires are an inherent part of life in Victoria and are one way in which forests rejuvenate. They also cause fatalities and a great deal of damage to properties, wildlife and livestock. The Victorian community relies on the skill and courage of those organisations and individuals tasked with fighting bushfires.

The *Fire Brigades Act 1890* established the MFB and a volunteer service for regional Victoria administered by the Country Fire Brigades Board. However, throughout the first half of the twentieth century fires in regional Victoria continued to be tackled in a piecemeal manner. Although many towns had their own bushfire brigades, only some were able to attract a strong number of volunteers.

The Stretton Inquiry into the bushfires of 1939 recommended a unified, statewide fire authority, however political opposition to this recommendation delayed its acceptance. The Country Fire Authority (CFA) began operating on 1 January 1945.⁴⁹

The CFA is largely known in the community for its bushfire and rural fire activities. As mentioned above, the CFA also fights urban and structural fires and many of the toxic chemicals firefighters face, which are discussed in this Final Report, are most commonly found in such fires. It is one of the world's largest volunteer-based emergency services organisations, with over 1,200 brigades and around 60,000 members.⁵⁰ The CFA is responsible for the whole of regional Victoria and is active, along with the MFB, in parts of Melbourne.⁵¹ Although fire suppression (which includes fire prevention education and training) is the CFA's major focus, it also provides other emergency services, including:

- Structural fire suppression (in urban areas)
- Transport-related fire suppression
- Road rescue
- Technical rescue, such as high angle, trench and mine operations
- Hazardous materials transportation and storage incidents
- Working with forestry industry brigades
- Flood assistance (in partnership with the State Emergency Service).⁵²

48 ABC Radio Australia, *Victoria one of the most bushfire prone regions in the world*, (www.radioaustralia.net.au/international/radio/onairhighlights/victoria-one-of-the-most-bushfire-prone-regions-in-the-world), viewed 18 December 2015

49 Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, pp.99-120

50 CFA, *Volunteerism Strategy 2015 - 2020*, (2015) p.5

51 CFA, *Volunteer FAQ's*, (www.cfa.vic.gov.au/volunteer-careers/volunteer-faqs/), viewed 18 December 2015. The MFB operates in the Metropolitan Fire District defined in s.4 and Schedule 2 of the MFB Act and the CFA from this boundary outwards

52 CFA, *What we do*, (www.cfa.vic.gov.au/about/what-we-do/), viewed 18 December 2015

Recent evidence of the CFA's firefighting ability, along with State Emergency Service workers, was seen during a fire along Victoria's Great Ocean Road on Christmas Day 2015. According to Commissioner Lapsley the damage caused by this fire would have been much greater if not for the firefighters. He said: "They were able to fight the fire in the streets in the afternoon, in the evening and in the night."⁵³

1.8 The importance of training

Firefighters train not only to extinguish fires; they also train to keep themselves and the public safe. Mr Andrew Ford, CEO at Volunteer Fire Brigades Victoria, told the Committee: "Not being trained ... is as much a safety hazard as many of the other things that we deal with in an inherently dangerous role."⁵⁴

The importance of training can be seen in the comment of Ms Lucinda Nolan, CEO of the CFA, who when speaking about the organisation's trainers said: "They should be well and truly recognised for the work that they have done over time and the skill set that they have given the CFA to perform as we have performed."⁵⁵

The Committee acknowledges the view of some firefighting trainers that 'real fires' will always be the best way to train firefighters.⁵⁶ However, the Committee finds it difficult to accept this view. For example, MFB firefighters are trained differently to CFA firefighters and there is no evidence they are less skilled or less capable of managing fires.

Firefighting is unusual in that firefighters' 'workplaces' are emergency situations. Risk can be controlled but never eliminated - a fire must be extinguished. The Linton Inquiry, which followed the deaths of CFA volunteers at the Victorian town of Linton, criticised CFA operational command for not fully considering the safety of firefighters. It concluded that dangerous and unpredictable emergencies can be successfully managed while also considering the safety of firefighters (see also the discussion on 'Reasonable practicability' below).

While the Linton Inquiry led to some changes that improved the safety of firefighters on the front line, this same consideration did not seem to extend to training. It goes without saying that firefighters when training should not be exposed to the same risks as when fighting 'real' fires.

The Committee believes, then, that while firefighting training must aim to be as realistic as possible firefighters have a right to safe training drills. For example, Mr Brian Whittaker from the MFB explained to the Committee that using

⁵³ Australian Associated Press, 'Great Ocean Road bushfire: firefighters 'saved hundreds of homes' in Wye River', *The Guardian*, (www.theguardian.com/australia-news/2015/dec/27/great-ocean-road-bushfire-firefighters-saved-hundreds-of-homes-in-wye-river), viewed 27 December 2015

⁵⁴ Mr Andrew Ford, Chief Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.221

⁵⁵ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.25

⁵⁶ Mr Paul Roughead, Operations Officer, CFA, *Transcript of evidence*, 27 July 2015, p.13

liquefied petroleum gas (LPG) in training scenarios allows trainees to understand how fire behaves in a much safer environment than the past practice of burning flammable liquids. He said:

LPG burns an enormous amount cleaner than the flammable liquid fuels that we used to use, but it still gives us the same heat and flame and understanding of the behaviour of fire, which is critical for firefighters. They must experience the heat; they must understand how fire behaves.⁵⁷

The burning of flammable liquids at Fiskville is discussed in Chapter 4.

Dr Mike Logan from Queensland Fire and Emergency Services spoke with the Committee about training for chemical spills. He said that it is possible to learn about the nature of a dangerous chemical spill even while restricting the amount of chemicals used to a safe level:

I go to emergencies where I am the bunny that goes into the lethal concentration of a chemical spill and all the gas is everywhere. That does not mean that I have to go and practice in it, because I know that if it goes wrong it is going to hurt. But you can still practice with it. You practice with it at safe levels but you want to practice with the purpose of: what are you actually trying to practice? ... You do not say, 'People, you can swim in it', because it is a lethal concentration. That is not good practice.⁵⁸

Looking to the future, virtual technology may make training even safer. The Committee notes that a team at Deakin's Centre for Intelligent Systems Research in Geelong has partnered with a company from the United States to develop a virtual firefighter training simulator.⁵⁹ The Committee notes that the CFA has used computer simulation in its training programs since 2006.⁶⁰

In Victoria, the 'State Fire and Emergency Services Training Framework' sets the foundations for fire and emergency services training.⁶¹ The document includes a commitment to:

Ensure that training for particular roles and specific hazards to cover the knowledge and skills required for that particular hazard where appropriate, acknowledging that having properly trained and accredited firefighters is the most critical element in achieving firefighter safety.⁶²

This commitment aims to ensure firefighter safety once they have been trained.

FINDING 7: That best practice firefighter training can be achieved in a controlled, safe training environment.

57 Mr Brian Whittaker, *Transcript of evidence*, 6 November 2015, p.4

58 Dr Michael Logan, Director, Scientific Branch, Queensland Fire and Emergency Services, *Transcript of evidence*, 6 November 2015, p.11

59 Deakin University, *Collaboration to boost virtual training technology* (www.deakin.edu.au/research/story?story_id=2015/09/03/collaboration-to-boost-virtual-training-technology), viewed 13 January 2016

60 CFA, *CFA Annual Report 2006*, (2006), p.24

61 EMV, *State Training Framework*, (www.emv.vic.gov.au/our-work/current-projects/state-training-framework/), viewed 31 March 2016

62 Fire Services Commissioner Victoria, *State Fire and Emergency Services Training Framework*, (2013), p.9

1.9 Firefighters and occupational health and safety

As discussed in Chapter 7, Victoria has had in place since 1985, at the latest, comprehensive legislation aimed at ensuring the highest levels of occupational health and safety for working people. Prior to 1985, there were less comprehensive but nonetheless generally applicable laws regulating workplace safety.⁶³ Those various laws have imposed duties on an employer for the benefit of its employees, contractors and anyone else who may be affected by the manner in which the employer conducts its undertaking.

So far as the operation of Fiskville is concerned, the *Occupational Health and Safety Act 1985* was the governing statute between 1985 and 2005 when it was repealed and replaced by the *Occupational Health and Safety Act 2004*. For the purposes of this Final Report, there is little practical difference between the 1985 and the 2004 statutes. For convenience, reference is made to the provisions of the 2004 Act.

Section 21 of the *Occupational Health and Safety Act 2004* imposes on an employer a duty to do what is reasonably practicable to provide and maintain a ‘working environment’ for employees that is safe and without risks to health.⁶⁴ The concept of a ‘working environment’ is very broad and would certainly encompass a training facility such as Fiskville and would include the facilities, the equipment, the work methods, the materials, etc.

An employer fails to meet that duty if, for example, the employer fails to:

- Maintain, so far as is reasonably practicable, each workplace⁶⁵ under the employer’s control in a condition that is safe and without risks to health⁶⁶
- Provide such ‘information, instruction, training or supervision to employees’ as is necessary to enable them to perform their work in a way that is safe and without risks to health.⁶⁷

It is an offence to discriminate against, or victimise, an employee because the employee raises a concern about health and safety.⁶⁸

⁶³ The *Industrial Safety Health and Welfare Act 1981* (Victoria) preceded the 1985 Act; prior to 1981, the *Labour and Industry Act 1958* (Victoria) applied – see generally William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria* (3rd ed, Federation Press, 2007) at [123]

⁶⁴ The equivalent section in the *Occupational Health and Safety Act 1985* (Victoria) was also s.21 under which the duty to do what was ‘practicable’; the equivalent provision in the *Industrial Safety Health and Welfare Act 1981* (Victoria) was s.11. Curiously, the duty there was to do what was ‘reasonable practicable’

⁶⁵ ‘Workplace’ means ‘any place, whether or not in a building or structure, where employees ... work’ and would certainly include a training facility such as Fiskville

⁶⁶ *Occupational Health and Safety Act 2004* (Victoria), s.21(1) and (2)(c)

⁶⁷ The equivalent provision in the *Occupational Health and Safety Act 1985* (Victoria) was also s.21(2)(e). A similar obligation was imposed on an employer by s.11(1) and (2)(c) of the *Industrial Safety Health and Welfare Act 1988*.

⁶⁸ *Occupational Health and Safety Act 2004* (Victoria), s.76(2)(d); the equivalent provision in the *Occupational Health and Safety Act 1985* was s.54(2)(d)

By virtue of s. 21(3), the duties owed by an employer to its employees under ss. 21(1) and (2) described above are also owed to a contractor engaged by the employer to the extent that the employer controls the work being done by the contractor.⁶⁹ For example, if the employer knows of a hidden danger, it must alert the contractor to it.⁷⁰

Section 22 of the *Occupational Health and Safety Act 2004* also requires an employer to:

- Monitor the health of employees of the employer
- Monitor ‘conditions at any workplace under the employer’s management and control’
- Provide information to the employees concerning health and safety at the workplace.⁷¹

Importantly in the present context, the duties owed by an employer under the *Occupational Health and Safety Act 2004* are not only owed to its employees and contractors. An employer is also required to do what is reasonably practicable to ensure that people other than its employees are not exposed to risks to their health and safety as a result of the ‘conduct of the employer’s undertaking’.⁷² The CFA’s ‘undertaking’ at Fiskville was primarily the provision of firefighting and other training. As noted above, thousands of employees of other agencies such as the MFB have been trained at Fiskville. The duty under s. 23 applied to them; it also applied (and continues to apply) to farmers on adjoining properties.⁷³

Many of the trainees and some of the instructors at Fiskville were volunteer firefighters. They were also owed a duty by the CFA under s. 23 of the *Occupational Health and Safety Act 2004*. For all practical purposes, the requirements imposed on the CFA under the Act in respect of its volunteers is, and was at all times, identical to the duty it owes to its employees and contractors: to do everything that is ‘reasonably practicable’ to protect them.

Section 25 of the *Occupational Health and Safety Act 2004* imposes a duty on employees, while at work, to take ‘reasonable care’ for their own safety and for the safety of others.⁷⁴

69 William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [601]-[614]

70 See the discussion of the ‘buried drums’ incident in Chapter 7

71 The equivalent section in the *Occupational Health and Safety Act 1985* was s. 21(4). See generally, William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [645]-[647]

72 *Occupational Health and Safety Act 2004*, s.23; the equivalent section in the OHS Act 1985 was s. 22. Those provisions are examined in detail in William B. Creighton and Peter Rozen, *Occupational Health and Safety in Victoria* (3rd edition, 2007), paragraphs [701]-[713]

73 See the Lloyds and Callow Case Studies at the end of this Final Report

74 The equivalent provision of the *Occupational Health and Safety Act 1985* was also s.25; the equivalent provision in the *Industrial Safety Health and Welfare Act 1981* was s.14

1.9.1 Reasonable practicability

As noted above, the key aspect of the statutory duties owed by an employer is to do what is ‘reasonably practicable’ to protect employees, contractors and others. Section 20(1) of the *Occupational Health and Safety Act 2004* provides that, in meeting this standard, an employer must ‘eliminate risks to health and safety so far as is reasonably practicable’ and, if elimination of risks is not reasonably practicable, must ‘reduce those risks so far as is reasonably practicable’.

Section 20(2) provides that in determining what is ‘reasonably practicable’ in relation to ensuring health and safety, regard must be had to the following matters:

- The likelihood of the hazard or risk concerned
- The degree of harm that would result if the hazard or risk eventuated
- What the person knows, or ought reasonably to know, about the hazard or risk and any ways of eliminating or reducing the hazard or risk
- The availability and suitability of ways to eliminate or reduce the hazard or risk
- The cost of eliminating or reducing the hazard or risk.⁷⁵

The application of the *Occupational Health and Safety Act 1985* to firefighting was examined in detail by the State Coroner in the inquest into the deaths of five volunteer firefighters in a wildfire at Linton in 1998.⁷⁶ At issue was the application of the employers’ duty in the context of an ‘uncontrollable hazard’ such as a wildfire. The Coroner concluded that:

It is clear that the Victorian Occupational Health and Safety legislation applies to firefighting and, in particular, a wildfire operation. There is nothing in the legislation to indicate firefighting agencies or individual firefighters are exempt when involved in wildfire management

It is the extent to which it is practicable to apply traditional occupational health and safety risk management principles to the management of wildfire on the fire ground that is at issue.⁷⁷

The Coroner observed that elimination of the hazard — that is, the wildfire — will clearly not be practicable in most circumstances. However, his Honour concluded that:

⁷⁵ The equivalent provision in the *Occupational Health and Safety Act 1985* was the definition of ‘practicable’ in s.4; see generally; *Johnstone, Bluff and Clayton, Work Health and Safety Law and Policy* (Thomson Reuters, 3rd edition, 2012), pp.263-289

⁷⁶ State Coroner’s Office, Report of the Investigation and Inquests into a Wildfire and the Deaths of Five Firefighters at Linton on 2 December 1998 (2002), chapters 20, 21 and 23.3; the issue was also examined in the Black Saturday Royal Commission report – see: 2009 Victorian Bushfires Royal Commission, *Final Report, Vol. II, Part One*, part 3.3.1

⁷⁷ State Coroner’s Office, *Report of the Investigation and Inquests into a Wildfire and the Deaths of Five Firefighters at Linton on 2 December 1998* (2002), chapters 20, 21 and 23.23 p.602

... the nature of the potential hazard in wildfire dictates a combination of all practicable systems to ensure the risk of injury or death is reduced. The lessons of Linton are that it is a combination of all systems that are likely to best achieve elimination of the risk. The general occupational health and safety principles of risk management are also applicable to wildfire management as they are in any other potentially hazardous workplace. It is the detail, extent and balance of the application that [sic.] variations may occur.⁷⁸

A similar observation was made by Mr Brian Whittaker in this Inquiry. Mr Whittaker has worked for the MFB for 30 years and is currently the Commander of Leadership and Development of Operational Training. He was also the Commander of the Hazmat Scientific Unit at the MFB. Mr Whittaker described the ‘common workplace’ of firefighter as ‘an uncontrolled environment’ in which there are numerous hazards including explosion, fire, structural collapse and exposure to toxic chemicals that are the product of combustion.⁷⁹ Mr Whittaker noted that “... in this profession sometimes you cannot eliminate those hazards, purely because of the nature of the job involved” because:

Firefighters are responding to an emergency. We cannot just let the fire keep going. Sometimes we probably might not even control that fire, though. The expectation from the community is that firefighters will do something — firefighters will enter the building that is on fire; ensure people have been removed from the building, rescued from the building; and try and minimise the damage of the fire. That is what is expected from the community.⁸⁰

However, Mr Whittaker accepted that the same challenges of protecting firefighters from hazards do not need to be present when they are training. He said that he was “... probably not accepting that we expose firefighters to the same chemicals in a training environment if we do not need to, and I do not think we need to”.⁸¹

The same point was made more forcefully by Mr Peter Marshall, the National Secretary of the UFU:

On firefighter exposure, I just want to make this point to the committee very strongly. There has been a suggestion that operational firefighting training is the same as operational firefighting training for the purpose of saving life and property. It is not. Operational firefighting training is a controlled atmosphere. Firefighters are entitled to the same protection as any other worker in relation to the Occupational Health and Safety Act. Naturally enough, the very nature of fire and incident(s) when they respond to an emergency is an uncontrolled environment. Sure, we have procedures, but the exposures and risks are not the same. The exposures and risks at training

⁷⁸ Ibid. p.607

⁷⁹ Mr Brian Whittaker, *Transcript of evidence*, 6 November 2015, p.2. The Committee heard similar evidence from Dr Tee Guidotti, an international consultant in occupational health, risk science and sustainability and the author of *Health Risks and Fair Compensation in the Fire Service* – Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, pp.2-3

⁸⁰ Mr Brian Whittaker, *Transcript of evidence*, 6 November 2015, pp.2-3

⁸¹ Ibid. p.6

can be controlled and should be controlled. We actually can minimise some of those risks through personal protective clothing and equipment and also through fire decontamination procedures post that particular fire.⁸²

Mr Whittaker was asked by Committee member Ms Vicki Ward to expand on this topic:

Ms WARD—In your submission you said that it is currently not possible to fully protect a firefighter. That is in a real-life firefighting situation, for which I completely understand your point. But what about in training? Is it possible to fully protect a firefighter in training?

Mr WHITTAKER—The control mechanisms are a lot more on scene that at a job, and that is because of the fuels we use to expose them to fire, the safety mechanisms of the instructors and the operators of the actual props themselves.

Ms WARD—In your view is it necessary to create identical real-life situations in fighting fires?

Mr WHITTAKER—They are not identical; they are as close as can be.

Ms WARD—But is it necessary to create an identical scenario?

Mr WHITTAKER—No. There are many reasons why you do not need to. It is as close as you can get.⁸³

The Committee accepts this evidence. It considers that whatever difficulties may face a firefighting agency such as the CFA in protecting its firefighters in a wildfire or structural fire setting, they need not be present in a training environment. The Committee accepts that for firefighting training to be effective so that firefighters are prepared for what they will confront on the job, those being trained must be exposed to fire behaviour, heat and circumstances close to real life. However, it is clear that at Fiskville the CFA had a choice about:

- The fuels it burnt
- The props it used
- The water it used for training
- The information it provided to its trainers and trainees about the hazards inherent in the training
- The supervision it provided.

⁸² Mr Peter Marshall, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.150

⁸³ Mr Brian Whittaker, *Transcript of evidence*, 6 November 2015, p.8

1.9.2 The special responsibilities of employers that are statutory authorities

The *Industrial Safety Health and Welfare Act 1981* and the *Occupational Health and Safety Act 1985* applied as much to the activities of employers that were private bodies as they did to employers that were government bodies.⁸⁴ This continues to be the case under the *Occupational Health and Safety Act 2004*.⁸⁵

In his 2004 review of the *Occupational Health and Safety Act 1985*, Chris Maxwell QC (as he then was)⁸⁶ considered that:

... government (as employer and duty holder, and as policy maker) can, and should, be an exemplar of OHS best practice. By taking the lead in the systematic management of occupational health and safety, government can influence the behaviour of individuals and firms upon whom duties are imposed by the OHS legislation.⁸⁷

Maxwell explained the meaning of ‘exemplar’:

Exemplary OHS performance means more than compliance. It involves going beyond what is required by the OHS legislation and looking to set high standards for the community by example.

The importance of such leadership cannot be overestimated. If the public sector can be seen by all duty holders (and by small business in particular) to be aspiring to exemplary OHS performance, this will foster and encourage in the minds of duty holders a culture of continuous improvement, to secure the health, safety and welfare of the persons who work for them.

The converse is equally true, and equally important. If the private sector gets any sense that Government — as an employer — demands less of itself than it (through WorkSafe) demands of private sector employers, the effect will be corrosive. There is simply no satisfactory answer to the challenge voiced more than once during the consultations, ‘If Government itself cannot achieve reasonable OHS standards, how can they expect me to comply?’⁸⁸

The Committee strongly endorses these sentiments. They have a special application to the CFA in relation to Fiskville for two reasons.

The first is that, as has been noted above, Fiskville held a special place as the ‘spiritual home’ of the CFA. Because all CFA recruits were trained at Fiskville, the standards that were set by those in charge of training there, good or bad, have permeated through the CFA during the last 45 years. Whatever approach was

⁸⁴ *Industrial Safety Health and Welfare Act 1981*, (Victoria), s. 4; *Occupational Health and Safety Act 1985*, (Victoria), s.5

⁸⁵ *Occupational Health and Safety Act 1985* (Victoria), s.6

⁸⁶ Maxwell P is currently the President of the Court of Appeal

⁸⁷ C. Maxwell QC, *Occupational Health and Safety Act Review 2004* (State of Victoria, 2004), paragraph [1061]

⁸⁸ *Ibid.*, paragraphs [1078]-[1080], emphasis in the original

taken to OH&S at Fiskville will have been the approach that the recruits took back to their home brigades and stations. Most if not all of the CFA's current senior officers are graduates of Fiskville.

The second reason is that, as discussed in Chapter 7, CFA officers received delegations from a predecessor organisation to WorkSafe under the *Dangerous Goods Act 1985* to perform a policing role requiring other employers to comply with the requirements for safe storage, labelling and handling of 'dangerous goods'. At the same time, as the evidence clearly demonstrates, the CFA itself was not meeting those standards at Fiskville.⁸⁹ As Professor Joy put it in his evidence to the Committee: "[The CFA] were out there preaching the gospel elsewhere to industry about safe storage and safe handling, but it was not happening back at Fiskville."⁹⁰

FINDING 8: That from 1981 onwards, the law required the CFA to do what was (reasonably) practicable to protect its employees, contractors and volunteers while they were engaged in providing and receiving training.

FINDING 9: That public sector employers should be exemplars in relation to compliance with occupational health and safety laws.

1.10 Fiskville's closure and its repercussions

It was common for witnesses before the Committee to say that they knew nothing about the unsafe practices at Fiskville until the story 'broke' in the media in late 2011. However, there were several people who tried to bring attention to activities at the site prior to this, including CFA members (such as Mr Brian Potter⁹¹ and Mr Alan Bennett⁹²) and paid firefighters (such as Mr Mick Tisbury from the UFU⁹³).

As noted above, in December 2011, the *Herald Sun* newspaper published a story on possible links between activities at the CFA's Fiskville training site and the development of cancers and other diseases among people who attended Fiskville.⁹⁴ Over the following three years the CFA contracted a number of contamination specialists to carry out tests on the site and make recommendations on how the site's safety could be ensured.

In March 2015, the CFA contracted environmental consultants Senversa to carry out tests at Fiskville in response to two EPA Victoria Clean Up Notices issued in January 2013 (see Chapters 8 and 10). The results of 550 tests showed that the potentially dangerous chemical PFOS had been found to have pervaded the

⁸⁹ See Chapter 7

⁹⁰ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.130; see also Case Study 3 on Mr David Clancy

⁹¹ See Chapter 3

⁹² See Case Study 2 on Mr Alan Bennett

⁹³ For example, see the discussion on water quality in Chapter 4

⁹⁴ Ruth Lamperd, 'Cancer Town', *Herald Sun*, 6 December 2011, p.1

infrastructure where it had not been previously detected, namely hydrants on the practical training site and near the hangar building. This pipework is connected to the network of pipes throughout the site. However, PFOS was not found in drinking water in the accommodation and mess areas.

The CFA Board decided to close Fiskville permanently because it could no longer guarantee the safety of the site. At a public hearing, Ms Claire Higgins, who was Chair of the CFA Board at the time of the closure, confirmed: “Firstly, I want to say that it was absolutely the decision of the Board to close and subsequent to that decision we advised the Minister of that decision.”⁹⁵

Both the CFA and Victorian Government made announcements about Fiskville’s closure.

On 26 March 2015, the CFA issued a media release stating:

Today the Victorian Government announced the permanent closure of CFA’s Fiskville training facility. It comes after CFA’s Board resolved to close the site following the results of water testing of more than 550 samples ... The Board resolved to take this course of action because we could not guarantee the safety of the site.⁹⁶

On the same day, the Victorian Government issued a media release titled, ‘Fiskville shut forever’. It stated:

The Andrews Labor Government has permanently closed the CFA training facility at Fiskville.

The CFA board unanimously recommended the closure of the site following the results of around 550 tests at the site. The results showed that while the drinking water and showers were clear of contamination, high levels of the toxic chemical PFOS were found around the fire training area and a completely new zone at the site where the chemical had not been previously detected.

The exhaustive tests showed PFOS levels ranged from less than 1 microgram per litre to as high as 50 micrograms per litre. International guidelines for safe levels of PFOS in drinking water is 0.2 micrograms and for non-drinking water is 4 micrograms per litre.

The source of the latest contamination has not yet been determined but the pumping system and old pipes are considered the most likely.

The Minister for Emergency Services, Jane Garrett, says despite previous clean ups, Fiskville remains a dangerous site which can no longer operate safely.⁹⁷

⁹⁵ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.12

⁹⁶ Michael Wootten, CFA, *Fiskville closure*, (media release, 26 March 2015)

⁹⁷ Minister for Emergency Services, Government of Victoria, *Fiskville shut forever*, (media release, 26 March 2015)

The CFA's submission states:

During site assessments carried out by BlueSphere in January 2015 (to determine the scope of remediation works around the PAD), an unexpected test result from two of the hydrants on the PAD was obtained. Further water testing in March 2015 revealed PFOS at additional sites that were not associated with the domestic water supply. On 26 March 2015 the Board determined to close Fiskville permanently.⁹⁸

Ms Higgins said that the Board had previously made a commitment to eliminate PFOS from Fiskville but these results meant that this commitment could not be met. Contrary to the Victorian Government's media release regarding the safety of the site, Ms Higgins added that the decision was not based on the level of PFOS itself, nor any health risks, but only on the continued location of PFOS in places where it was not expected to be found. This meant that the Board had lost confidence in the site.⁹⁹

Ms Higgins explained that the new discoveries:

... undermined the confidence that the Board had with respect to the site, and that was why the decision was taken. Now if I or the Board are proven wrong with the passage of time, then so be it, but from my perspective I felt that it was the cautious and appropriate action to take at the time.¹⁰⁰

The current CEO of the CFA, Ms Lucinda Nolan, added: "The presence of contaminants is not the reality about people's impacts, but it is about a perception and a loss of confidence in the site."¹⁰¹

The media coverage of Fiskville's closure, in particular the focus on health risks, has caused a great deal of concern in the local community. This concern has been exacerbated by the often contradictory evidence that has appeared in the public domain regarding the specific level of risk from the Fiskville site (see the discussion on PFOS in Chapter 9). Mr Hatfield said: "There are heaps of people who tell us that PFOS is bad, but then we have experts who are telling us it is not. That is the trouble that our community has."¹⁰²

Further, local farmers are concerned about the damage to their reputation and potential problems they may face selling their livestock.¹⁰³ Examples of financial losses and health concerns for neighbouring properties at Fiskville are found in the case studies on Mr Neville Callow and Mrs Beccara and Mr Matthew Lloyd at the end of this Final Report.

⁹⁸ CFA *Submission No.60*, p.17

⁹⁹ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.12

¹⁰⁰ *Ibid.* p.13

¹⁰¹ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.25

¹⁰² Mr Ben Hatfield, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, p.275

¹⁰³ Mr Ian Ireland, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, p.274

Mr Ian Ireland from the Ballan Fire Brigade summed up the impact of the closure of Fiskville on the local community by saying: “The closure has caused anxiety, hurt and frustration in the local community and across the Western District ... This is not being helped by front-page stories equating Fiskville as a toxic dump.”¹⁰⁴

Similarly, a combined submission from Fiskville staff members states:

Fiskville is a focal point in the small community of Mount Wallace and provides employment opportunities for both male and female residents within their immediate local area. It has introduced new members to the community, provides a social hub, and at various times and to different levels has enhanced the viability of local clubs and schools. This influence has extended into the wider communities of Ballan and the Moorabool Shire and as Fiskville has grown so has its social and economic impact on these communities grown.¹⁰⁵

In an article in Ballarat’s *The Courier* newspaper, Mr Adam Ludbrook, co-owner of a business based in Ballan, described the flow-on effect of a drop in his turnover caused by the closure of Fiskville:

We have slowly grown and we employ around five or six blokes, Fiskville has provided us with a steady income as that period of time has gone on. My estimate has been that it would be 15 to 20 per cent of our turnover. Rough calculations, if we don’t have that money coming in we might have to drop a bloke or two, that is how it would impact me directly.

But it is also the indirect work where we employ other local people, like we employ local plumbers, local glaziers and we generate work through that ... In my mind it is the whole community that it affects because if we are not employing two blokes, well they don’t come down and buy a paper or a pie or a coffee.¹⁰⁶

Mr Rob Croxford, the CEO of Moorabool Shire Council, told the Committee that the majority of the people employed at Fiskville - around 70 - lived locally, contributing to the social and economic strength of the region. He said that the impact of the closure of Fiskville was “... quite significant ... That is our concern — for the community, for the businesses and ultimately for the rebuilding of a facility in the shire”.¹⁰⁷

While the closure of Fiskville has harmed the Ballan region the Committee accepts the decision of the CFA Board to close Fiskville on the basis that it could not guarantee the safety of the site. It is therefore vital for a new training site to be found in the area as quickly as possible to limit any future social and financial harm to the region. This is discussed further in Chapter 10.

104 Ibid. p.273

105 Fiskville Staff, *Submission 57*, p.6

106 Matthew Dixon, ‘Fiskville closure to impact town’, *The Courier*, (www.thecourier.com.au/story/3246276/fiskville-closure-to-impact-town/), 30 July 2015

107 Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.6

FINDING 10: That following a series of concerns about the safety of the site over several years, Fiskville was closed by the CFA Board in March 2015 after perfluorooctane sulfonate (PFOS) was found in parts of the site where it had been previously undetected, causing the Board to lose confidence in the safety of the site.

FINDING 11: That Fiskville's closure has had negative economic and social consequences in the Ballan region.

1.11 Meeting current and future training demand

As well as affecting the local area, the closure of the Fiskville Training College has significantly reduced Victoria's capacity to train firefighters. The facility provided training for MFB firefighters as well as emergency services personnel from the CFA, Victoria Police, Ambulance Victoria, Department of Environment, Land, Water and Planning, and the State Emergency Service.¹⁰⁸

A new site at Craigieburn, just north of Melbourne, has helped meet some of the demand for firefighter training in Victoria. However, the Committee does not believe that this facility alone is sufficient for the State's needs, nor the needs of CFA trainees. For example, CFA trainees from western Victoria should not be expected to travel the long distance to Craigieburn. As well, the Committee heard evidence that the closure of Fiskville has put a strain on the capacity to train firefighters and this will only increase. Mr Andrew Ford, the CEO of Volunteer Fire Brigades Victoria, told the Committee:

I think it is also relevant to note that the training demand for the state, both in the paid and the volunteer perspective, is not going to go away, ever. It is certainly not going to diminish and in fact we know here and now that in the next two, three, four, ten years, the training demands are going to increase. If anything, even if there was a perfect bill of health for all the training facilities that existed last year, they probably would not be adequate for next year anyway.¹⁰⁹

Commissioner Lapsley told the Committee that not only is a new CFA site needed in the Ballan area, the State may have to consider developing more facilities in other parts of Victoria.¹¹⁰

Regarding a new site in the Ballan area, Ms Nolan told the Committee:

A number of sites have been identified for the purchase of new land for a training facility. They have not got any further than that, so there have been some negotiations but none successful to date, so that will continue. I have met with Moorabool council and spoken to them at length about it in terms about their concerns and some of the recommendations, so that is going ahead.¹¹¹

¹⁰⁸ MFB, *World class emergency training centre fires up for official open day*, (media release, 15 June 2015)

¹⁰⁹ Mr Andrew Ford, Chief Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.223

¹¹⁰ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.8

¹¹¹ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.21

Remediation of the Fiskville site and the potential for a new training facility in the Ballan area are discussed in Chapter 10 of this Final Report.

FINDING 12: That the closure of Fiskville has placed a great strain on the capacity of the remaining training centres to meet firefighting training demands in Victoria.

FINDING 13: That the closure of Fiskville has inconvenienced many trainees in western Victoria by forcing them to travel further to other training sites.

2 Inquiry process

AT A GLANCE

Background

This Chapter outlines the process followed by the Committee in order to conduct a thorough and transparent Inquiry. The process included extensive consultation (submissions, public hearings, site visits, informal briefings and an evidence-gathering trip to Germany) and an extensive document discovery process. The challenges associated with accessing documentary evidence, as well as proposals for addressing such challenges for future Joint Investigatory Committee Inquiries, are canvassed.

This Chapter addresses Terms of Reference (1), (3) and (4).

Key findings

- That a document discovery process was required to meet the Terms of Reference and documents were requested from the CFA and a range of other agencies and Departments (listed in Appendix 4).
- That the documents the Committee gained access to were essential to the Committee's work both to test the evidence at public hearings and for writing this Final Report.
- That the Committee should have been provided with all CFA Board minutes in an un-redacted form within the timeframe of the summons.
- That the document discovery process was slow and arduous, and the Committee faced challenges accessing documents from all Departments and agencies, particularly the CFA.
- That the Victorian Government Solicitor's Office was obstructive and uncooperative in the document discovery process.
- That the process consumed significant Committee resources that would not have been necessary if there had been more cooperation.

2.1 Introduction

On 23 December 2014, the Environment and Natural Resources Committee (the Committee) received Terms of Reference for an Inquiry into the CFA Training College at Fiskville.¹¹² The Terms of Reference are provided in full at the beginning of this Final Report.

The Committee resolved to conduct a thorough and transparent Inquiry. This Chapter outlines the Committee's comprehensive approach to both consultation and evidence gathering.

The Committee's evidence, information and consultation included:

- Submissions
- Public hearings
- Site visits and informal briefings in Victoria and Canberra
- An evidence-gathering trip to Germany
- Documents summonsed from the CFA and other government agencies
- A formal document discovery process from CFA and other government agencies
- Academic research papers and reports
- Publicly available information.

The document discovery process that provided crucial material for the Committee is not usual for Parliamentary Committees. However, it was necessitated by the Terms of Reference and the volume of material needing to be examined. This process is discussed in Section 2.5 of this Chapter.

A complete list of submissions and witnesses who appeared at public hearings is provided in Appendices 1 and 2. The Committee sincerely thanks the individuals who made submissions and appeared at public hearings, and recognises that it would have been difficult for many to provide the Committee with details about their own illnesses, and the illnesses and deaths of their family members.

The Committee produced two reports during the course of the Inquiry, prior to the preparation of this Final Report. One was an Interim Report required by the Terms of Reference (June 2015) and the other was a Special Report (November 2015). An overview of these reports is provided in section 2.3 of this Chapter. The timeframe for the Inquiry is discussed in section 2.4.

¹¹² In April 2015, following an amendment to the *Parliamentary Committees Act 2003* (Victoria), the Committee was merged and its name changed to the Environment, Natural Resources and Regional Development Committee

2.2 Consultation process

2.2.1 Submissions

The Inquiry process began on 30 January 2015 with a call for submissions on the Committee's website. The Committee also advertised in newspapers in Melbourne and regional Victoria, as well as in Sydney, Brisbane and nationally. As part of this process the Committee also wrote to a range of organisations inviting submissions, including government departments, local councils and emergency management organisations. Submissions closed on 1 May 2015. The Committee resolved to accept late submissions on a case-by-case basis.

Submissions were made by many individuals and organisations, including CFA volunteers and employees, MFB firefighters, current and former residents of the Fiskville area, individuals who trained at Fiskville as part of their work for government agencies and private companies, and unions with members who had trained at the site.

The United Firefighters Union of Australia (UFU) Victorian Branch promoted the Inquiry and sent its members a form to complete detailing 'personal accounts and experiences at Fiskville'. The Committee received a large number of these submissions via the UFU.

Submissions were also made by health experts, legal firms and regulatory agencies (for example, EPA Victoria and WorkSafe).

The CFA made two detailed submissions to the Inquiry.

A summary of the majority of the submissions received by the Committee was provided in the Committee's Interim Report.¹¹³ The Interim Report was produced after the formal closing period for submissions, however oral evidence from many people affected by the training activities at Fiskville was not explored in detail in the Interim Report because evidence was taken after it had been drafted.

2.2.2 Public hearings

The Committee held 17 days of public hearings between May 2015 and January 2016. In total the Committee received evidence from 95 individuals, many of whom gave evidence on behalf of their employer.

The witnesses who appeared at public hearings were organised into five categories.

¹¹³ Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Interim Report*, (2015, Report No.1, 58th Parliament), pp.40-48

Table 2.1 Witnesses during this Inquiry

	Category	Timing of appearance
1	Victims and those affected by the contamination	May, June and July 2015
2	Health and scientific experts, who informed the Committee about studies linking firefighting and cancer and the human health impacts of perfluorinated chemicals (PFCs)	Between May and 19 November 2015
3	Regulatory agencies with legal responsibilities for the Fiskville site and activities at the training college	Between 19 November and 14 December 2015
4	CFA management, both past and present	Between 14 December 2015, and 28 and 29 January 2016
5	Experts on compensation schemes	27, 28 and 29 January 2016

Public hearings were held in Melbourne, Launceston (Professor Robert Joy) and Sydney (Dr Nigel Holmes and Dr Roger Klein). The Committee also heard evidence from one expert witness, Dr Tee Guidotti, via video link from the United States of America.

The Committee sincerely thanks all those who made themselves available to give evidence to the Committee.

Assistance to witnesses

The Committee was conscious that the issues discussed during the Inquiry were emotional and traumatic for many people. An independent helpline was established early in the Inquiry to support people who were anxious about their health and disturbed by the reports regarding chemical contamination at Fiskville. This was available to anyone with concerns, regardless of whether they chose to make a submission to the Inquiry or appear as a witness before the Committee. All witnesses were sent a letter advising them about the independent hotline.

A range of support was offered to witnesses, with the Secretariat phoning individual witnesses in advance to discuss their needs. Some witnesses chose to have a pre-briefing a few days prior to giving evidence, which included being shown the room where they would give evidence. Some witnesses spoke to a counsellor or representatives of the Department of Justice and Regulation's Community Operations and Victims Support Agency before and / or after giving evidence.

CFA witnesses who raised concerns about giving evidence were also offered the assistance of the counsellor and representatives of the Victims Support Agency who were available before, during and after the hearings.

Witness statements

Committee hearings were relatively informal in comparison to court proceedings and the Committee felt it was unfortunate that a number of senior Departmental representatives sought to table lengthy statements prepared by the Victorian

Government Solicitor's Office (VGSO) at the time they were required to give evidence.¹¹⁴ It was impossible for Committee members to analyse such information at such a time.

The Committee subsequently resolved that witness statements could not be referred to by witnesses during public hearings unless provided to the Committee ten days prior to the hearing. In some instances, statements that were produced outside the specified timeframe were later accepted by the Committee and considered following the hearing.¹¹⁵

2.2.3 Site visits and informal briefings

In June 2015, the Committee visited CFA Training Colleges at Fiskville and Bangholme and the Victorian Emergency Management Training Centre (VEMTC) at Craigieburn.

Fiskville had been closed by the Board at the time Committee members conducted a site visit. However, a number of managers of the Fiskville site generously gave their time to provide the Committee with a comprehensive tour of the site. Secretariat staff did not attend, as Parliamentary Services had determined parliamentary staff safety could not be guaranteed.

Similarly, Committee members were provided with a comprehensive tour of the Bangholme training centre by site management and the Craigieburn VEMTC by its management representatives.

The Bangholme site was established in 1993 and was the CFA's second major training facility (after Fiskville). The VEMTC at Craigieburn is Victoria's major emergency training centre and is managed by the MFB. The Committee visited the three sites to gain insight into firefighter training practices, current and historical, and to be briefed by the CFA and the MFB.

On 16 November 2015, the Committee travelled to Canberra and received a briefing from officers of the Department of Defence, the Defence Minister's Office and the Assistant Defence Minister's Office. The purpose of the visit was to discuss the Department's response to sites in Oakey (Queensland) and Williamstown (NSW) contaminated by high levels of perfluorooctane sulfonate (PFOS).¹¹⁶ The briefing centred on approaches to decontamination and remediation and added to the Committee's understanding of the situation at Fiskville.

¹¹⁴ For example, witnesses for the Department of Economic Development, Jobs, Transport and Resources produced statements totalling 180 pages and provided them to the Committee at the time of their appearance on 23 November 2015

¹¹⁵ For example a statement by Ms Kirstie Schroder was requested on 13 January and was provided to the Committee on 20 January

¹¹⁶ Oakey is the site of an Army Aviation Centre. Williamstown is the site of an RAAF base

2.2.4 Evidence-gathering trip to Germany

Terms of Reference (4) asked the Committee to report back on the feasibility of decontamination / rectification of Fiskville. The Committee has received little evidence on decontamination and remediation as very little has been done in Australia. The only example in Australia is the Point Cook military airbase in Victoria that is referred to in Chapter 10. Chapters 8 and 9 raise the concern of the Committee about the lack of consideration authorities have given to contaminants such as PFOS. Because of the lack of information in Australia the Committee determined that Europe, specifically Germany, is a world leader in decontaminating sites similar to Fiskville. The Committee travelled to Germany between 29 November and 4 December 2015 to hear about how its authorities have responded to cases of perfluorinated compounds (PFC) contamination and their approaches to remediation.

The Committee visited several contaminated sites, including Nürnberg and Düsseldorf airports and a site near the town of Brilon in North Rhine-Westphalia. At these sites, the Committee heard how firefighting training areas with a history of use similar to that of Fiskville had become polluted by PFCs, as well as how PFCs had washed into a major river and contaminated drinking water. The Committee was given an overview of the ongoing efforts to remediate these areas. These involved treating groundwater with absorbing agents and using a filtering process. In some cases, polluted soil was removed and treated to prevent further contamination. The Committee noted that the provision of information to residents and the wider public was a key element throughout the process. Community consultation and communication concerning Fiskville is discussed in Chapters 3 and 5.

The Committee met with several government agencies involved in the regulation of PFCs and remediation of pollution. These included the:

- German Federal Environment Agency (Umweltbundesamt)
- Bavarian State Environment Agency (Bayerisches Landesamt für Umwelt) and
- North Rhine-Westphalian State Agency for Nature, Environment and Consumer Protection (Landesamt für Natur, Umwelt und Verbraucherschutz Nordrhein-Westfalen).

Throughout the trip, the Committee also met with a number of consultants, experts and non-government organisations. Appendix 3 provides a full list.

The Committee is grateful to all those in Germany who gave their time, knowledge and expertise, and willingly shared their experiences and ideas with the Committee.

The remediation of contaminated sites in Australia and Germany is discussed in detail in Chapter 10.

2.3 Interim Report and Special Report

2.3.1 Interim Report (June 2015)

The Committee tabled an Interim Report in the Parliament on 24 June 2015. The Committee identified a number of themes arising from the evidence gathered at that point. These are repeated below.

The Committee has identified a number of key themes that have emerged from the submissions and the first four hearings, including:

- Not all materials burnt at Fiskville in live fire training up to 1999 are known, nor is the mix in which they were burnt established, nor the use by dates of chemicals and the volatility of the fuels. However, some of these chemicals used for firefighting training are known and are undeniably carcinogenic and toxic
- Fire-fighting foams and water used for fighting fire at Fiskville contained PFOS and PFOA. These organic compounds are also carcinogenic and toxic
- The Monash Health Report found higher rates of particular cancers amongst people who had worked and trained at Fiskville than in the general population. Less clearly established are the levels of exposure to particular carcinogens, and mixtures of toxins, that would lead to cancer and other severe illnesses
- Toxins such as PFOS and PFOA are pervasive poisons that are in our everyday environment at relatively low levels. They are chemicals that spread through water, soil, and magnify through the food chain. A number of countries have strict regulatory requirements about the use and handling of PFOS products. In 2009 PFOS was added to the Stockholm Convention on Persistent Organic Pollutants. Australia is expected to ratify this addition soon. There are moves to develop tight guidelines spear-headed by the Western Australian and Queensland environment protection agencies
- This Inquiry has not completed its study in to health effects of contaminants present at Fiskville and therefore the Interim Report is limited to these statements
- In March this year the CFA conducted further tests for PFOS and PFOA on the Fiskville site. The results of 550 tests showed that the toxic chemical PFOS was found in a completely new zone where the chemical had not been previously detected, and was at unacceptable levels. Based on the results of the testing the CFA Board resolved to recommend the closure of the site and the Victorian Government subsequently closed the site on the basis that it could not operate safely
- Notwithstanding the concerns that people now have, many submitters to the Inquiry view their time at Fiskville as a happy one and the site itself as forming an iconic part of CFA and firefighting history in Victoria
- There is a high level of concern amongst witnesses about cancer and possible health impacts, and many individuals believe that these have not been adequately addressed by the CFA
- Health and safety practices at Fiskville were poor and there was minimal OH&S training until the 1990s
- There is significant criticism and mistrust about the role of CFA management, especially from the late 1980s to the present, and views expressed that the CFA was more concerned with protecting its own reputation

- Aside from CFA and MFB training, Fiskville was used by a wide range of organisations, government agencies and private companies as a training ground, and many involved in these practices feel that their experiences have not been considered
- There are a number of people who have lived near the Fiskville site who feel that their ill health can be linked to the Training College, and that the stories of these individuals have largely been ignored
- Fiskville has operated within a complex regulatory environment, with responsibility for oversight dispersed across several agencies. This raises the question of possible regulatory failures that will require further investigation
- Previous studies of Fiskville - including the Monash Health Study and the Joy Report - have been too narrow in scope, and there has been a lack of an holistic approach that combines environmental, health and OH&S concerns
- Given the status of PFOS as an 'emerging contaminant' within the international scientific community, there is a need to seek further clarification about the risks posed by different levels of PFOS
- There is a widespread concern that those affected by Fiskville should be able to achieve a sense of justice - which would include an acknowledgement of their experiences, appropriate health, and possibly some form of financial compensation
- There is broad support for presumptive legislation to address the occupational risk associated with firefighting, although further work needs to be done on identifying an appropriate model for this
- Many in the local community are concerned about the closure of Fiskville and job losses, and are eager to see a new CFA training facility built in the area, or a remediation of the Fiskville site
- There is uncertainty about the capacity and suitability of other existing sites to replace Fiskville as the CFA's primary training ground.¹¹⁷

The report made three recommendations to the Victorian Government:

Recommendation 1

- (a) The Victorian Government oversee the thorough testing of soil and water, including tank water, on adjoining or relevant properties and the results assessed in light of the decisions made at Fiskville. It is important to ensure people living or working on those properties are not subject to ongoing unacceptable risks of exposure;
- (b) In addition, all information regarding exposure to PFOS, testing results and other decisions from authorities related to contamination should be made available to those property owners; and
- (c) Due to market sensitivity regarding contamination of food the Government considers the situation whereby local producers may not be able to sell their livestock or other produce.

117 Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Interim Report*, (2015, Report No.1, 58th Parliament), pp.xi-xii

Recommendation 2

That the Victorian Government assess the feasibility of providing voluntary testing for PFOS free of charge to firefighters - career and volunteer - current and former staff at Fiskville, other trainees, and people who live or have lived on neighbouring properties. The Government, through the Department of Health and Human Services, is to report to the Committee on the feasibility of this process by September 2015.

Recommendation 3

That the Victorian Government ensures that any person who seeks records and documents relating to their involvement with Fiskville is able to do so from government agencies and departments without hindrance.¹¹⁸

As required under section 36 of the *Parliamentary Committees Act 2003*, on 9 February 2016 the Government tabled its response to the Interim Report. The Government accepted all three of the Committee's recommendations. The full Interim Report and the Government's response are both available on the Committee's website.

Recommendation 3 of the Interim Report raised concerns about the ability of persons to access records from government agencies without hindrance. The Government's response to this recommendation indicated that the following action had been taken:

The Secretary, Department of Premier and Cabinet has written to the Secretaries of other Government departments to ensure that any person (including serving or past staff of departments or related agencies) who requests documents are provided with access as soon as possible (except where they would be exempt documents under the Freedom of Information Act 1982).

The Committee remains concerned about difficulties accessing information about what occurred at Fiskville. This is in light of the findings in this Final Report about poor record keeping and people's attempts to access information (see, for example, the Lloyds and Bennett Case Studies at the end of this Final Report) and the challenges the Committee has encountered in accessing information throughout the course of the Inquiry - particularly from the VGSO (discussed in the Committee's Special Report and further in Section 2.6 of this Chapter).

The Committee is concerned that the restriction of access to documents does not accord with the obligation of agencies and their legal representatives to act as model litigants under the Model Litigant Guidelines. These Guidelines are discussed in more detail in section 2.7. They require agencies (including the CFA) and their legal representatives (with the VGSO specifically listed) to:

- 'Act fairly'¹¹⁹
- 'Deal with claims promptly and not cause unnecessary delay'¹²⁰

118 Ibid. p.xiii

119 Victorian Government, Department of Justice and Regulation, 'Guidelines on the State of Victoria's obligation to act as a model litigant' (2011) 2 (a)

120 Ibid. 2(c)

- Avoid litigation (for example, by using alternative dispute resolution or settlement negotiations)¹²¹
- Not take advantage of a person who lacks resources to litigate.¹²²

The Committee therefore seeks an update as to whether requests are being granted and individuals are now able to more easily access records and documents relating to their involvement at Fiskville, as well as an assessment as to whether the CFA and its legal representatives have complied with the Model Litigant Guidelines.

RECOMMENDATION 1: That the Victorian Government, in responding to this Final Report:

- Provide an update on Departmental and agency compliance with the directive from the Secretary of the Department of Premier and Cabinet (as set out in the Government's response to the Interim Report) to provide individuals with access to records and documents relating to their involvement at Fiskville
- Provide an assessment of the CFA's compliance with the Model Litigant Guidelines when people seek access to documents, and
- Provide an assessment of the Victorian Government Solicitor's Office's compliance with both the Secretary's directive and the Model Litigant Guidelines.

2.3.2 Special Report on Production of Documents (November 2015)

On 12 November 2015, the Committee took the unusual step of tabling a 'Special Report'. The purpose of the report was to notify the Parliament that the Committee was experiencing obstacles in its efforts to conduct a transparent Inquiry pursuant to its Terms of Reference. The central obstacle was the failure of the CFA and the VGSO – who acted on the CFA's behalf in responding to the Committee's requests – to produce documents ordered under summons.

The Special Report emphasised that '... the Committee is committed to conducting a thorough and transparent inquiry into the role of past and present executive management at the CFA training college at Fiskville, as well as the other aspects of the Terms of Reference with which it has been issued'. It went on to note that '... the Committee is reporting to the Parliament its concerns about the challenges it is experiencing in undertaking its inquiry'.¹²³

The Special Report is available on the Committee's website. The frustrations and challenges encountered are discussed in section 2.6 below.

¹²¹ Ibid. 2(f)

¹²² Ibid. 2(j)

¹²³ Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Special report on production of documents*, (2015, Report No.2, 58th Parliament), p.13

2.4 Inquiry timeframe

The Committee was committed to conducting a comprehensive Inquiry and obtained a large volume of evidence in doing so. In particular, the volume of documents gained via the document discovery process was immense (an estimated 15,000-20,000 documents) and is discussed further in section 2.5 below. Significant time and resources were required to analyse the documents, in addition to analysing 476 submissions and examining 95 witnesses during public hearings.

The extent of the resources gathered by the Committee was recognised by the Victorian Government when describing the Committee's website as '... the most comprehensive repository of information about PFCs available in Victoria'.¹²⁴

The Committee encountered numerous impediments in accessing certain categories of documents - particularly the CFA Board papers, as detailed in section 2.6 below and in the discussion of the Special Report in section 2.3.2 above.

The combination of the volume of evidence and the delays experienced by the Committee in accessing CFA documents led the Committee to request two extensions to the initial reporting date of 1 December 2015. On 17 September 2015, the reporting date was extended to 31 March 2016. On 10 March 2016, the reporting date was further extended to 16 May 2016.

2.5 Document discovery process

The Committee needed to examine documents from the CFA and a range of other agencies to assist its Inquiry. It requested documents pursuant to section 28(1) of the *Parliamentary Committees Act 2003*. A large volume of documents was sought from the CFA, in particular. The Committee also sought documents from a number of other government agencies. Full details about the dates that requests were sent by the Committee to relevant agencies, the nature of the documents requested, as well as the dates on which the documents were received are provided in Appendix 4.

This section starts with an overview of how the document requests were made to both the CFA and other agencies and the process used to obtain the documents. It then draws some comparisons between document discovery for the purposes of litigation and the experiences of the Committee with document discovery in this instance. The section then outlines the value of the documents that were obtained for the purposes of the Inquiry.

FINDING 14: That a document discovery process was required to meet the Terms of Reference and documents were requested from the CFA and a range of other agencies and Departments (listed in Appendix 4).

¹²⁴ Victorian Government submission to Senate Standing Committee on Foreign Affairs, Defence and Trade Inquiry into Contamination of Australia's Defence Force facilities and other Commonwealth, State and Territory sites in Australia, 5 February 2016

2.5.1 Documents requested from the CFA

The Committee requested a large number of documents from the CFA that fell into a range of categories. These included:

- Documents that the CFA had released to individuals who had made requests under Freedom of Information legislation
- Documents relating to the CFA's insurance policies
- Transcripts of interviews conducted during the Joy Report¹²⁵
- Papers relating to CFA Board meetings held between 1971 and December 2014
- Documents relating to CFA expenditure on remediation and legal advice.

These requests related to different Terms of Reference in the inquiry. For example:

- The transcripts of interviews are relevant to Terms of Reference (1) 'a comprehensive historical study of pollution, contamination and unsafe activities at Fiskville between 1970 and the present day'
- The Board papers and expenditure are relevant to Terms of Reference (3) 'a study of the role of past and present executive management at Fiskville'.

The CFA provided the Committee with a large number of documents in response to these requests.¹²⁶ However, in response to some requests the VGSO (on behalf of the CFA) advised the Committee that the Committee would need to issue a separate summons. An example of this is the Committee's summons of documents relating to meetings of Fiskville management and staff, which the VGSO advised the Committee could not be provided in response to the summons for Board papers. Therefore, an additional summons was issued.¹²⁷

The Committee maintained these documents were pivotal to this Inquiry and accordingly issued a summons for their production. The Committee therefore issued a total of four summonses to the CFA throughout the course of the Inquiry.¹²⁸ The CFA did not comply fully with every summons.

The challenges faced by the Committee in accessing CFA documents are discussed in detail in section 2.6.

2.5.2 Documents requested from other agencies and Departments

The Committee wrote to the Secretaries of relevant agencies and Departments in February and March 2015 requesting that they:

¹²⁵ Professor Robert Joy, CFA, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012)

¹²⁶ For example, in response to the request for FOI documents and insurance documents

¹²⁷ Correspondence from the VGSO, to Chair, Environment, Natural Resources and Regional Development Committee, received 1 October 2015

¹²⁸ 26 June, 8 September, 25 September and 27 October 2015. More detail is provided in Appendix 4

Investigate whether your organisation holds documents (either hardcopy or electronic, and including all notes, correspondence, memoranda, or like documents, concerning interactions with government agencies and others) in relation to the CFA Training College at Fiskville, in the period from the 1970s to the present day.

At this stage the Committee is only requesting a list of these documents. In addition, could you please indicate if these documents are held in a dedicated database. The Committee wishes to obtain a full list of such documents that may be held, not a selective or representative list.

Following receipt of these lists, the Committee determined which documents to request. The requests were prioritised according to the documents' relevance to the Inquiry. For example, the Committee did not request documents relating to the CFA's registration as a Registered Private Provider of Training¹²⁹ because this was not relevant to the environmental or human health impacts of the activities at Fiskville.

The Committee found several Departments and agencies to be uncooperative in response to requests for documents. The following are examples of this:

- An officer of EPA Victoria sought a verbal undertaking from the Committee's Secretariat that any documents provided would not be shown to the Committee members and only viewed by the Secretariat
- EPA Victoria initially followed the same process of redacting material that it follows when releasing material under the *Freedom of Information Act 1982* (the documents were later provided in full)
- The Department of Environment, Land, Water and Planning (which has policy responsibilities that are central to the Committee's Terms of Reference) indicated that the only documents it held relating to Fiskville were records of individuals who attended conferences at the Fiskville site
- Emergency Management Victoria redacted large sections of documents due to claims of executive privilege.

2.5.3 Document discovery in a Parliamentary setting

The term 'document discovery' is adopted from a litigation setting. It is traditionally a process where opposing parties to litigation exchange materials to reduce 'information asymmetry between the parties, and between the parties and the judge'.¹³⁰ As noted above, the Committee decided to establish its own document discovery process to respond to its Terms of Reference. Document discovery, in a formal or structured manner, is not usual practice for Victorian Parliamentary Committees, however it was necessary for this Inquiry.

¹²⁹ These documents were on a list provided by the Victorian Registration and Qualifications Authority on 27 March 2015

¹³⁰ Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1*, (2014), p.397

There are key differences between document discovery in a litigation setting and the document discovery process undertaken by the Committee. The most obvious difference is in a litigation setting the flow of information is mutual as between relevant parties, particularly between the claimant and respondent, whereas in a Parliamentary setting the flow of information is one-way: from agencies to the Committee.

Other differences include that document discovery in a litigation setting is highly regulated by legislation,¹³¹ court rules¹³² and practice directions,¹³³ and the Courts oversee the process. Relevant legislative provisions include: the power of the Court to make orders and directions in relation to discovery;¹³⁴ sanctions a court may impose for failure to comply with the document discovery process;¹³⁵ and making it a criminal offence to destroy documents.¹³⁶ Court decisions provide guidance about the type of claims that are acceptable by the parties in relation to provision of documents or refusal to provide documents to the other party.¹³⁷

Notwithstanding these significant differences in context, the Committee makes some observations here about document discovery. These may be of benefit if Committees are to hold Inquiries of a similar nature to this one in the future, as the Committee found an absence of commentary on this topic to date.

The first observation is that the volume of documents available to be ‘discovered’ is immense. In the words of the Productivity Commission: ‘... developments in information technology have resulted in the production and storage of increasing volumes of electronic documents amplifying the challenges in managing the efficient operation of the discovery process’.¹³⁸ Courts have put in place case management strategies for this,¹³⁹ whereas because this process is atypical for Parliamentary Committees, the experience in this Inquiry provides valuable insight into the challenges that may be faced by Committees wishing to conduct a document discovery process in future.

¹³¹ For example, Part 4.3 of the *Civil Procedure Act 2010* (Victoria) that was amended in 2014 by the *Justice Legislation Amendment (Discovery, Disclosure and Other Matters) Act 2014* (Victoria)

¹³² For example, Order 29 of the *Supreme Court (General Civil Procedure) Rules 2015*

¹³³ For example, s. 6 of the Victorian Supreme Court Practice Note No.1 of 2007 (Technology in Civil Litigation Matters)

¹³⁴ For example, s. 55 of the *Civil Procedure Act 2010* provides, among other things, that the Court may place limitations on discovery (s. 55(2)(c)), order that discovery occur in stages (s. 55(2)(d)), or require that a list of documents be set out in a particular way (s. 55(2)(g))

¹³⁵ For example, s. 56 of the *Civil Procedure Act 2010* (Victoria) provides, among other things, that the Court may initiate proceedings for contempt (s. 56(2)(a)), order costs, including indemnity costs (s. 56(2)(c)) and ‘prohibit or limit the use of documents in evidence’ (s. 56(2)(e))

¹³⁶ *Crimes (Document Destruction) Act 2006* (Victoria) This reform was introduced in response to document destruction during tobacco litigation. For the history see: Matthew Harvey and Suzanne Lemire, ‘Playing for Keeps? Tobacco Litigation, Document Retention, Corporate Culture and Legal Ethics’ (2008) 34(1) *Monash University Law Review* 163

¹³⁷ It is not uncommon during litigation for there to be a number of interlocutory determinations specific to the application of privilege over documents prior to the determination of the matters in dispute. For a decision of the High Court see *Expense Reduction Analysts Group Pty Ltd v Armstrong Strategic Management and Marketing Pty Limited* [2013] HCA 46

¹³⁸ Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1*, (2014), p.397

¹³⁹ See further the Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1* (No. 72 5 September 2014)

In correspondence in February 2015 about search results for documents relating to Fiskville from 1970 to the present day, the CFA indicated that it held 110,000 records.¹⁴⁰ The Committee received in the order of 15,000–20,000 documents in total¹⁴¹ and allocated significant resources to reviewing and analysing this large volume of material.

This leads to the second observation, which is that document discovery processes incur significant costs and resources. For example, the Productivity Commission refers to an estimate that ‘... discovery in Federal Court proceedings generally represented approximately 20 per cent of total litigation costs’.¹⁴²

In the case of this Inquiry, the Committee employed several paralegals to review the documents as they were received. Additional resources were made available by the Parliament in order for the Committee to manage the documents it received. There are also financial ramifications for the agencies involved.

The third observation is that document discovery in a litigation setting may be used to ‘leverage settlement or put off an opposing party’.¹⁴³ The Committee experienced behaviour that accords with the observation made by Justice Byrne of the Supreme Court of Queensland: “Sometimes a litigant is content to over-disclose: to slow down the litigation or to swamp the other side with material, forcing significant expense to be incurred.”¹⁴⁴

The specific tactics the Committee experienced are detailed in section 2.6 below, and include provision of multiple versions of the same documents, delay in the provision of documents, ad hoc provision of documents and claims that documents did not exist when in fact they did.¹⁴⁵

2.5.4 Value of the documents

The documents obtained by the Committee were a valuable source of evidence. The documents have been used to either verify or refute claims made in traditional sources of evidence relied upon by Parliamentary Committees (that is, submissions and transcripts of witnesses’ evidence before the Committee). The documents have also been used to fill in gaps in the evidence. In some cases the documents provide the only source of non-anecdotal evidence for certain matters relevant to the Inquiry and are referred to throughout this Final Report.

¹⁴⁰ Correspondence from Michael Wootten, to Chair, Environment, Natural Resources and Regional Development Committee, received 23 February 2015

¹⁴¹ It has not been possible to provide an exact number due to the combination of electronic and hard copy records provided by a range of agencies

¹⁴² Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1*, (2014), p.397

¹⁴³ *Ibid.* p.397

¹⁴⁴ Cited in Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1* (No. 72 5 September 2014), 399. This is also known as ‘trolley load litigation’, or ‘trial by avalanche’: Australian Law Reform Commission, *Managing Discovery. Discovery of Documents in the Federal Courts* (2011), p.329

¹⁴⁵ See also Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Special Report on Production of Documents* (November 2015)

Considering this Inquiry was established, in part, to tell the full story of what happened at Fiskville these documents proved indispensable.

The Committee used the documents to prepare for the questioning of witnesses during public hearings. For example, the Committee received a large number of technical reports about the Fiskville site. The content of these reports was useful in forming questions on the types of chemicals that have contaminated the Fiskville site. Further, reports were used to determine which witness should be asked particular questions, based on the staff member a report was provided to within the CFA.

The documents were used extensively during the public hearings - particularly those involving past and present CFA executive management - for a variety of purposes. Table 2 provides examples from throughout this Final Report alongside illustrations from specific public hearings.

Table 2.2 Use of documents in this Inquiry

Purpose	Illustration from the hearings
Asking specific questions about the context at the time a particular document was produced	Mr James Stitz was provided with correspondence he had sent to the EPA and Department of Health in 2009. He provided the context of these letters, which dated back to 2004 ^(a)
Asking the witness to verify information contained in a document	Ms Kirstie Schroder was asked to confirm information contained in an email ^(b)
Refuting a claim made by the witness about their lack of involvement in certain matters	Mr Mick Bourke gave evidence that he did not recall sending any SMS messages to neighbours at Fiskville. He was then provided with copies of SMS messages and asked to comment on them ^(c)
Gaining more detail about Board-level discussion of various matters relevant to the Terms of Reference of the inquiry	Mr Len Foster was asked about the content of Board minutes dating from the time he was Chairman of the Board ^(d)
Ascertaining the involvement of particular individuals in particular occurrences	Mr Raymond Greenwood was provided with copies of correspondence sent between Mr Alan Bennett and Mr Greenwood in the 1980s (when Mr Greenwood was Chair of the Board). Mr Greenwood informed the Committee that, although two of the letters purported to be signed by him, they had in fact been signed by a delegate on his behalf. Mr Greenwood was completely unaware of such letters being sent or the correspondence it responded to ^(e)

(a) Mr James Stitz, Mr John Myers and Mr Lex De Man, *Transcript of evidence* - 27 January 2016, p.28

(b) Ms Kirstie Schroder, *Transcript of evidence*, 27 January 2016, p.4

(c) Mr Mick Bourke, *Transcript of evidence*, 28 January 2016

(d) Mr Len Foster and Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, pp.5-6

(e) Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, pp.5-8

FINDING 15: That the documents the Committee gained access to were essential to the Committee's work both to test the evidence at public hearings and for writing this Final Report.

2.5.5 Providing information to people affected by Fiskville training activities and the general public that would otherwise be hidden

The Committee is of the view that important technical reports about the Fiskville site have become readily available to members of the public via this Inquiry that would otherwise be either inaccessible or difficult to access.

In many cases the CFA has instructed its private legal representatives (Ashurst) as opposed to the VGSO to commission scientific research, which means that the reports may be covered by legal professional privilege.¹⁴⁶ The following are examples of this:

- ToxConsult, *Health Impact Assessment from Consumption of Fish from Lake Fiskville* – prepared for Ashurst 1 April 2014
- Senversa, *Potable Water Assessment* - prepared for Ashurst 28 April 2015
- Cardno Lane Piper, *Buried Drums Assessment Fiskville Training College* – prepared for Ashurst March 2014.

There are several reasons that the CFA may have done this. The first is that the reports cannot be accessed by members of the public who request them under the *Freedom of Information Act 1982*. This is because documents that are covered by legal professional privilege are exempt under that Act.¹⁴⁷

The second is that material subject to legal professional privilege generally cannot be accessed by plaintiffs in litigation via the pre-litigation document discovery process. Large corporations often instruct their legal representatives to commission scientific research that may show their product in an unfavourable light (rather than commissioning the research directly) so that the research findings cannot be accessed during potential litigation against them. For instance, this is a strategy that large tobacco companies employed to conceal the findings of research about the health risks of smoking.¹⁴⁸

The Committee has published a large number of reports about Fiskville on its website that were previously difficult or impossible for members of the public to access for a range of reasons, including because the reports were:

- Subject to legal professional privilege¹⁴⁹

¹⁴⁶ Provided they were prepared for the 'dominant purpose' of providing legal advice

¹⁴⁷ *Freedom of Information Act 1982* (Victoria), s. 32(1)

¹⁴⁸ This strategy was exposed by litigation in the late 1990s and early 2000s in both the USA and Australia. When the strategy was exposed in Minnesota, it led to 39,000 documents becoming available. It has been observed that 'Because the "privileged" documents disclosed in Minnesota contain important scientific facts about the health consequences of smoking and the industry's knowledge of these consequences, the 39,000 documents will have significance for the public health community, governmental authorities and other litigants for decades to come': Michael Ciresi, Roberta Walburn and Tara Sutton, 'Decades of Deceit: Document Discovery in the Minnesota Tobacco Litigation' (1999) 25 *William Mitchell Law Review* 477, 500. In Australia see, for example, *Re Mowbray: Brambles Australia v BAT* [2006] NSWDDT 15 and Matthew Harvey and Suzanne Lemire, 'Playing for Keeps? Tobacco Litigation, Document Retention, Corporate Culture and Legal Ethics' (2008) 34(1) *Monash University Law Review* 163, 170-73 and 178-81

¹⁴⁹ Senversa, *Potable Water Assessment* (2015)

- Not publicly available¹⁵⁰
- Contained in the report of an EPA Victoria audit that is approximately 10,000 pages long.¹⁵¹

Were it not for the Committee's Inquiry, these reports may have remained either inaccessible to members of the public or very difficult for them to access.¹⁵²

2.6 Challenges associated with accessing CFA documents

As a Joint Investigatory Committee of the Victorian Parliament, the Committee has powers to call for evidence - either in documentary form or by compelling witnesses to appear - that are equivalent to a court, judicial inquiry or royal commission.

In addition, the Committee has powers relating to parliamentary privilege that extend beyond those of a court, judicial inquiry or royal commission. The Committee's proceedings - and all documents and evidence by witnesses during hearings - are covered by parliamentary privilege. Section 50 of the *Parliamentary Committees Act 2003* (see also s 28(6)) provides:

- (1) The proceedings of a Joint Investigatory Committee or any recommendations or reports made by a Joint Investigatory Committee or any documents published by a Joint Investigatory Committee—
 - (a) do not give rise to a cause of action in law;
 - (b) must not be the subject of, or in any way be called into question in, a proceeding before a court, tribunal, Royal Commission, Board of Inquiry or Formal Review.

The Family and Community Development Committee recently observed that parliamentary privilege '... is a key form of transparency, accountability and free speech in a democratic society and is unique to Parliament. It allows Members of Parliament and other people to seek and speak the truth in a way that other settings do not necessarily allow.'¹⁵³

The Committee considers that these powers should have been sufficient for the Committee to have full access to the documents required to conduct this Inquiry. However, this was not the case.

¹⁵⁰ ALS, *Country Fire Authority, Fiskville Training College, Water Reuse Investigation Report*, (2012)

¹⁵¹ For example, Cardno Lane Piper, *Buried Drums Assessment Fiskville Training College* (2014)

¹⁵² The Committee has also published some reports that - while not subject to legal professional privilege - were not easily accessible by members of the public. For example: ALS, *Country Fire Authority, Fiskville Training College, Water Reuse Investigation Report*, (2012)

¹⁵³ Parliament of Victoria, Family and Community Development Committee, *Betrayal of Trust. Inquiry into the Handling of Child Abuse by Religious and Other Non-Government Organisations* (2013), p.32

This section details the challenges the Committee faced obtaining full access to the CFA documents it requested. These challenges fall into two main categories: claims of executive privilege; and other challenges, such as document duplicates being provided, inadequate explanation accompanying documents and delays associated with the production of documents.

These challenges caused significant delays to this Inquiry. The Committee had to request certain documents multiple times, received inadequate responses to summonses and received multiple versions of the same documents (for example, a version containing redactions due to a potential claim of executive privilege, followed by a complete (un-redacted) version after the Victorian Government determined that it would not claim executive privilege over the material).

These delays required the Committee to twice extend the reporting date initially provided by the Parliament and unfortunately has drawn out what was already a lengthy and stressful process for those affected by Fiskville.

Recommendations to address these problems in future inquiries are made in section 2.7 below.

2.6.1 Claims of executive privilege

The Committee had significant problems accessing CFA Board minutes in full. A large amount of material was redacted by the VGSO in case the Executive wished to claim executive privilege over the material. The VGSO advised the Committee on 1 October 2015 that ‘redactions for executive privilege have been made’ and that a ‘whole of Government process’ was necessary to determine whether the executive wished to claim privilege over this material.¹⁵⁴

The major problem the Committee faced regarding this two-stage process to determine executive privilege claims was that the VGSO frequently redacted material contained in CFA Board minutes in case the Victorian Government wished to claim executive privilege of that material. Then when the Victorian Government later made a decision about the material, this did not align with the VGSO’s assessment. Specifically, on 8 December 2015 the Attorney-General wrote to the Committee stating that of the 280 Board minutes listed in the schedule attached to the correspondence, all of which contained material redacted by the VGSO in case the Government wished to claim executive privilege, 235 could be released to the Committee.

This means that of the minutes containing material redacted by the VGSO, the Government formed a contrary view about executive privilege in around 85 per cent of cases.

¹⁵⁴ Correspondence from the VGSO, to Chair, Environment, Natural Resources and Regional Development Committee, received 1 October 2015

Examples of overturned redactions

Two examples of material redacted for a potential claim of executive privilege by the VGSO, but later provided to the Committee after the Attorney-General made a determination, are provided below.

Example 1: Originally section 5.13 of the Board minutes dated 26 September 2011 was redacted. It states:

5.13 CFA Inquiry into Volunteerism Report No: 3890/OT&V It was noted that the Chief Officer and Chief Executive Officer had met with the Minister in mid September. It was noted that there is anticipation that CFA will embrace the general themes of the report into its normal business, as opposed to progressing these recommendations as specialised projects.

Example 2: Originally section 9.2.9 of the Board minutes dated 2 October 1989 was redacted. It states:

Amendments to Regulations: Report No. 8471

The Chief Officer sought approval for the proposed amendments to the CFA Regulations, and recommended their adoption to the Minister for Police & Emergency Services, the amendments being to permit the appointment of Communications Officers in Urban Brigades, and to provide voting rights for Reserve members of brigades.

Resolved: that the Authority grants approval for amendments to CFA Regulations and recommends their adoption to the Minister for Police & Emergency Services.

The redaction of material in the October 1989 minutes is particularly significant because in March 2015 the Committee had been provided with a complete set of minutes for 1989, in response to the Committee's request for documents that the CFA had released to individuals under Freedom of Information legislation. The copy provided to the member of the public was complete - that is, it did not contain any redactions.

The Committee believes that the VGSO should know that if material can be provided in full to a member of the public, there is no justification for providing a redacted version to a Parliamentary Committee.

FINDING 16: That the Committee should have been provided with all CFA Board minutes in an un-redacted form within the timeframe of the summons.

2.6.2 Further concerns with the process of accessing CFA documents

The Committee's other concerns relate to two separate categories of documents. The first is CFA Board minutes. Many of the challenges associated with accessing the Board minutes, in addition to the problems relating to claims of executive privilege discussed above, were raised in the Special Report but are summarised here. The second is CFA financial information that was summonsed on 27 October 2015. These challenges were not discussed in the Special Report.

Board minutes

On 12 November 2015, the Committee tabled a Special Report¹⁵⁵ on the challenges the Committee had encountered in conducting a transparent Inquiry. In particular, the Committee's access to CFA Board minutes was problematic, including:

Slow production of documents – the summons for CFA Board papers was issued on 8 September 2015 with a deadline of 15 September 2015. By 6 November 2015, the Committee had only received minutes of 100 Board meetings out of a total of 739 minutes.¹⁵⁶ It took the Committee until 7 December 2015 to gain access to all of the minutes.

Ad hoc production of documents – the Committee did not receive the Board minutes in any order. For example, on 25 September 2015 the Committee received minutes relating to two timeframes (1971 to 1986 and 2002 to 2012), then on 16 October 2015 the Committee received minutes relating to three timeframes (1971 to 1996, from 2012 to 2014 and from 2008 to 2014).¹⁵⁷ The VGSO's disordered and unhelpful approach to the provision of minutes to the Committee wasted Committee resources.

The use of a filtering system – the VGSO adopted its own system for determining the relevance of material and therefore chose to only provide minutes that fit its criteria. The filtering system was as follows:

... material issues that fall within the Committee's Terms of Reference and inquiry:

1. Contamination at the Fiskville site in any form
2. Development or redevelopment of the PAD
3. Development or redevelopment of water treatment facilities
4. Use of PFOS in firefighting foam at the site
5. Burying of drums of hazardous material on site or removal from the site of drums
6. Use of hazardous materials on the PAD and on the site generally
7. Health effects on staff, volunteers and neighbouring properties to the Fiskville site.¹⁵⁸

The use of this filtering system meant that the summons, which was for all Board meeting papers from 1971 to 2014, was not complied with. Importantly, such behaviour contradicts the Committee's view that it alone should determine what is relevant for the purposes of this Inquiry. Therefore, in the Committee's view the VGSO's filtering process contributed to delays in the Inquiry.

¹⁵⁵ Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Special Report on Production of Documents* (2015, Report No.2, 58th Parliament)

¹⁵⁶ *Ibid.* p.6

¹⁵⁷ *Ibid.*

¹⁵⁸ *Ibid.* p.7

Duplication of documents produced – the production of the Board minutes provides one illustration of the problems the Committee faced with duplicates being provided. At the time the Committee tabled its Special Report, of the 374 documents that had been produced by the VGSO on behalf of the CFA in response to two September summonses, approximately 60 documents were duplicates of those already received. This resulted in an additional call on the Committee’s resources, especially given the length of some of the documents and the need to check whether previous versions had had material redacted that was later made available.¹⁵⁹

Claims that meeting papers did not exist – on 11 September 2015, the VGSO wrote to the Committee stating: ‘The CFA wishes to advise the Committee that: searching to date indicates that meeting papers prior to 1996 no longer exist.’ Following a request for an explanation from the Committee Chair the VGSO revealed that the minutes in question had in fact been found.¹⁶⁰ Some of the minutes were provided to the Committee as photographs of pages within a bound volume of minutes.¹⁶¹ The Committee would have preferred the VGSO to have indicated that it was still searching for the minutes prior to 1996, rather than advising that the minutes ‘no longer exist’.

Financial information

The Committee sought specific financial information in a summons dated 27 October 2015 (the text of the summons is provided in Appendix 4). This was to inform the Committee’s understanding of:

- The costs associated with remediation of the Fiskville site¹⁶²
- The legal expenditure incurred by the CFA - for example, during the Joy Report.¹⁶³

Remediation costs

The CFA’s response to the first part of the summons (relating to remediation) was not adequate as the Committee was provided with multiple invoices and left to conduct its own analysis. This led the Committee Chair on behalf of the Committee to request further information from the CFA on 16 February 2016 that the VGSO responded to on 29 February 2016.

The Chair raised four areas of concern. The first concern was:

¹⁵⁹ Ibid. p.8

¹⁶⁰ Ibid. p.9

¹⁶¹ For example, the minutes of the 554th meeting of the CFA held on 15 June 1976

¹⁶² Particularly relevant for Term of Reference (4)

¹⁶³ The exact wording of this paragraph of the summons was: ‘The total expenditure by the CFA for legal advice and representation in relation to matters connected with the Fiskville site and surrounding properties. Such expenditure may include, but is not limited to, spending associated with claims for compensation, legal representation during the Independent Fiskville Investigation and advice about responding to Freedom of Information requests’

The summons response seems to be incomplete. Paragraph (2) of the summons sought information pertaining to ‘how much the CFA spent on environmental remediation of the Fiskville site and surrounding properties and the nature of the remediation work’ for specific financial years: 2010-11, 2011-12, 2012-13 and 2013-14. It appears that the response is confined to expenditure on remediation as part of the Informing the Future Program, which was the CFA’s response to the Independent Fiskville Investigation. The expenditure as part of this program was limited to the 2012-13 financial year, therefore it does not provide the Committee with information for the three financial years of 2010-11, 2011-12 and 2013-14. Another spreadsheet provided by the CFA covers the expenditure by Golder Associates for 2012 only, therefore does not relate to the entire timeframe of the summons.

The VGSO responded to this concern by:

- Clarifying that the CFA did not spend anything on remediation before December 2012 - that is, there was no spending on remediation in the 2010-11 and 2011-12 financial years
- Noting that Golder and Associates only provided services in 2012 (as part of the Joy Report).

The Committee’s view is that VGSO should have specified in its initial response to the summons that it could only provide information about remediation expenditure from December 2012 onwards because there was no expenditure on remediation at Fiskville prior to this date. In the Committee’s view this would have been a transparent approach to responding to the summons. More importantly, it would also have shown the VGSO to be committed to the aims of this Inquiry

More concerning is the fact that the CFA did not spend any funds on remediating Fiskville prior to December 2012. Numerous consultants recommended various types of remediation be carried out at Fiskville prior to that date. For example, the need to remediate sludge in Dam 1 was raised in 1996,¹⁶⁴ 2009 (by two consultants¹⁶⁵) and February 2012¹⁶⁶ (this matter is discussed in more detail in Chapter 4).¹⁶⁷ This fact lends weight to the Committee’s findings in other Chapters that the CFA did not respond appropriately to contamination at Fiskville (see, for example, Chapter 5).

The second concern raised by the Committee was:

The response contains confusing information that makes analysis difficult. The spreadsheets provided to the Committee in response to the summons contain codes (such as, “GL Code” and “WBS”) without an accompanying explanation of what these codes mean.

¹⁶⁴ CRA ATD, *Fiskville Training College Review of Site Assessments and Remediation Options*, (1996)

¹⁶⁵ Wynsafe Occupational Health Services, *SRS Proposal for Remediation of Sludge from Settling Pond at CFA Fiskville*, (2009); SRS Australia, *Estimate for Remediation of Sludge from Settling Pond at the CFA Centre Ballan - Geelong Rd, Fiskville Vic*, (2009)

¹⁶⁶ ALS, *Country Fire Authority, Fiskville Training College, Water Reuse Investigation Report*, (2012)

¹⁶⁷ Another example is the reports relating to buried drums and the need for excavation and remediation that was raised in a report by AS James, *Waste Disposal Site Fiskville Training Centre*, (1988), by two reports in 1996 (CRA ATD, *Fiskville Training College Review of Site Assessments and Remediation Options*, (1996) and EPA site inspection report 21 August 1996) and in 1997 (Rio Tinto, *Draft Fiskville Training College Remediation Action Plan*) - this is discussed in detail in Chapter 5

The VGSO responded to this by stating that the data provided to the Committee was from the CFA's financial information system (SAP). It said: 'Source data was provided so that the Committee could be assured of the transparency of the information provided in response to the summons.' The VGSO also provided explanations for the two codes provided as examples in the Chair's letter ('GL Code' and 'WBS').

In the Committee's view it is reasonable to expect that the codes would initially have been accompanied by explanatory material to aid the Committee's interpretation of the data.

The third concern raised by the Committee was:

The descriptions of the invoices are inadequate. For example, there is a description that states "progress invoice foam analysis" without the details about which consultant carried out this work, or what the work entailed.

The VGSO responded to this concern by providing additional information about this invoice in a spreadsheet. The Committee did not find the additional information provided about this particular invoice of use. Unfortunately, this is just one example of many invoices where insufficient detail was provided to the Committee.

The fourth concern raised by the Committee was:

Some of the information provided appears to be irrelevant. For example, the response to paragraph (2) of the summons concerning 'remediation' included an invoice for catering, without an explanation of whether or how this contributed to the remediation of the site.

The VGSO responded to this concern by noting that the inclusion of a catering invoice for a meeting where civil works projects at Fiskville were discussed '... is indicative of the transparent and comprehensive approach the CFA has taken in relation to its response to both the summons and the letter'¹⁶⁸.

In the Committee's view a catering invoice does not represent evidence of the CFA's expenditure on remediation. The Committee disagrees with the VGSO's representation of this as a 'transparent and comprehensive approach' to responding to the summons.

The Committee also found additional seemingly irrelevant information was supplied in documents received on 29 February 2016. These documents contained an invoice for a hire car,¹⁶⁹ which was included in a spreadsheet titled 'Expenditure on Environmental and Human Health Impact Assessments'. However, there was no accompanying explanation as to the connection between the car hire and either health assessments or remediation of the Fiskville site.

¹⁶⁸ Correspondence from Ms Joanne Kummrow, Special Counsel, VGSO, to Chair, Environment, Natural Resources and Regional Development Committee, received 29 February 2016

¹⁶⁹ Dated 25 September 2013 in the amount of \$126.62

Legal expenditure

The Chair's letter of 16 February 2016 did not raise any specific concerns with the CFA's response in relation to legal expenditure. However, when responding to the Committee's request for clarification about the remediation expenditure, the VGSO conducted an audit and found that it had provided incorrect information about legal expenditure. The VGSO advised the Committee that they had erroneously:

- Included expenditure that was not associated with Fiskville
- Included remediation expenditure as part of the total spent on legal expenses.

The VGSO's letter of 29 February 2016 informed that Committee that:

- The information initially provided in response to the summons relating to **remediation** was an **under**-estimate of almost \$22,000
- The information initially provided in response to the summons relating to **legal expenditure** was an **over**-estimate of \$22,000.

Committee's view

The Committee stresses the importance of receiving accurate information from agencies, especially in light of the fact that the Committee's role is to make recommendations that may lead to legal or policy reforms by current or future Governments. There are risks associated with the Committee performing this role based on inaccurate or incomplete information.

The Committee also believes that this unprofessional behaviour calls into question the reliability of other information provided by the CFA and its legal representatives, the VGSO.

FINDING 17: That the document discovery process was slow and arduous, and the Committee faced challenges accessing documents from all Departments and agencies, particularly the CFA.

FINDING 18: That the Victorian Government Solicitor's Office was obstructive and uncooperative in the document discovery process.

FINDING 19: That the process consumed significant Committee resources that would not have been necessary if there had been more cooperation.

2.7 Addressing challenges with accessing documents

If a similar inquiry arises in the future - that is an inquiry that requires the Parliamentary Committee to access documents in order to address the Terms of Reference provided by the Parliament - there needs to be increased clarity surrounding the provision of documents to Parliamentary Committees.

This section provides the Committee's views about two sets of guidelines that - if amended - may improve the cooperation of agencies in future document discovery processes carried out by Joint Investigatory Committees. The first are the Model Litigant Guidelines and the second are the Department of Premier and Cabinet's guidelines for agencies responding to Parliamentary Committees.

2.7.1 Model Litigant Guidelines

Some challenges faced by the Committee with accessing documents outlined in section 2.6 are similar to the challenges associated with document discovery in a litigation setting (despite there being key differences in the two settings, as noted in section 2.5.3). It is therefore worthwhile to consider whether guidelines intended to apply to government agencies engaging in litigation could be of assistance with improving government agencies' cooperation with requests from Joint Investigatory Committees to provide documents.

Government agencies involved in litigation are expected to 'play fair' or behave as 'model litigants'.¹⁷⁰ The rationale for imposing obligations on government agencies was outlined by the Productivity Commission as being: 'the inherent power of government; the proper role of government being to act in the public interest (as it has no legitimate private interest); and the large quantity of resources at governments' disposal'.¹⁷¹

The absence of private interests is the most relevant rationale in the context of dealing with a Parliamentary Committee Inquiry. This rationale was expressed the following way by Justice Finn:

Having no legitimate private interest in the performance of its functions, a public body (including a state owned company) should be required as of course to act fairly towards those with whom it deals at least in so far as this is consistent with its obligation to serve the public interest (or interests) for which it has been created.¹⁷²

The source of the obligation is common law,¹⁷³ but it has also been codified in most Australian jurisdictions by Model Litigant Guidelines that bind government agencies when litigating. Victoria has such Guidelines,¹⁷⁴ which

¹⁷⁰ Gabrielle Appleby, 'The Government as Litigant' (2014) 37(1) *UNSW Law Journal* p.94

¹⁷¹ Australian Government Productivity Commission, *Access to Justice Arrangements. Productivity Commission Inquiry Report Volume 1*, (2014), p.430

¹⁷² *Hughes Aircraft Systems vs Air Services Australia* (1997) 76 FCR, pp.151-196

¹⁷³ Gabrielle Appleby, 'The Government as Litigant' (2014) 37(1) *UNSW Law Journal* pp.100-108

¹⁷⁴ Victorian Government, Department of Justice and Regulation, 'Guidelines on the State of Victoria's obligation to act as a model litigant' (2011)

were issued in 2001 and revised in 2011. The Victorian Law Reform Commission has described the Guidelines as representing ‘an important mechanism for the setting of high forensic standards and the regulation of the conduct of parties in civil litigation’.¹⁷⁵ Thus at a broad level, these guidelines may target two of the problems with the document discovery process during litigation identified by the Australian Law Reform Commission: that it is the procedure most open to abuse and the most costly.¹⁷⁶

The Victorian Guidelines require Departments and agencies to:

- 2(a): Act fairly in handling claims and litigation
- 2(c): Deal with claims promptly and not cause unnecessary delay
- 2(g): Where it is not possible to avoid litigation, keep the costs of litigation to a minimum.

The Guidelines specifically note that ‘... lawyers engaged in such litigation, whether the Victorian Government Solicitor, in-house or private, will need to act in accordance with the obligation to assist their client agency to do so’.

These specific guidelines may target several key elements that the Committee experienced with the document discovery process, that are not unlike a document discovery process during litigation. As outlined above, the Committee experienced:

- The receipt of a large volume of documents
- The need to allocate significant resources to summarising and analysing the documents and keeping track of multiple versions of documents
- Tactics adopted to ‘swamp’ the Committee and delay the provision of documents.

The Guidelines may not do anything to change the volume of documents to be provided, but the goals of not causing unnecessary delay and keeping costs to a minimum should address the second and third elements experienced by the Committee. The Australian Law Reform Commission refers to Model Litigant Guidelines in a report about document discovery in the Federal Courts.¹⁷⁷ This provides recognition that the Guidelines can be of assistance in managing the behaviour of agencies and their legal representatives during document discovery processes.

The Committee is of the view that the CFA and the VGSO were not acting in accordance with the Model Litigant Guidelines in their approach to the Committee’s document discovery process, as evidenced by the challenges the Committee faced accessing documents. These rules have not been specifically drafted to cover the conduct of agencies in relation to Parliamentary Committee

¹⁷⁵ Victorian Law Reform Commission, *Civil Justice Review Report*, (2008), p.168

¹⁷⁶ Victorian Law Reform Commission, *Managing Justice: A Review of the Federal Civil Justice System*, (2000), p.431

¹⁷⁷ Australian Law Reform Commission, *Managing Discovery, Discovery of Documents in the Federal Courts*, (2011), pp.352-353

Inquiries. However, the Committee's view is that it is consistent with the aims of the Model Litigant Rules - particularly to act in the public interest - to expect agencies to abide by them and cooperate fully with a Parliamentary Inquiry.

RECOMMENDATION 2: That the Victorian Government amend the Model Litigant Guidelines on the State of Victoria's Obligation to Act as a Model Litigant so that the Guidelines extend to the conduct of Departments, agencies and their legal representatives' dealings with Parliamentary Committees, particularly when conducting a document discovery process.

2.7.2 Department of Premier and Cabinet's guidelines

The Department of Premier and Cabinet has produced two sets of guidelines for agencies interacting with Victorian Parliamentary Committees. These are:

- *Guidelines for Submissions and Responses to Inquiries*
- *Guidelines for Appearing Before State Parliamentary Committees.*¹⁷⁸

The first set of Guidelines deal with the decision-making process government agencies should follow when determining whether to voluntarily provide a submission to a Parliamentary Inquiry. Therefore they are not relevant to a situation where a Parliamentary Committee requires evidence from a government agency.

The second set of Guidelines are focused on witnesses appearing before Victorian Parliamentary Committees, however they also contain guidance about the provision of documents to a Committee. For example, the Guidelines outline the powers of Committees to call for witnesses and documents¹⁷⁹ and specify the punishment for failure to attend or produce material.¹⁸⁰ These Guidelines are therefore more relevant to situations where the Committee seeks documentary evidence from government agencies.

The *Guidelines for Appearing Before State Parliamentary Committees* emphasise that the Victorian Parliament may punish or censure a person who fails to provide information. However, the Guidelines do not encourage agencies to provide information in a timely and cooperative fashion. This can be contrasted with the provision about 'conduct during hearings':

Officials should be open with the Committees and if unable or unwilling to answer questions or provide information should say so, and give reasons. It is also, of course, incumbent on officials to maintain the highest standards of courtesy in their dealings with Parliamentary Committees.¹⁸¹

¹⁷⁸ Both guidelines are dated October 2002, but a cross-government submission to the Legislative Council Environment and Planning Committee's Inquiry into Onshore Unconventional Gas in Victoria in September 2015 was prepared in accordance with the guidelines. The guidelines also appear on the Department of Premier and Cabinet's website under the heading 'Governance': <http://www.dpc.vic.gov.au/index.php/policies/governance> (recorded as 'last updated' 27 March 2013; accessed 18 April 2016)

¹⁷⁹ Department of Premier and Cabinet, *Guidelines for Appearing Before State Parliamentary Committees*, (2002), paragraphs 23 - 26, p.7

¹⁸⁰ *Ibid.* paragraphs 27-28, p.7

¹⁸¹ *Ibid.* paragraph 50, p.11

The Committee considers that advice on the provision of documents and information should be added to the *Guidelines for Appearing Before State Parliamentary Committees*. This advice should be based on several principles contained in the Model Litigant Guidelines. Specifically, agencies should act fairly when responding to requests for documents and information. Further, such requests should be dealt with promptly, without unnecessary delay, and in a manner that does not increase the resources associated with accessing and reviewing documentation for either the agency or the Committee.

The advantage of the Department of Premier and Cabinet's *Guidelines for Appearing Before State Parliamentary Committees* is that they are specific to Parliamentary Inquiries and are the logical place for agencies to turn to for guidance when dealing with Parliamentary Committees. It is appropriate, therefore, that these Guidelines detail the standards for agency conduct when providing information and documents to Parliamentary Committees (in addition to the repercussions for failing to meet such standards).

RECOMMENDATION 3: That the Department of Premier and Cabinet amend the *Guidelines for Appearing Before State Parliamentary Committees* so that they contain some standards for conduct when a Parliamentary Committee requests information and documents. The standards should reflect relevant principles contained in the Model Litigant Guidelines.

Fiskville – the site, contamination and people’s experiences

AT A GLANCE

Background

This Chapter covers contamination at Fiskville caused by the fuels used to create fires and the foams used to extinguish the fires. It includes the experiences of people living, working and training on-site, as well as the impact that the contamination had on Fiskville’s neighbours.

This Chapter addresses Terms of Reference (1) and (2).

Key findings

- That the Committee identified several failures regarding the Independent Fiskville Investigation, including: the appointment of Professor Robert Joy due to perceived conflict of interest; limiting his terms of reference to 1999; and not investigating present day water quality.
- That hazardous materials at Fiskville posed a health risk because of how they were stored and used, and how knowledge of the danger they posed was ignored.
- That firefighters are exposed to a cocktail of toxic chemicals when fighting fires which can cause many health problems.
- That at Fiskville both firefighters and non-firefighters were exposed to many of the same chemicals in many cases with limited or no protective clothing.
- That many of the illnesses suffered by people attending Fiskville have a link with the toxins that contaminated the site.
- That there are two distinct but related eras of contamination at Fiskville. The first involved the contamination of the site and exposure of people to the chemicals that were burnt and buried. The second involved the contamination of water used in firefighting training.
- That Fiskville’s residents and neighbours were affected to differing degrees by the smoke plumes and contaminated water run-off caused by firefighting training.
- That many people are concerned that their experiences at Fiskville may have contributed to health concerns they are currently experiencing or may experience in the future.
- That people trusted the CFA to look after its people but that trust was broken.
- That the CFA’s community engagement program to inform the local community of risks posed by Fiskville and how it planned to clean up the site was not to the same standard as other examples the Committee examined.

3.1 The Fiskville story

As mentioned in Chapter 1, several people tried to bring attention to activities at the site prior to the publication of an article in the *Herald Sun* newspaper in December 2011, including CFA members and other firefighters who had trained at Fiskville. Possible links between activities at the CFA's Fiskville training site and the development of cancers and other diseases were then reported in the *Herald Sun* in December 2011. Journalist Ruth Lamperd wrote that at least 17 former workers and family members, including children, who lived on and near the Fiskville site in the 1970s and 1980s '... have suffered cancers linked to the chemicals stored onsite and used in burn-offs'.¹⁸²

The article claimed that the CFA failed to inform staff and trainees of the potential risks of exposure to chemicals used in training exercises. Media coverage focused particularly on the experience of Mr Brian Potter, a former CFA Chief Officer and Fiskville instructor, who had spent the previous 15 years suffering from multiple cancers and an autoimmune disease. Other former CFA employees, volunteers and local residents also came forward to speak of their health experiences. The *Herald Sun* further reported that up to 13 deaths and 12 serious illnesses could be linked to the Fiskville site.¹⁸³

3.1.1 The Joy Report

Following the media reports, the CFA announced the appointment of Professor Robert Joy, former Deputy Chair of EPA Victoria, to conduct an investigation into past - or 'historical' - practices at the Fiskville site. The report, *Understanding the Past to Inform the Future*, has become known as the 'Joy Report'. Several investigations, environmental audits and health studies were also carried out from 2012 onwards, while the CFA undertook a range of remediation and risk mitigation activities. During this time a number of the individuals who were the focus of the initial media reports about Fiskville, including Mr Potter, passed away.

Both at the time of the appointment,¹⁸⁴ and in evidence before this Inquiry, a number of concerns were raised about the appointment of Professor Joy to conduct the CFA's investigation into Fiskville. Mrs Potter said that her late husband Brian had told the CFA CEO that "... he felt it also was incestuous, as the CFA were doing an inquiry on themselves and that he was using an old work[mate] from EPA days".¹⁸⁵

Concerns have also been expressed about the Terms of Reference for Professor Joy's Inquiry not considering events at Fiskville after 1999. Mr Tony Ford, a member of the CFA for 28 years who was part of the recruit course at Fiskville

¹⁸² Ruth Lamperd, 'Cancer Town', *Herald Sun*, 6 December 2011, p.1

¹⁸³ Ruth Lamperd Jessica Craven and Stephen Drill, 'Death Toll Grows in CFA Scare', *Herald Sun*, 7 December 2011, p.13 Also see the Case Study 1 on Mr Brian Potter

¹⁸⁴ Stephen Drill, 'Probe Conflict Denied', *Herald Sun*, 16 December 2011, p.16

¹⁸⁵ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15; see also Dr John Ferrier, *Transcript of evidence*, 25 May 2015, p.105

in 2000, expressed the view that this was done because there were a huge number of recruits going through that year and the CFA "... wanted to reassure all of us who have been recruited and trained there since 2000 that it was safe".¹⁸⁶ Mr Mick Tisbury, who has been an MFB firefighter for 26 years and gave evidence on behalf of the UFU, was blunter. He described the 1999 time limit as "just a crock". He added:

You want to make sure, and you want to get to the truth and find out what your people have been exposed to and is it a safe place to be working at. You would not be cutting off at 1999, would you? You would be going until the present day.¹⁸⁷

Mr Colin Cobb, a career firefighter of 32 years with the CFA described the Joy Report as a "... very soft report on Fiskville. It touched the surface; that was all."¹⁸⁸

The CFA's decision to appoint Professor Joy to conduct an investigation is troubling for a number of reasons. Firstly, Professor Joy had been, in the time when he was Deputy Chair of EPA Victoria, a colleague of the then CFA CEO, Mr Mick Bourke. The Committee was disturbed to learn that the CFA Board was persuaded by Mr Bourke himself that there was no potential conflict of interest in the appointment and that a PricewaterhouseCoopers review of the decision to appoint Professor Joy did not investigate this potential conflict of interest.¹⁸⁹ Further, it was likely that any examination of pollution at Fiskville would require an examination of the conduct of EPA Victoria as the principal regulator of pollution. It was conceivable that Professor Joy would have to inquire into the conduct of EPA Victoria during the time that both he and Mr Bourke worked there in senior positions.

Further, the Committee is aware of a 2010 report from the Victorian Auditor-General which examined hazardous waste management in Victoria. The report, which covered the period of time in which Mr Bourke and Professor Joy were employed at EPA Victoria,¹⁹⁰ found that EPA Victoria had been ineffective in its management of hazardous waste in Victoria, such that '... there is neither sound compliance monitoring nor effective enforcement regimes. As a consequence, there is little assurance that hazardous waste is stored and disposed of appropriately.'¹⁹¹ It is concerning that, despite this report, Professor Joy's appointment was not questioned by the Board and that Mr Bourke was unfamiliar with the Auditor-General's report when questioned about it by the Committee.¹⁹²

¹⁸⁶ Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.122

¹⁸⁷ Mr Mick Tisbury, MFB, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.173; see also Mr Peter Marshall, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.156

¹⁸⁸ Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.89

¹⁸⁹ Mr John Peberdy, Acting Chairperson, CFA, *Transcript of evidence*, 29 January 2016, p.13

¹⁹⁰ Mr Bourke was EPA Victoria's Chair from 2002-2009; Professor Joy was Mr Bourke's Deputy Chair for 18 months of that time

¹⁹¹ Victorian Auditor General, *Hazardous Waste Management*, (2010), p.vii

¹⁹² Mr Mick Bourke, *Transcript of evidence*, 21 December 2015, p.16

The Committee does not make any allegations of impropriety against either Professor Joy or Mr Bourke regarding this issue. However, good governance requires that investigations into a subject as serious as the illnesses linked with Fiskville must be both impartial and be seen to be impartial.¹⁹³

Secondly, the Joy Report was limited to investigating practices up to 1999. The CFA's rationale for setting this limit is that training practices at Fiskville had improved by this stage - in particular the redevelopment of the training area known as the PAD (see Chapter 4) - and as such the site no longer presented a health risk. This rationale was repeated by Professor Joy himself in his evidence to this Inquiry.¹⁹⁴ However, as is shown in this Final Report, while practices undoubtedly improved, occupational health and safety at Fiskville remained seriously compromised post-1999. Indeed, it was poor occupational health and safety management that ultimately caused the site to be closed down in 2015. This may have been prevented if the Joy Report had been given a broader brief.

3.1.2 Water quality at Fiskville

A major occupational health and safety issue at Fiskville was the quality of the water used for firefighting training drills. The Committee learnt that the CFA Board was not aware of any concerns about the water quality at Fiskville until the *Herald Sun* story in December 2011.¹⁹⁵ The Committee spoke with Mr John Peberdy, Acting Chairperson at the CFA and a Board member since 2009. When asked if the Board should have been made aware of the many water quality reports commissioned by staff at Fiskville and CFA management prior to December 2011 (see Chapter 4), Mr Peberdy replied: "I think we should have been told, yes. Absolutely."¹⁹⁶

Mr Peberdy added that it would have been the responsibility of the CEO to inform the Board, saying: "We would expect the CEO to provide that information to us. The Board predominantly works through the CEO. I mean, the Board should not be going wider and talking to a whole range of people."¹⁹⁷

Asked if the CEO(s) failed in their responsibility by not informing the Board, Mr Peberdy replied: "If they were aware, yes."¹⁹⁸

In its 2013 document, *A Review of the Governance of Public Sector Boards in Victoria* the Victorian Ombudsman states that the relationship between the board and the CEO is '... the principal internal accountability relationship for a public entity'.¹⁹⁹ The evidence received throughout this Inquiry shows that there were

¹⁹³ In his evidence to this Inquiry, Professor Joy maintained that he had no conflict of interest because he was not 'beholden' to Mr Bourke – Professor Robert Joy, Chair, Independent Fiskville Investigation, *Transcript of evidence*, 3 June 2015, p.144

¹⁹⁴ *Ibid.* pp.128 - 129 and 139

¹⁹⁵ Mr John Peberdy, Acting Chairperson, CFA, *Transcript of evidence*, 29 January 2016, p.5

¹⁹⁶ *Ibid.* p.6

¹⁹⁷ *Ibid.* p.14

¹⁹⁸ *Ibid.* p.15

¹⁹⁹ Victorian Ombudsman, *A Review of the Governance of Public Sector Boards in Victoria*, (2013), p.8

inadequate important internal relationships at the CFA throughout the history of Fiskville which led to very poor information flows both up to and down from the Board.

For example, in January 2016 the Committee spoke with three former senior members of the CFA: Ms Claire Higgins (Chair of the Board, October 2012 - August 2015); Mr Euan Ferguson (Chief Officer, November 2010 - November 2015); and Mr Michael Wootten (Executive Director Business Services, December 2011 - February 2015). The Committee asked if they had knowledge of concerns that were raised in 2012 about the source of training water at Fiskville and received the following replies:

Ms HIGGINS—No.

Mr FERGUSON—No.

Mr WOOTTEN—No.²⁰⁰

How training was conducted at Fiskville, including the quality of the water, is examined in Chapter 4. CFA governance and the Board and senior management's knowledge of contamination at Fiskville are discussed further in Chapters 5 and 6.

FINDING 20: That the Committee identified several failures regarding the Independent Fiskville Investigation, including: the appointment of Professor Robert Joy due to perceived conflict of interest; limiting his terms of reference to 1999; and not investigating present day water quality.

3.2 Contamination at the training centre

Aside from fuel, a range of other hazardous materials were kept at Fiskville for use in training drills - such as aluminium, chlorine, phosphorous, magnesium shavings, sodium (in blocks) and sulphur. These materials were stored improperly for many years. Professor Joy states that '... from the 1970s to the mid-1990s these chemicals were stored along with explosives and detonators in unsafe conditions together in a shed'.²⁰¹

There are also concerns regarding the safety of the firefighting foams that were used to extinguish practice fires and the way that used firewater (that is, the water used for extinguishing fires) was collected, stored and reused. The foams used typically contained perfluorooctanoic acid (PFOA) or perfluorooctane sulfonate (PFOS) - materials that became a focus of significant health and environmental concerns in the 1990s. The Joy Report notes:

²⁰⁰ Ms Claire Higgins; Mr Euan Ferguson; and Mr Michael Wootten, *Transcript of evidence*, 28 January 2016, p.10

²⁰¹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.8. See also the Committee's discussion on WorkSafe inspections in Chapter 7 of this Final Report

Both [materials] are readily absorbed by the body after ingestion and are very slowly eliminated. Limited data make it difficult to reach conclusions as to the potential effects of acute exposure, but animal studies suggest both are moderately toxic affecting the liver and gastrointestinal tract.²⁰²

Firefighting foams containing PFOS and PFOA were used at Fiskville from the 1970s until 2007.²⁰³ This is discussed in more detail in Chapter 4. The health effects of PFOS and PFOA are discussed in Chapter 9.

The Joy Report provides a list of hazardous materials used at Fiskville and their constituent parts, as seen in Table 3.1 below:

Table 3.1 Flammable and combustible materials used at Fiskville

Material	Constituents
Petrol	Complex mix of aliphatic and aromatic C ₄ -C ₁₂ hydrocarbons, including benzene
Diesel	Complex mix of hydrocarbons - composition varies with source of crude oil but generally aliphatic C ₈ -C ₂₁ with up to 21% aromatics. Numerous additives
Used lubricating oil	Complex mixture of paraffinic, naphthenic and aromatic petroleum hydrocarbons, numerous additives
Various hydrocarbon fuels including Avgas, kerosene and other aviation fuels	For example: kerosene - mixture of C ₉ -C ₁₆ hydrocarbons produced by the distillation of crude oil
Solvents	Aliphatic hydrocarbons, cyclic hydrocarbons, aromatic hydrocarbons, xylene aldehydes, ketones (not all were reported as having been received at Fiskville)
Paint thinners	Solvents such as toluene acetone and proprietary mixtures of various solvents
Paint (oil based)	Solvents such as naphtha, toluene, and xylene, lead was phased out or banned in the late 1970s, but the pigments in oil-based paints may still contain some heavy metals
Wood	Copper, chromium and arsenic in treated timber, formaldehyde in various types of composite timber products, particle board etc
Tyres	Natural and synthetic rubber, carbon black, silica, sulfur, zinc oxide, anti-oxidants
LPG	Mixture of hydrocarbon gases propane and butane

Source: Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.61-62. This is a selected version of the full table in the Joy Report.

Several examples of the health effects caused by exposure to these chemicals are found in Table 3.2 below:

Table 3.2 Examples of health risks associated with materials encountered by firefighters

Material	Health risks
Solvents (short-term)	Skin rashes, headaches, drowsiness, nausea
Solvents (long-term)	Liver damage, neurotoxicity, kidney disease, infertility
Benzene	Cancer, birth defects

202 Ibid. p.63

203 Ibid. p.69

Material	Health risks
Asbestos	Mesothelioma
Carbon monoxide	Cardiac arrest
Cyanide	Seizures, comas, cardiac arrest, respiratory arrest

Source: See also the discussion on firefighters' health in Chapter 9 and the concept of 'weight of evidence' in Chapter 11

The health of firefighters is potentially compromised by coming into contact with dangerous chemicals via water, firefighting foams and the products of combustion. The products of combustion take two distinct but connected physical phases: particulate matter; and gases (connected because gases frequently attach themselves to particulate matter). Gaseous combustion products tend to dissipate rapidly and can be said to comprise four non-exclusive types of toxicological behaviour:

- Common combustion products that are benign or effectively inert (carbon dioxide)
- Common combustion products that exert their primary effect on the respiratory tract (phosgene, oxides of nitrogen)
- Common combustion products that cause systemic toxicity that are absorbed by the pulmonary route (carbon monoxide, cyanide)
- Toxic air contaminants unique to a particular situation such as HAZMAT operations or a fire in a production or storage plant (pesticide paraoxons, isocyanates).²⁰⁴

Of these, the second and third categories are of greatest concern for urban firefighters, while the fourth is most important for firefighters facing industrial fires (such as the MFB).

According to Dr Tee Guidotti, an international consultant in occupational and environmental health, the most common substances that firefighters come into contact with are:

- Asbestos
- Benzene
- Butadiene
- Carbon monoxide
- Cyanide
- Diesel exhaust
- Formaldehyde
- Nitroarenes
- Oxidant gases

²⁰⁴ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014), p.47

- Particulate matter
- Polycyclic aromatic hydrocarbons
- Polyhalogenated organics
- Trichloroethylene.²⁰⁵

Although not all firefighters in Victoria face the same types of fires, the concern is that trainers, trainees and others at Fiskville may have been exposed to many of these chemicals.

FINDING 21: That hazardous materials at Fiskville posed a health risk because of how they were stored and used, and how knowledge of the danger they posed was ignored.

FINDING 22: That firefighters are exposed to a cocktail of toxic chemicals when fighting fires which can cause many health problems.

FINDING 23: That at Fiskville both firefighters and non-firefighters were exposed to many of the same chemicals in many cases with limited or no protective clothing.

FINDING 24: That many of the illnesses suffered by people attending Fiskville have a link with the toxins that contaminated the site.

3.3 The Fiskville experience

The Committee heard that people living and working at Fiskville, and nearby, were concerned about two main issues: the quality of the water (used for drinking and for recreation); and smoke and debris from the firefighting training.

3.3.1 The impact on residents, staff and trainees

There were 12 houses on-site at Fiskville²⁰⁶ and the Joy Report includes a short analysis of the risk posed to people living in these houses. Professor Joy concluded that the greatest risk came from short-term exposure to smoke from training drills. He also refers to possible contamination of tank water, which was used for drinking, from residue and the products of combustion.²⁰⁷ To these the Committee would add the contamination of the soil at Fiskville from the improper storage and use of dangerous chemicals.

The Committee heard from Mrs Deborah and Mr Kevin Etherton, who lived and worked at Fiskville from 1985 to 1988. Mr Etherton told the Committee that whenever flammable liquid training was about to start residents would rush to bring their washing in, to avoid their clothes being contaminated by smoke.²⁰⁸

²⁰⁵ Ibid.

²⁰⁶ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.19

²⁰⁷ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.94

²⁰⁸ Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.38

Mrs Etherton added that their tank water was frequently contaminated by embers and ash from the hot fire training. She said: “The tanks had been drained several times because the water was tainted. You could taste it. It was really quite off.”²⁰⁹

Mrs Deborah Etherton was diagnosed with breast cancer in May 2011. She told the Committee that she is one of seven women who lived at Fiskville who have been diagnosed with the disease.²¹⁰

Mr Kenneth Lee, a PAD supervisor at Fiskville from 1979 to 1999, explained how soot from the training drills would settle on the roofs at Fiskville and, when it rained, contaminate the water tanks.²¹¹ Similar evidence was provided by Mr Colin Cobb, who worked as a senior instructor at Fiskville from 1984 to 1987.²¹²

Mrs Diane Potter, the widow of Mr Brian Potter, told the Committee:

We did have a water tank at the old house that came through the kitchen, so we felt we had safe water to drink. I did often question why it had floaties in it, with Brian assuring me it was okay. I would still boil it for drinking, and now one wonders: what were the floaties?²¹³

Another concern for residents at Fiskville in the 1980s and 1990s was the quality of reticulated mains water. Mr Cobb spoke to the Committee about the poor quality of the mains water. He said: “On numerous occasions the water was so discoloured that you could not see through a glass of water. As for washing your clothes or towels or sheets, they would come out badly discoloured and the kids would be afraid to get in the bath.”²¹⁴

Mr Ian Ireland, a Lieutenant at the Ballan Fire Brigade, explained that initially the water supplied to Fiskville came from the local Colebrook reservoir. He said:

The water supplied from Colebrook was of very poor quality. It was brown, brackish and had a stringent smell. This water could not be used for washing without staining clothes. Residents in Ballan used tank water for drinking because of the poor quality of the water. This is the same water that was used in the residential accommodation and the cottages at Fiskville.²¹⁵

Mr Ireland added that a new supply pipeline was constructed from Lal Lal Reservoir to Ballan in 2000, which improved the quality of the mains water.

The Joy Report also includes a brief discussion of the risk posed to the children living at Fiskville and playing around the site, including in the dam water. It concludes that ‘the key exposure route would have been inhalation of smoke’ and that ‘it is reasonable to conclude that any exposure ... to smoke would have

209 Mrs Deborah Etherton, *Transcript of evidence*, 18 May 2015, p.38

210 Ibid. p.35

211 Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.79

212 Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.85

213 Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.14

214 Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.85

215 Mr Ian Ireland, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, p.272. See also Mr John Myers, *Transcript of evidence*, 27 January 2015, p.34

been infrequent and of short duration'.²¹⁶ By contrast, the Committee heard the evidence of a former pupil of the school, Mr David Card. Mr Card, who has had both his testicles removed as a result of testicular cancer, told the Inquiry that he "... drank the water, breathed the air, stood on the side of the training area [and] waded through the water on the golf course".²¹⁷

Mrs Diane Potter told the Committee that the children spent a lot of time:

... climbing trees, playing on drums and pallets, and playing in the fire building, riding their bikes all over the property, even to a lot of places they should not have been. There was even an occasion when they tried to build a raft to sail on the dam. Thankfully that was aborted when one of the other mums found them and stopped that adventure.²¹⁸

The Committee notes that Professor Joy is not a qualified health expert and as such was not asked to consider the health consequences of training practices at Fiskville in the Terms of Reference the CFA provided him. Instead, his report focuses on '... legacy issues such as possible site contamination that may pose an ongoing risk to human health or the environment'.²¹⁹ Importantly, Professor Joy himself acknowledges this, writing:

The Investigation is not a health study. As a consequence, some people will be disappointed by its findings, in particular, by the fact that it does not draw conclusions about possible linkages between past training practices and ill health experienced by some of those who trained, worked or lived at Fiskville. The Investigation was never intended to address such issues.²²⁰

The Committee learnt that many people were in fact disappointed by the fact that the Joy Report did not link training practices and ill health at Fiskville. However, the Committee also notes Professor Joy's statement that his report can provide the background and context for any future health study (through, for example, the above table of hazardous materials used at Fiskville).

Professor Joy also assessed the likelihood that Fiskville staff, trainees and local residents would have been exposed to the flammable liquids and contaminated firewater that were used and stored on-site. He developed a framework of 'high', 'medium' and 'low' risk to categorise the likelihood of exposure to hazardous materials for different categories of people at Fiskville.

Professor Joy proposes that the risks of exposure to flammable liquids were 'high' for PAD operators working at Fiskville, while full-time instructors were at 'high' risk of exposure to foam, used firewater and products of combustion.²²¹

216 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.94

217 Mr David Card, *Transcript of evidence*, 18 May 2015, p.44. The golf course was on the grounds of Fiskville

218 Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.14

219 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.142

220 *Ibid.* p.5

221 *Ibid.* p.140

He categorises volunteer and regional instructors as being at 'medium' risk of exposure, while trainees who visited Fiskville for short periods of time were considered to have had a 'low' risk.²²²

The three categories of 'high', 'medium' and 'low' risk served as a base for the Fiskville health study carried out by Monash University's School of Occupational and Environmental Health following the Joy Report. However, the categories do not take into account the health risk posed to firefighters by acute or one-off events. This is discussed in more detail in Chapter 9.

Despite the importance of Fiskville as a training site and 'spiritual home' of the CFA, the site was contaminated by: the CFA's approach to training; its attitude to health and safety; and its release of untreated water into the environment. Indeed, concerns about water quality were raised yet not adequately addressed (see Chapter 4) by the CFA even while the Joy Report was being prepared. Many staff and trainees who worked at Fiskville have contracted cancers and other serious illnesses. Some have died as a result. A number who have given evidence to this Inquiry believe that the time they spent at Fiskville being exposed to the polluted air, water and soil caused their illnesses.

The Committee heard about the experiences of people affected by events at Fiskville. These fell into four broad categories: the nature and experience of training activities; health conditions and concerns of links to Fiskville; people's trust in the CFA to do the right thing; and how the CFA treated people who raised concerns.

The Committee notes that many of these experiences relate to the period from the 1970s through to the 1990s and that the CFA's practices have improved since then. However, it also notes that many of the impacts of these experiences are long-term and ongoing. Tragically, some have been fatal.

FINDING 25: That there are two distinct but related eras of contamination at Fiskville. The first involved the contamination of the site and exposure of people to the chemicals that were burnt and buried. The second involved the contamination of water used in firefighting training.

FINDING 26: That Fiskville's residents and neighbours were affected to differing degrees by the smoke plumes and contaminated water run-off caused by firefighting training.

The nature and experience of training activities

Mr Alistair Allan conducted fire training courses at Fiskville from 1985 to 1989 for staff of various petrochemical companies, on behalf of the Australian Institute of Petroleum. Mr Allan informed the Committee that participants regularly came into contact with firewater despite wearing protective clothing. Further, no breathing apparatus (BA) were available. He compared the training at Fiskville with his previous training in the petroleum industry and remarked on the far higher OH&S standards in the latter. Drawing on that experience, he agreed with

²²² Ibid. p.96

a question from the Committee Chair that it would have been possible to reduce the exposure to contaminants at Fiskville while doing the same training.²²³ Mr Allan also stated that Fiskville took possession of old tanks, valves and other props when BP closed its Western Port refinery and that these materials were incorporated into the PAD.²²⁴

Mr Etherton described some of the training activities he participated in, noting that BA were rarely used. He stated that staff and trainees would regularly require more than one shower to clean the smoke, soot and grease from themselves. Mr Etherton described the instructors as complacent and expressed his anger that the CFA was aware of the dangers associated with using donated fuels for fire training as early as 1988 yet showed little concern about risks posed by those hazardous materials and refused to share the information with those affected.²²⁵

Mr Colin Cobb was a PAD instructor at Fiskville from 1984 to 1987. Mr Cobb described a number of training exercises to the Committee including the five man fog attack, which was typically conducted without BA.²²⁶ He described the PAD fires as 'large, black and toxic' and produced photos of such fires to the Inquiry. He explained that:

... flammable liquids were sump oil and heavy diesel ... laced with other highly flammable substances. Many unknown substances were given to Fiskville by the chemical companies as a way of disposal and brought to Fiskville in unmarked 200-litre drums.²²⁷

The donated fuels arrived at Fiskville on what has been described to the Committee as the 'muck truck'. Mr Kenneth Lee explained that:

... from what I recall in the early 1980s we picked up chemicals, oils and fuels in an old converted fire truck from service stations, chemical companies, fuel depots and various other places. Timber was picked up in our tray truck, and quite a lot of liquids were delivered by semi-trailer, with 200-litre drums stacked on top of one another of different types of fuels. Some were not even labelled. After their use most of the drums were buried on the grounds, a lot of them still with part of their contents in them.²²⁸

Mr Alan Bennett was an instructor at Fiskville between 1978 and 1987. He referred the Committee to correspondence to his superiors he had authored commencing in 1982, in which he described how drums containing chemicals were corroding and emitting a foul smell, leading to a decision to bury the drums. It was in the course of one such burial that Mr Bennett was overcome by fumes.²²⁹ The manner in which this incident was responded to by the CFA is examined in Chapter 5.

223 Mr Alistair Allan, *Transcript of evidence*, 18 May 2015, p.31

224 Ibid.

225 Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.35

226 Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.86

227 Ibid.

228 Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.76

229 Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.14

Mr Andrew Bishop detailed an incident that occurred in the early 1990s during a drill where participants were required to attack a fire uphill against the wind. He said that he raised safety concerns with instructors but was ignored.²³⁰

Mr Cory Woodyatt stated that while he was a recruit in the 2000s it was common for trainees to swim through the dams at Fiskville as part of triathlon training. He explained that on one occasion one of the course participants was required to swim in a dam at Fiskville despite being ill with either bronchitis or glandular fever.²³¹ Mr Woodyatt also spoke about his experience of training others at Fiskville, including staff from Corrections Victoria.²³²

Mr Gavan Knight spoke to the Committee about his former work as an instructor at Fiskville from 2001 – 2007 for various government departments, including the then Department of Natural Resources, Department of Sustainability and Environment, and Department of Primary Industries. He described training officers in the dams, such as during scenario training for duck protestor management.²³³

Mr Tony Martin from the United Firefighters Union told the Committee about what he viewed as the resistance at Fiskville to the MFB's demand to always eat in a 'clean mess'; that is, leaving all contaminated clothing outside while eating. This was despite the fact that it was MFB policy, and according to Mr Martin policy at other CFA training grounds (such as Bangholme), for all dining areas to be a 'clean mess'.²³⁴ The Committee has seen evidence confirming that Fiskville had a 'clean mess' area (the formal dining room) and a 'dirty mess' area with different procedures regarding clothing applied to each area and that MFB trainees were welcome to eat in whichever area they preferred.²³⁵

Mr Geoffrey Barker, a Leading Firefighter at the CFA, spent 16 weeks training at Fiskville in 2001. He told the Committee of being issued with personal protective clothing (PPC) comprised of black woollen coats, flame retardant trousers and leather gloves. There was no moisture barrier in the PPC meaning the woollen trousers and polyester t-shirts worn underneath stayed wet for a number of hours. Although the PPC would be removed before eating, trainees would keep on their wet clothes, leading Mr Barker to state: 'I have concerns about the possibility of contaminating our food whilst eating in contaminated uniform.'²³⁶

Health conditions and concerns of links to Fiskville

Most of the witnesses who gave evidence about having been trainers or trainees at Fiskville have suffered ill-effects following their time at the College, ranging from skin conditions and gastroenteritis through to potentially fatal cancers.

²³⁰ Mr Andrew Bishop, CFA Volunteer, *Transcript of evidence*, 15 June 2015, p.196

²³¹ Mr Cory Woodyatt, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.188

²³² Ibid.

²³³ Mr Gavan Knight, *Transcript of evidence*, 18 May 2015, p.51

²³⁴ Mr Michael Martin, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, pp.161-163

²³⁵ Email correspondence from Mr Justin Justin, CFA to Ms Kirstie Schroder, MFB, 3 September 2012

²³⁶ Mr Geoffrey Barker, *Submission 29*, p.1

Mr Kenneth Lee spoke to the Committee about his experiences working at Fiskville from 1979 to 1999, primarily as a supervisor responsible for organising live firefighting drills. Mr Lee stated that he suffers from asthma and bowel cancer and wonders whether his work at Fiskville contributed to his illness.²³⁷ He told the Committee: “I do have to ask whether I would have had these problems if I had not sucked in all the smoke and chemicals for the 20 years I was at Fiskville.” Despite his own failing health, he said that his “... biggest fear is for my children, who spent a lot of time at Fiskville playing and enjoying time with the families that lived on site, riding their bikes, fishing in the dams, et cetera”.²³⁸

The Committee heard evidence from Dr John Ferrier, an educator in the forestry industry who had trained forestry students on various occasions at Fiskville during the late 1970s and 1980s. Dr Ferrier stated that he has suffered from an aggressive form of prostate cancer that he believes is linked to Fiskville.²³⁹

Mr David Card attended Fiskville State School in the 1990s. Mr Card was first diagnosed with testicular cancer at 21 and again three years later. He told the Committee of the impact that the disease has had on his life and outlined his ongoing treatment. Mr Card told the Committee that the pupils of Fiskville State School were fascinated by the training drills and smoke. He is concerned that other children may have experienced health impacts and are unaware of the possible links to their time at Fiskville.²⁴⁰ (See discussion of the Fiskville State School below.)

The Committee also heard from people who lived on properties near Fiskville and who have suffered ill health which they think may be related to the training facility. Mr John Cutler lived with his family at a property six kilometres south of Fiskville between 1981 and 2010. He told the Inquiry that he has been diagnosed with bowel and liver cancer, one of his step-daughters has been diagnosed with breast cancer and another with bowel cancer. Another member of his household has breast cancer.²⁴¹

FINDING 27: That many people are concerned that their experiences at Fiskville may have contributed to health concerns they are currently experiencing or may experience in the future.

People's trust in the CFA to protect them

The Committee heard from a number of witnesses who spoke of their trust that senior management at Fiskville and the CFA would provide a safe working and training environment.

For example, Mr Cutler said that “... you have got to have a degree of trust, I suppose, don't you, when you work in these places that the people are being responsible, and let us hope they were”.²⁴²

²³⁷ Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.76

²³⁸ Ibid.

²³⁹ Dr John Ferrier, *Transcript of evidence*, 25 May 2015, p.104

²⁴⁰ Mr David Card, *Transcript of evidence*, 18 May 2015, p.45

²⁴¹ Mr John Cutler, *Transcript of evidence*, 18 May 2015, p.56

²⁴² Ibid. p.61

Mr Norman Carboon gave evidence to the Committee about his career with the CFA and his time working at Fiskville as a trainer in the late 1970s. He said that Fiskville staff always used practices that were considered 'safe' at the time.²⁴³

However, this evidence contrasts with the evidence of Mr Bennett. He told the Committee that safe practices were ignored in order to test the qualities of the trainees and, hopefully, ensure they were prepared for the worst:

... while we were attacking the fires in a way that in many ways was a contravention of practical firefighting exercises — in other words, with the wind behind you and being uphill — I think we all agreed that it put people in the worst situations. It bonded them together as a team. It gave them the worst circumstances that could happen. I, and I am relatively certain my other friends and compatriots from Fiskville, explained full well, certainly before we went into such a situation, what the real reason was.²⁴⁴

The Committee notes that, in general, it was common practice for firefighting training to prepare trainees for severe situations rather than 'normal' or 'typical' fires.²⁴⁵

The Committee heard about the experiences of Mr Tony Ford who became involved with the CFA as a junior brigade member at the age of 11. Mr Ford, who undertook a 14-week training course at Fiskville in 2000 before becoming a career firefighter, said: "... we just got up there, and we put our faith and trust in the organisation that they would be doing the right thing, and if they said the water was good enough to train with, we trusted them".²⁴⁶

Mr Paul Roughead, an Operations Officer at Fiskville, said: "We were not aware what standard the water was tested to, but we trusted that it was to a safe standard and we had no reason at all to doubt that. That trust was based on the fact that the water was being tested by the local water authority, Central Highlands Water."²⁴⁷ (The Committee notes that Central Highlands Water only provided test results to the CFA in an accredited format. It did not provide any consulting or advisory services.²⁴⁸)

How the CFA treated people who raised concerns: betrayal by 'the family'

Mrs Diane Potter told the Committee about her time living at Fiskville and of her husband's experience raising his concerns about Fiskville. Like a number of other witnesses, she considered the CFA to be like 'a big family' but said that she was distressed by the way the CFA had treated her husband during his illness and that the lack of communication from the CFA led Mr Potter to speak to the *Herald Sun*. Mrs Potter argued that the CFA had been aware of potential health

²⁴³ Mr Norman Carboon, *Transcript of evidence*, 15 June 2015, p.200

²⁴⁴ Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.10

²⁴⁵ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014), p.8

²⁴⁶ Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.123

²⁴⁷ Mr Paul Roughead, *Transcript of evidence*, 27 July 2015, p.301

²⁴⁸ Mr Paul O'Donohue, Managing Director, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.4

risks at Fiskville but had failed to pass on the information to those affected.²⁴⁹ The Committee understands this to be a reference to the AS James Report of 1988, which is discussed in Chapter 5.

Mr Trevor Lansdown, a 27-year CFA veteran, expressed similar sentiments. He told the Committee that:

The contamination of Fiskville came out through the media and so forth, and Brian Potter's issue. I would really like to pay tribute to Brian Potter for having the courage to speak forward, and I would probably understand more than a lot of people how much courage it took to speak against the organisation. I was really CFA through and through, probably very much like Brian, and I really do understand the betrayal that he felt by his organisation.²⁵⁰

Mr Michael James, a part-time instructor for the CFA from 1987-2000 and a paid firefighter for 27 years, has battled a number of medical conditions including a rare skin disorder called morphea. He provided evidence about his career with the CFA and his experiences at the Fiskville and Bangholme training grounds. His evidence focused on the culture of the CFA and the difficulties that members, including himself, have had raising safety concerns with management. Mr James emphasised the importance of respecting the chain of command within the CFA, arguing that this creates an impression on recruits and junior members to believe that it's 'not their place' to question practices.²⁵¹ After describing instances where his requests to wear BA at Fiskville were rejected, Mr James explained that he:

... was very concerned at the time, and have remained angry and concerned for the 27 years since, that I had been unnecessarily and repeatedly exposed to smoke from this particular flammable liquid pit. My exposure to this smoke was totally avoidable. The unknown nature of the fuel used in this pit makes it very difficult to attribute specific health issues with the exposure to this smoke.²⁵²

Mr Ford provided the Committee with details of training at Fiskville in 2000 that included being required to swim through dams. He stated that this activity was not optional and that the water was dirty and smelly. While he had concerns at the time he said that the recruits did not raise any issues with the CFA. He argued that for many, firefighting was considered a "dream job" and they had not wanted to jeopardise their careers by complaining about safety issues.²⁵³

Mr Woodyatt was another witness who spoke to the Committee about the culture of the CFA, echoing Mr James's statements about the importance of the chain of command. Mr Woodyatt also described being a firefighter with the CFA as his "dream job" and said that he did not want to jeopardise his future by raising concerns about safety and water quality.²⁵⁴

The culture of the CFA is discussed in more detail in Chapter 5.

²⁴⁹ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15. See also Case Study 1 on Mr Potter

²⁵⁰ Mr Trevor Lansdown, *Transcript of evidence*, 15 June 2015, p.212

²⁵¹ Mr Michael James, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.184

²⁵² *Ibid.* pp.180-181

²⁵³ Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.123

²⁵⁴ Mr Cory Woodyatt, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.188

FINDING 28: That people trusted the CFA to look after its people but that trust was broken.

3.3.2 Fiskville State School

Fiskville State School was established in 1933 and closed in 1993 as part of a wider restructuring of the Victorian education system. The CFA then purchased the site. The one-classroom and one-teacher school delivered classes for up to six grades. It was located next to the Fiskville CFA site and children of Fiskville staff and local farming families attended the school.²⁵⁵

As with all small rural schools, Fiskville State School engendered a lot of pride in the local community. At a public hearing in Melbourne, Mr Card, who attended the school, read out a small section of a book co-authored by his mother, *We Made the Most of It*:

The parents, teachers and pupils of Fiskville can be justly proud of their achievements, proud of the children who have grown and those who will grow to become good and happy people, contributors to their community, devoted to their children and committed to their future, as were the founders and all the participants in the lives of the 295 children who have attended Fiskville State School 4518.²⁵⁶

Mr Card attributed his illness to the time he spent at the school.²⁵⁷ (The school was located 660 metres east of the PAD.²⁵⁸) The Committee also heard evidence regarding a former teacher at the school who died from oesophageal cancer.²⁵⁹

As part of his investigation, Professor Joy interviewed families who sent children to the school, ex-pupils and two past principals. Professor Joy found no evidence that the school experienced problems with smoke from training activities and that the school relied solely on mains water (and not tank water). He wrote: 'Consequently, it is reasonable to conclude that any exposure to staff and children to smoke would have been infrequent and of short duration.'²⁶⁰ Professor Joy reaffirmed this view when he spoke with the Committee, saying: "The exposure of the students would have been very ephemeral."²⁶¹

However, the Committee heard contrasting evidence that students and teachers at Fiskville State School may have been at increased risk of exposure to smoke because of the chemical composition of the smoke plumes that drifted over the

255 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.32

256 Mr David Card, *Transcript of evidence*, 18 May 2015, p.44. Mr Card told the Committee that 114 students attended the school from the time Fiskville Training College opened until the school's closure in 1993

257 *Ibid.* p.43

258 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.94

259 Mr John Cutler, *Transcript of evidence*, 18 May 2015, p.56

260 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.94

261 Professor Robert Joy, Chair, Independent Fiskville Investigation, *Transcript of evidence*, 3 June 2015, p.136

school.²⁶² The Committee believes that the small number of students and teachers who attended Fiskville State School means this group could form an ideal cohort for a health study on the effects of contamination at Fiskville. The names of every student and teacher who attended Fiskville State School are listed in *We Made the Most of It*.

RECOMMENDATION 4: That the Victorian Government offer all students and teachers who attended Fiskville State School the opportunity to participate in a health study on the effects of contamination at Fiskville.

3.3.3 Fiskville's neighbours

The Committee received submissions from people living near the Fiskville site, particularly in the neighbouring area of Mount Wallace, concerned about possible health impacts caused by the activities at Fiskville.

For example, Mr Alex Martin lived at Mount Wallace as a young child and has experienced nocturnal epileptic seizures since he was 16 years old.²⁶³ Mr Cutler lived at Mount Wallace from 1981-2010 and worked at Fiskville as an electrical contractor from 1982 until the late 1990s. Mr Cutler was diagnosed with bowel and liver cancer in November 2011.²⁶⁴ As noted above, other members of Mr Cutler's family who lived with him have also been diagnosed with various cancers.

The Committee also heard evidence at public hearings from farmers with properties near Fiskville concerned about possible contamination to their land, water and stock from chemicals used at the site.²⁶⁵

3.4 Community engagement

The Committee was interested to learn how the CFA engaged with the local community regarding the contamination of the Fiskville site and surrounding areas. The Committee's study tour of Germany emphasised the importance of soundly based community engagement in relation to contaminated sites.²⁶⁶ The Committee heard evidence from Ms Sherry Herman, the former Program Manager of the Informing the Future program, which the CFA established to implement the Joy Report's recommendations.

Ms Herman told the Committee that the CFA's community engagement program following the December 2011 *Herald Sun* article and the Joy Report could be divided into two parts: regular updates via media releases, interviews on local

²⁶² Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 June 2015, p.249

²⁶³ Mr Alex Martin, *Submission 17*, p.1

²⁶⁴ Mr John Cutler, *Submission 18*, p.1

²⁶⁵ See also the case studies on Mr Neville Callow and Matthew and Beccara Lloyd at the end of this Final Report.

²⁶⁶ See Chapter 10; see also the Hazelwood Mine Fire Report 2015/16 Vol IV, Mine Rehabilitation at pp 173-176 for a discussion of the importance of community engagement in the context of the successful rehabilitation of coal mines with reference to the German experience

radio and an online blog run by then CEO Mr Mick Bourke; and campaigns around what Ms Herman described as "... key events, so things that happened that we did not expect to happen or that we felt were so important that we needed to get out and do a lot more in terms of community engagement or communication overall".²⁶⁷

Part of this community engagement program included notifying neighbouring properties that the water in the local waterways was unfit for human consumption. Ms Herman said that there are around 20 properties between Fiskville and the Moorabool River. These were contacted by either the CFA or Moorabool Shire Council and informed of the health risks posed by the water.²⁶⁸

In Appendix 5, the Committee has included a copy of a CFA 'Community Update' advising residents not to drink the water from local waterways. Ms Lucinda Nolan, the current CEO of the CFA, provided the Committee with further examples of the CFA's community engagement, including:

- 'Fiskville updates' distributed to properties neighbouring Fiskville
- Scientific and health advice regarding PFCs to neighbours and the wider community
- Updating the CFA website with information
- Meeting with the Ballan fire brigade and Moorabool Shire Council.²⁶⁹

See also the discussion in Chapter 5 about community engagement carried out by the Department of Defence for properties it has contaminated.

FINDING 29: That the CFA's community engagement program to inform the local community of risks posed by Fiskville and how it planned to clean up the site was not to the same standard as other examples the Committee examined.

²⁶⁷ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.10

²⁶⁸ *Ibid.* p.19

²⁶⁹ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.11

4

Contamination — history of training activities and how the Fiskville site was contaminated

AT A GLANCE

Background

This Chapter provides a detailed summary of the practical training methods at Fiskville. It explains how the use of donated fuels, recirculated water and firefighting foams caused the contamination at the site, including how the use of extinguishing agents changed over time. The Chapter contains the Committee's clarification of several issues of confusion surrounding the CFA's use of water at Fiskville following the release of the Joy Report in 2012.

This Chapter addresses Terms of Reference (1) and (3).

Key findings

- That the training activities at Fiskville from 1972 through to its closure in 2015 contributed to contamination of water, soil and the air both on-site and off-site.
- That CFA representatives were aware that training practices were causing contamination.
- That poor record keeping and sample taking on the part of the CFA has meant that regulatory agencies have not been able to hold the CFA and individuals working for the CFA to account.
- That the exact nature of the fuels, many of them donated, used at Fiskville from the 1970s through to the 1990s is unknown because of inadequate record keeping. However, the acquisition, transport and storage of hazardous materials were frequently undertaken in ways that were likely to have contravened legislative requirements and industry standards at the time.
- That limiting the Joy Report to examine only up to 1999 was short sighted as evidenced by ongoing concerns over hazardous materials and the water quality at Fiskville.
- That former CFA staff and management stated that they were unaware of health and safety concerns because there were no reports of incidents or complaints. However, there is evidence that CFA management was aware of health and safety issues.
- That significant occupational health and safety incidents that occurred during Fiskville's operations were poorly documented, resulting in a loss of corporate knowledge and the unnecessary exposure of people to toxic substances.

- That trainers and trainees at Fiskville were unnecessarily exposed to toxic substances because internal and external reports into health and safety incidents which made recommendations to improve safety standards were not disseminated appropriately. These failures have added to the bitterness and sense of betrayal on the part of many long-term CFA employees and volunteers who lived and worked at Fiskville and gave evidence to the Committee.
- That Fiskville staff and CFA managers provided incorrect information to regulatory authorities.
- That outside organisations training at Fiskville could not rely on the veracity of the information on water quality provided by the CFA.
- That recirculated water contaminated by the products of combustion caused health problems, including skin rashes, which should have warned the CFA about water quality at Fiskville.
- That organisations training at Fiskville made decisions based on inaccurate information provided by the CFA, which may have led to people being exposed to contaminated water.
- That senior management at the CFA was aware from 2009, at the latest, that contaminants in Dam 1 were an ongoing potential health threat to firefighting training drills.
- That CFA senior management repeatedly avoided taking responsibility for water quality at Fiskville.
- That considering the CFA's annual budget, it is disappointing that more funds were not invested in remediation of, and water treatment at, the Fiskville site.
- That poor record keeping and often contradictory information created a great deal of misunderstanding regarding the use of mains water at Fiskville, including: if mains water continued to be mixed with recirculated water until the installation of a second water storage tank in October 2012; and the use of Class A recycled water.

4.1 Information on contamination at Fiskville

Contamination at Fiskville occurred through a combination of creating fire and extinguishing fire. The products of combustion - that is, the burning of fuels and physical objects - released toxic materials into the environment. These materials then contaminated the firefighting water used to extinguish the fire, a problem which was exacerbated by chemicals found in firefighting foam. This Chapter explains the process of creating and extinguishing fire at Fiskville.

A major problem encountered by the Committee throughout this Inquiry was determining exactly what happened at Fiskville. As discussed elsewhere, this is in part because of poor record keeping. However, another factor was the contradictory information that the CFA provided other organisations about its activities at Fiskville. This is discussed in detail below regarding issues such as the standard of water being used and the presence of contaminants such as *Pseudomonas aeruginosa* and *E. coli* in the water.

When put together these examples of contradictory information paint a concerning picture of the CFA, both in the past and more recently. At times, the information provided depended on who at the CFA was being asked. For example, at one stage Fiskville staff stated that Class A recycled water was being used while senior management stated that Class A recycled water was not being used.²⁷⁰

It appears that CFA senior management was immune to the need to keep staff and outside organisations aware of its activities. Consequently, people's health was put at risk, while others remain unsure what danger they have been exposed to. The end result is a dramatic loss of trust in the CFA that cannot be easily repaired. The issue of trust is discussed further in Chapter 5.

FINDING 30: That the training activities at Fiskville from 1972 through to its closure in 2015 contributed to contamination of water, soil and the air both on-site and off-site.

FINDING 31: That CFA representatives were aware that training practices were causing contamination.

FINDING 32: That poor record keeping and sample taking on the part of the CFA has meant that regulatory agencies have not been able to hold the CFA and individuals working for the CFA to account.

4.2 Practical training at Fiskville 1972-1999

An important part of firefighting training involves igniting fire and extinguishing it using either water or firefighting foams. The concerns about Fiskville relate to the practical training activities that took place at the site, particularly the possible health impacts of the hazardous materials trainees and others were exposed to during practice drills. Health risks arose through:

- Exposure to fuels and the products of combustion via inhalation
- Contact with or ingestion of contaminated firewater (including through wet turnout gear)
- Contact with or ingestion of firefighting foams containing potentially dangerous chemicals.

4.3 Creating fire

Practical training at Fiskville took place on a specially designed 90 by 90 metres gravel surface (subsequently sealed with concrete in 1996) known as the PAD (practical area for drills). The PAD was constructed between 1973 and 1974 and consisted of: a fire attack building; a flammable liquid 'prop' ('props' are structures and objects which are set alight for trainees to extinguish);

²⁷⁰ For example, see the evidence from the United Firefighters Union and Mr Justin Justin referred to at 4.6 in this Chapter

two non-bunded²⁷¹ foam pits for flammable liquid training; and a pit filled with mains water before each training drill. The PAD provided a space where ‘live’ fire training could be conducted and featured a range of props designed to simulate possible firefighting situations, such as tank fires, fires in pools of liquid and fires running along drains. The PAD also housed a three-storey building used to simulate fires in industrial, commercial and residential buildings, including a simulated ship’s engine room and enclosed hallways used to conduct smoke tunnel training.²⁷²

BOX 4.1: The practical area for drills (PAD)

The props on the PAD were fuelled by a variety of materials over the years: flammable liquids such as petrol and diesel; a variety of flammable waste materials donated by industry (including sump oils, solvents, mineral oils and paints); and, since the late 1990s in particular, liquefied petroleum gas (LPG). The PAD was fed by a system of pipes and tanks that allowed fuel to be stored and pumped into the props.

From the 1970s through to the 1990s, fuels were also stored in 44 gallon drums that were themselves kept in an area that lacked protective bunds and covers. Access to the area was unrestricted for a number of years.²⁷³ During this period, Fiskville staff rolled the drums onto the PAD and manually emptied them into the props.²⁷⁴ In some instances, PAD operators collected fuel from the storage area in open buckets and walked it over to the PAD to refill the props. Professor Joy notes that ‘... the contents of the bucket often splashed the PAD operators and the PAD itself’.²⁷⁵

Depending on the exercise they were conducting, trainees would practise different fire attack techniques and use water and / or foams to extinguish fires. During this time the protective equipment and clothing used by PAD operators, instructors and trainees was ‘rudimentary’ at best and non-existent at worst.²⁷⁶

It has been difficult for the Committee to determine the exact nature of the donated flammable materials that were used in training, particularly in the 1970s and 1980s. The Joy Report explained that the opening of Fiskville coincided with a global increase in the price of oil.²⁷⁷ As a way of minimising costs, Fiskville’s operators began to accept donated fuels from local industries as a supplement to purchased petrol and diesel.

Mr Kenneth Lee spoke to the Committee about his experiences working at Fiskville from 1979 to 1999, primarily as a PAD supervisor responsible for organising live firefighting drills. Mr Lee described the process of collecting fuels, chemicals and oils from petrochemical companies and fuel depots for use during training drills.²⁷⁸

²⁷¹ Bunds are protective walls designed to contain leaks

²⁷² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.37

²⁷³ *Ibid.* p8

²⁷⁴ *Ibid.* p37

²⁷⁵ *Ibid.* p63

²⁷⁶ *Ibid.* p35

²⁷⁷ *Ibid.* p.43

²⁷⁸ Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.78

Similar evidence was heard from Mr Norman Carboon, a trainer at Fiskville in the late 1970s. Mr Carboon told the Committee that Fiskville became known as one of the few locations in Victoria that would accept contaminated or expired fuels.²⁷⁹ Mr Carboon was asked by Committee member Mr Bill Tilley if it could be said that the petrochemical companies used Fiskville as a ‘dumping ground’ for their waste. Mr Carboon’s reply was: “It was a bit of both ways in this because their staff used to come up for training and they would bring fuel with them, but when they were not there an occasional truckload of drums came up, but I was never told what the contents were.”²⁸⁰

Mr Colin Cobb, a CFA member for 32 years, and a former Fiskville instructor was more blunt, saying: “Fiskville was known as a dumping ground for many things within the fire service and in industry.”²⁸¹

Mr Brian Potter’s interview for the Joy Report includes Mr Potter’s recollection of an incident where a Fiskville employee contacted a waste disposal company to enquire about the removal of hazardous material from Fiskville. The company said that the waste was too dangerous for it to accept but it could pass on the phone number of someone that would accept the waste. That phone number turned out to be for Fiskville.²⁸²

Mr Alistair Allan, a former BP employee who led training courses at Fiskville in the late-1980s on behalf of the Australian Institute of Petroleum, told the Committee that in the petroleum sector, standards at that time regarding fuel sources were much higher than those he observed at Fiskville. He said:

All the fuel we used [in the petroleum sector] was clean and new - working in an oil refinery, we had plenty of clean, new fuel - and the water was either straight from the fresh water or straight seawater. There was no contamination, no contaminated water used.²⁸³

Similar evidence was heard from Mr John Cutler, an electrical contractor at Fiskville from 1982 to the late 1990s. Mr Cutler also worked in the chemical sector, at companies such as Dow and Nufarm, and told the Committee that the occupational health and safety standards at Fiskville at that time were much lower than those he witnessed in the chemical sector.²⁸⁴

This evidence is very important. In its discussion of these issues and the extent to which the CFA fell short of applicable OH&S regulatory standards, the Joy Report accepted that the CFA’s practices at Fiskville from the 1970s to the early 1990s ‘... would be unacceptable judged against today’s occupational health and safety and environment protection standards, community expectations *and industry norms*’.²⁸⁵ Professor Joy went on to say: ‘... however, it is important to consider

²⁷⁹ Mr Norman Carboon, *Transcript of evidence*, 15 June 2015, p.203

²⁸⁰ Ibid.

²⁸¹ Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.87

²⁸² Mrs Diane Potter, *Submission 448, attachment 1*, p.49

²⁸³ Mr Alistair Allan, *Transcript of evidence*, 18 May 2015, p.28

²⁸⁴ Mr John Cutler, *Transcript of evidence*, 18 May 2015, p.61

²⁸⁵ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.47 (emphasis added)

these practices in the context of the day, including the regulatory context and *common practices across sectors* and the community'.²⁸⁶ The evidence before this Committee suggests that, even judged against industry standards at the time, the CFA's activities at Fiskville fell well short of what was acceptable.

There is little documented information about the specific nature of the donated materials. It is believed that they included waste oils, expired fuels, paint and paint thinners, expired Avgas, and vegetable and mineral oils.²⁸⁷ The Committee considers this to be important because it is difficult for health professionals to determine the impacts of contamination on people without knowing exactly what they have been exposed to. This directly impedes the ability of those who were exposed to satisfy the requirements of applicable compensation regimes.²⁸⁸

This lack of documentation regarding Fiskville's operations became a dominant feature of this Inquiry. The Committee's efforts to understand past actions at Fiskville — including the very recent past — were frequently frustrated by poor or, at times, absent record keeping. This is discussed further in Chapter 5 but also features regularly throughout this Final Report.

Despite this level of uncertainty about what was donated, Professor Joy writes:

... what can be stated with a high degree of confidence is that the various solvents, paints and other flammable waste materials contained in the drums were potential environmental contaminants. Given that some drums were known to be in poor condition, that they were stored on permeable surfaces and at times buried, they pose risks of potential contamination of soil, surface and groundwaters.²⁸⁹

Donated fuel was often collected by PAD operators in a vehicle known as the 'muck truck'. The truck, which held approximately 400 gallons or 1,800 litres of fuel, would visit local businesses, garages and transport companies to collect donations. Once at Fiskville the fuel was typically pumped out of the truck into overhead tanks on the PAD.²⁹⁰

The Committee discussed this practice with the CEO of EPA Victoria, Mr Nial Finegan. Mr Finegan was of the opinion that the practice would breach current legislation, saying: "The whole concept of the muck truck going around, gathering up chemicals, bringing them to the CFA and burning them on site would not be acceptable today ...".

When asked by the Committee if the practice would have been legal even at the time it was happening, Mr Finegan stated: "I would not think so."²⁹¹

²⁸⁶ Ibid. (emphasis added)

²⁸⁷ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.43-55. The Committee sent letters to 14 local businesses in early 2016 enquiring as to their knowledge of fuels donated to Fiskville in the 1980s and 1990s. The responses did not contain any new information. See also Table 3.1 in this Final Report

²⁸⁸ This is discussed in more detail in Chapter 11

²⁸⁹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.76

²⁹⁰ Ibid. p.54

²⁹¹ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.5

This practice of accepting donated fuel continued into the 1990s. The CFA redeveloped the PAD in the late 1990s following an occupational health and safety report produced by a Fiskville staff member, Mr David Clancy (see below). By 1999, the Joy Report explains, donated fuels were no longer being used at Fiskville and LPG was instead the fuel source for most of Fiskville’s training exercises.²⁹² Minutes of the CFA’s Training and Props Committee meeting dated 16 November 1995 suggest the practice of accepting donated fuels had ceased by this date.²⁹³

The change in practice was used to justify the Joy Report not examining the period beyond 1999 in its investigation. However, hazardous materials such as diesel continued to be used at Fiskville. For example, the CFA’s 2000 Annual Report states: ‘The PAD is the first of its type in Australia and is able to ignite gas, petrol and diesel fire simultaneously through one prop. The PAD meets Environment Protection Authority requirements with a fully enclosed water cleaning and recycling system.’²⁹⁴ Further, as outlined below, concern about water quality persisted well beyond 1999.

WorkSafe’s CEO, Ms Clare Amies, was asked by Committee member Ms Vicki Ward about the 1999 cut-off in Professor Joy’s brief from the CFA:

Ms WARD—The Joy report covers only 60 per cent of the period of Fiskville’s history. There is a 40 per cent gap in our knowledge, if you like, that part of what we are doing here is trying to work through. Do you think it would have been helpful for WorkSafe for the Joy report to go beyond 1999?

Ms AMIES—I think in hindsight that it may have been helpful for us to have had a report that went through the full life and life span; there is no doubt about that. I think in any of these long term investigations there is always hindsight and lessons and ways for us to improve.²⁹⁵

In these circumstances, the Committee considers that it was a mistake for the CFA to limit the Joy Report to this time period. It was a mistake that should have been apparent in late 2011 when the Joy Report was commissioned.

FINDING 33: That the exact nature of the fuels, many of them donated, used at Fiskville from the 1970s through to the 1990s is unknown because of inadequate record keeping. However, the acquisition, transport and storage of hazardous materials were frequently undertaken in ways that were likely to have contravened legislative requirements and industry standards at the time.

FINDING 34: That limiting the Joy Report to examine only up to 1999 was short sighted as evidenced by ongoing concerns over hazardous materials and the water quality at Fiskville.

²⁹² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.44

²⁹³ Minutes of a training props meeting at Fiskville, 16 November 1995

²⁹⁴ CFA, *CFA Annual Report 1999-2000*, (2000), p.38. This is a reference to way in which run-off water flowed from Dam 1 to Dam 2 via a pipe filled with scoria, as discussed below at 4.5

²⁹⁵ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.49

RECOMMENDATION 5: That the Victorian Government review appropriate sanctions for entities that do not keep records demonstrating compliance with regulatory requirements.

4.3.1 How contamination happened

Although the exact nature of the donated fuels is unknown, there is clearer evidence of the CFA's poor handling practices regarding these fuels.

At various times in the 1970s and 1980s Fiskville staff raised safety concerns about the nature of the donated materials and storage of the fuel drums. On at least three occasions a decision was made at Fiskville to bury a mass of stockpiled fuel drums (either full or containing residual amounts of fuel). Professor Joy notes:

Two situations characterise the on-site burial of drums at Fiskville. The first involved the routine burial of small batches in either or both of two landfills near the south-western corner of the property. While the drums were reported to be empty, in practice many are likely to have contained solidified residues. The second involved mass burials of drums, most of which were probably full. These mass burials took place into pits or trenches at different locations on the property.²⁹⁶

Improper storage of fuels and inadequate occupational health and safety procedures and reporting were a feature of Fiskville's operations for many years. Of particular concern was an incident in 1982 following a fire in the fuel drum storage area. A Fiskville staff member, Mr Alan Bennett, was tasked with burying the burnt drums and was '... temporarily overcome by fumes from a black substance that had leaked from one of the drums'.²⁹⁷ Other Fiskville employees and volunteers were also affected by this incident.²⁹⁸

Several years later, on the advice of his treating specialist, Mr Bennett raised the 1982 incident with CFA management as the possible cause of a range of illnesses from which he was then suffering (including the surgical removal of growths from his nose).²⁹⁹ Mr Bennett pursued the issue with the CFA over several years and Professor Joy notes that '... on two occasions, the United Firefighters Union wrote to the CFA Chair in support of [Mr Bennett] and pointed out that the burial of the drums posed 'further environmental problems''.³⁰⁰

In a letter to the CFA's human resources department in November 1990, Mr Bennett requested that all information on the chemicals be provided to every person involved, however there is no evidence other staff or trainees were informed of their risk of potential exposure to hazardous materials from

²⁹⁶ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.12

²⁹⁷ Ibid. p.11; see also Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.87. Mr Cobb informed the Committee that he had spoken to Mr Bennett twice about the incident in the week before Mr Cobb gave evidence to the Committee

²⁹⁸ See Case Study 2 on Mr Alan Bennett for a detailed discussion of the incident and its lengthy aftermath

²⁹⁹ Ibid. p.11; Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.286

³⁰⁰ Ibid. p.13

the drums.³⁰¹ In Chapter 1, the Committee noted that the CFA had a statutory responsibility (which had been in place since 1981) to provide its employees and volunteers with the information they needed to work safely.³⁰²

The Committee heard from Mr Bennett. His written submission speaks of the ‘very rewarding time’ he had at Fiskville and states that the facility played a ‘vital role in the training of emergency services personnel’. This makes his reflections on what he sees as the CFA’s failures in his case all the more compelling:

I acknowledge that [CFA] Management may have believed that they were doing the right thing at the time by accepting industrial waste to use on the Training Pad, but I believe that, when they became aware of the analysed toxic properties of substances used, copies of the analysis which I hold, they failed in their duty of care by denying any knowledge of use, storage and burying of such substances when there was evidence to support this, and that they failed to accede to my request to inform Fiskville staff and others involved at Fiskville of the risk of exposure to such substances despite giving its assurance it would do so. Had this been done the situation in which the Country Fire Authority finds itself today may not be such as it is.³⁰³

This distinction between the use of contaminated fuels on the one hand and the failure to pass on information about the nature of the fuels to workers on the other was a key theme in evidence received by the Committee. For example, Mr Kevin Etherton joined the CFA in 1975 and worked at Fiskville as an instructor between 1985 and 1988. He and his wife Deborah lived at Fiskville with their children. Mr Etherton is angry that the CFA did not pass on the information it had about the chemicals to those who had been exposed to them:

That unknown flammable liquids were delivered and used at Fiskville to me is not the issue. When it became known later about the nature and the hazards of those fuels and the fact that that information was not passed on to people who had been exposed to them, to me that is the issue ... Many of my colleagues and friends who worked with me at Fiskville and who are currently seriously ill or deceased may not have been seriously ill or deceased had that information been passed on 24 years ago.³⁰⁴

Fuel drums were buried at Fiskville in a number of on-site landfill areas, one of which was closed off and capped in the mid-1990s.³⁰⁵ In 1988, one of the burial sites was exhumed and sampled, with contaminants including resins, solvents, benzene, toluene, xylene and phenol being found. At this time a consultant informed the CFA that ‘... materials of this type are only slowly biodegraded

301 Ibid. pp.13-14

302 *Occupational Health and Safety Act 1985* (Victoria), s.21(2)(e) and, before 1985, *Industrial Safety Health and Welfare Act 1981* (Victoria), s.11(2)(c)—see generally Chapter 1

303 Mr Alan Bennett, *Submission 453*, p.2

304 Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.35 ; see also at p.38 and the evidence of Mrs Diane Potter

305 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.12

and their presence would normally constitute an environmental problem'.³⁰⁶ Subsequently in 1991, around 75 drums and 253 tonnes of contaminated soil were removed from landfill areas on-site.³⁰⁷

More drums were found in March 2002 when a contractor hired to dig up soil in preparation for planting blue gums on the site tore open a drum. The incident happened on a Saturday and Mr John Myers (also known as 'Turk'), the PAD supervisor at Fiskville at the time, told the Committee that on the following Monday a company removed six drums and some soil from the site.³⁰⁸

Professor Joy observed a lack of corporate knowledge at Fiskville that allowed digging to disturb buried drums containing toxic material: 'The fact that the area was ripped for a blue gum plantation appears to point to a loss of knowledge and a lack of a systematic approach to managing environmental and safety issues at Fiskville.'³⁰⁹ The Committee reaches the same conclusion.

It cannot be said with any certainty whether or not any more drums remain buried at Fiskville.

It was not until March 2002 that waste disposal company Chemsal removed 56 drums, 136 tonnes of contaminated soil and 2,940 litres of product from Fiskville. Professor Joy found it hard to piece together what had happened as he could find no documented record of the drums being dug up.³¹⁰ Mr Mark Glover, the CFA's current Operations Manager, confirmed that he did not prepare a formal report of the accidental drum location incident, instead advising CFA senior management over the telephone. When asked if this was standard procedure at the time, even when people became ill, Mr Glover answered that it was.³¹¹ He further confirmed that he did not prepare a report on the incident to WorkCover (now WorkSafe), despite the fact that a contracted employee had taken ill.³¹²

As noted in Chapter 8, there is no evidence before the Committee that the CFA has made any attempt to follow-up on the contractor's health. Professor Joy, who examined this incident in detail, told the Committee: "... nobody can even remember his name. He may have died ten years later. We just do not know."³¹³

Mr Glover was one of very few CFA employees the Committee spoke with who was prepared to acknowledge and accept personal responsibility for a failure to properly document a safety breach at Fiskville.

³⁰⁶ AS James, *Waste Disposal Site Fiskville Training Centre*, (1988), Appendix 1, Report East Melbourne Laboratories, p.3

³⁰⁷ Ibid. pp.12-14. Plus see Case Study 2 about Mr Alan Bennett

³⁰⁸ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.13. This incident is discussed in detail in Chapter 8, including the finding that EPA Victoria should have involved itself in this incident more than it did

³⁰⁹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.106

³¹⁰ Ibid.

³¹¹ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.14

³¹² Ibid. p.15

³¹³ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.140-141

This lack of documentation is also important because the Committee heard frequently throughout this Inquiry that in the absence of incident reports the CFA Board and senior management did not think there was a problem at Fiskville. However, while record keeping at Fiskville was undoubtedly poor, Professor Joy found evidence that, at various times, CFA management did in fact know about the risks associated with hazardous materials stored at the site. During the 1990s, for example, the CFA commissioned a number of site assessments and studies focusing on the site's environment and health and safety issues.³¹⁴

The Committee learnt of a further example of a lack of safety on-site at Fiskville from Mr Glover. Mr Glover told the Committee that during his time at Fiskville old props from the PAD were dumped in the south-west corner of the site. Mr Glover explained that "... any old stuff went there. It was not contaminated, just tossed there and covered over with stuff."³¹⁵

FINDING 35: That former CFA staff and management stated that they were unaware of health and safety concerns because there were no reports of incidents or complaints. However, there is evidence that CFA management was aware of health and safety issues.

Clearly, better incident reporting at Fiskville would also have resulted in senior management and the Board being more aware of occupational health and safety breaches at Fiskville and, ideally, would have led to action. (The lack of knowledge of occupational health and safety concerns is examined further in the discussion of the CFA's culture in Chapter 5.) Yet it is not clear if this in fact would have been the case.

In 1996, for example, a Fiskville instructor, Mr David Clancy, undertook a health, safety and environment review of Fiskville, with input from the Health and Safety Organisation (now WorkSafe) and EPA Victoria.³¹⁶ The report was submitted to CFA management and subsequent redevelopments at Fiskville (including of the PAD) made efforts to address identified health, safety and environment issues, including removing underground storage tanks and bio-remediating contaminated soil beneath the flammable liquid PAD and old fire training pits.³¹⁷

However, Professor Joy notes that not all of the report's recommendations were implemented and that there was limited auditing of the recommendations.³¹⁸ This lack of action by the CFA following reports is a recurring theme throughout the organisation's history, in particular regarding Fiskville. One repercussion of this lack of action was that people were unnecessarily exposed to toxic chemicals.

314 Ibid.

315 Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, pp. 10-11

316 David Clancy, *Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*, (1996), p.1

317 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.14

318 Ibid.

A further repercussion is, as Professor Joy observed above, the loss of corporate knowledge that occurs when members of an organisation fail to act on information. For example, Mr Jeff Green, CFA's Workplace Health and Safety Manager, told the Committee that he had only recently become aware of the report from Mr Clancy. Mr Green, who was appointed to his position in 1994, said:

I have had a scan through some of the reports that talk about I think it was a '96 report, where they were addressing the environmental processes between Fiskville and the building property, so the manager at the time has obviously identified the issues and was dealing with them through the building properties section for the clean-up ... If it was deemed as though it should have been a risk, maybe I should have been advised, but I do not recall ever being advised.³¹⁹

The level of CFA knowledge of contamination at Fiskville is discussed in detail in Chapter 6.

FINDING 36: That significant occupational health and safety incidents that occurred during Fiskville's operations were poorly documented resulting in a loss of corporate knowledge and the unnecessary exposure of people to toxic substances.

FINDING 37: That trainers and trainees at Fiskville were unnecessarily exposed to toxic substances because internal and external reports into health and safety incidents which made recommendations to improve safety standards were not disseminated appropriately. These failures have added to the bitterness and sense of betrayal on the part of many long-term CFA employees and volunteers who lived and worked at Fiskville and gave evidence to the Committee.

4.4 Extinguishing fire - firefighting foam and PFCs

Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are types of perfluorinated chemicals (PFCs, also commonly referred to as fluorosurfactants) present in some firefighting foams. PFCs are very stable and non-reactive compounds. They are used to provide resistance to heat, to other chemicals or to abrasion, and they can be used as dispersion, wetting or surface treatments. PFCs have been used in non-stick cookware, in specialised garments and textiles to protect fabric, furniture and carpets from stains, and, most importantly, in some types of firefighting foam.

The American company 3M began producing PFOA in 1947 and PFOS in 1949. DuPont began production of PFCs in the early 1950s.³²⁰ These were the two major manufacturers of PFCs in the world.

³¹⁹ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.11. See also the Case Study 3 on Mr David Clancy

³²⁰ Flouride Action Network, *Timeline for PFOS and PFOA perfluorinated chemicals*, (www.fluoridealert.org/wp-content/pesticides/effect.pfos.class.timeline.htm), viewed 25 June 2015

BOX 4.2: Firefighting foams

There are two types of firefighting foam: Class A foams designed for solid materials; and Class B foams designed for flammable liquids. PFCs such as PFOS and PFOA enable the foam to spread easily and are a key component of aqueous film forming foams (AFFF), the most common Class B foam.

Firefighting foam works by cooling the fire, coating the fuel and preventing its contact with oxygen, thereby suppressing the combustion. Mr Matthew Wright, Chief Technical Officer / Deputy CEO, Fire Protection Association Australia explained to the Committee that for foam to be effective it must also:

- Resist mixing with other fuels
- Resist breakdown by special fuels such as polar solvents
- Suppress the release of flammable vapours
- Control fire spread and provide progressive extinguishment
- Provide protection from re-ignition.³²¹

It is now possible to purchase Class B foam concentrates that are completely fluorosurfactant free (known as F3s), have the relevant approvals, and satisfy the industry standard for both mains water and seawater. However, their efficacy has been questioned in the past. The Committee viewed one piece of research from 2014 that showed F3 foams taking twice as long to extinguish fires as AFFF foams.³²²

Some foam manufacturers publicise the fact that their foams are made via a process known as telomerisation, which makes them free of PFOS. However, Dr Roger Klein, a chemical specialist based in the United Kingdom, explains:

All fluorosurfactants, whether manufactured by the PFOS-based Simons ECF method or the modern fluorotelomer process, break down chemically or biologically to produce highly stable, environmentally persistent fluorinated degradation products. These can be toxic and bioaccumulative to varying degrees. The combination of persistence, bioaccumulative potential and toxicity is known as the substance's PBT profile.³²³

All firefighting foams, then, damage the environment - and therefore potentially human health - to some extent. This means that the longer that foams take to put out a fire the more chemicals are released into the environment and the more dangerous the fire is to firefighters. Mr Matthew Wright, from the Fire Protection Association of Australia, spoke about the challenges that firefighting organisations face in determining the best type of foam to use:

³²¹ Mr Matthew Wright, Deputy Chief Executive Officer, Fire Protection Australia, *Transcript of evidence*, 6 November 2015, p.3

³²² Fire Fighting Foam Coalition, *Fact Sheet on AFFF Fire Fighting Agents*, (2014), p.2

³²³ Roger Klein, 'Firefighting foam and the environment', *Fire Australia*, Summer 2008-09. The Committee also notes that history is full of examples of dangerous chemicals being replaced by seemingly safe chemicals that are later found to be equally bad – for example, arsenic was used as a pesticide until it was replaced by presumed less harmful DDT. See Suave and Desrosiers, 'A review of what is an emerging contaminant' p.3

We know fluorinated firefighting foams work from a firefighting perspective and we want to keep that effectiveness, but we need to make them so that they break down easier in the environment after the fire has finished, because that is having a detrimental environmental effect.³²⁴

Mr Wright added that the efficacy of F3 foams have greatly increased over the past five years.³²⁵

The Committee considers that regardless of what type of foam is being used, it is incumbent upon the CFA to ensure that appropriate handling practices are in place across all training grounds at all times. The evidence throughout this Final Report shows that the CFA did not implement safe handling practices for firefighting foams at Fiskville. The health effect of PFCs on humans is examined in detail in Chapter 9.

The Committee notes that firefighting foam remains an ‘acceptable purpose’ for PFOS on the Stockholm Convention on Persistent Organic Pollutants (see Appendix 6).

4.4.1 The CFA’s use of foam containing PFCs

In 2003, Australia’s National Industrial Chemicals Notification and Assessment Scheme (NICNAS) issued an alert recommending that foams containing PFOS and PFOA be discontinued for use in firefighting training.³²⁶ In the same year the CFA’s ‘Environment Strategy’ stated: ‘Material Safety Data Sheets for B class foam currently used by CFA ... indicate that some chemicals in foam may persist in the environment.’³²⁷

Despite the NICNAS recommendation, it took a number of years before firefighting foam containing PFOS was discontinued throughout Australia (due to concern about the efficacy of F3 foams, in particular the fact that F3 foams took longer to extinguish fires). For example, the CFA discontinued its use in 2007, while the Department of Defence implemented a policy restricting its use in 2008. Some foams may still contain trace elements of PFOS and PFOA.³²⁸

The CFA’s 2007 Annual Report states:

With the phasing out of Perfluoro-octyl Sulphonate foams and widely-varying foam stocks, CFA needed to determine an alternative foam supply to meet its performance, risk profile, environmental, engineering and Occupational Health and Safety

³²⁴ Mr Matthew Wright, Deputy Chief Executive Officer, Fire Protection Australia, *Transcript of evidence*, 6 November 2015, p.6

³²⁵ *Ibid.* p.4

³²⁶ For all NICNAS alerts on PFCs see: www.nicnas.gov.au/communications/publications/information-sheets/existing-chemical-info-sheets/pfc-derivatives-and-chemicals-on-which-they-are-based-alert-factsheet; accessed 4 January 2016. Dr Kerry Nugent, Principal Scientist, National Industrial Chemicals Notification and Assessment Scheme, *Transcript of evidence*, p.3

³²⁷ CFA, *Environment Strategy*, (2003), p.15

³²⁸ Department of Defence, Community Information Session Army Aviation Centre Oakey (AACO) – Environmental Investigation, (4 December 2015)

(OH&S) needs. This project involves the immediate replacement of all existing Class B foam concentrate stocks from regional headquarters, other large stock piles and in appliances with a new, Angus Tridol ATF 3-6% Class B foam concentrate.

Implementation is being led by District Maintenance Officers and regional staff. This includes the collection, flushing and disposal of existing Class B foam as well as implementation of new foam. By June 2007, a quarter of all relevant appliances had been changed over, with the aim to have all major bulk supplies and CFA's pumper fleet replaced by November 2007. Replacement of the remaining small stocks will be co-ordinated centrally in 2007 / 08.³²⁹

The CFA's Environment Program provided support to the Class B Foam Project Team, which made recommendations on the replacement of CFA's Class B foam stocks following a review of environmental as well as operational and cost issues.³³⁰

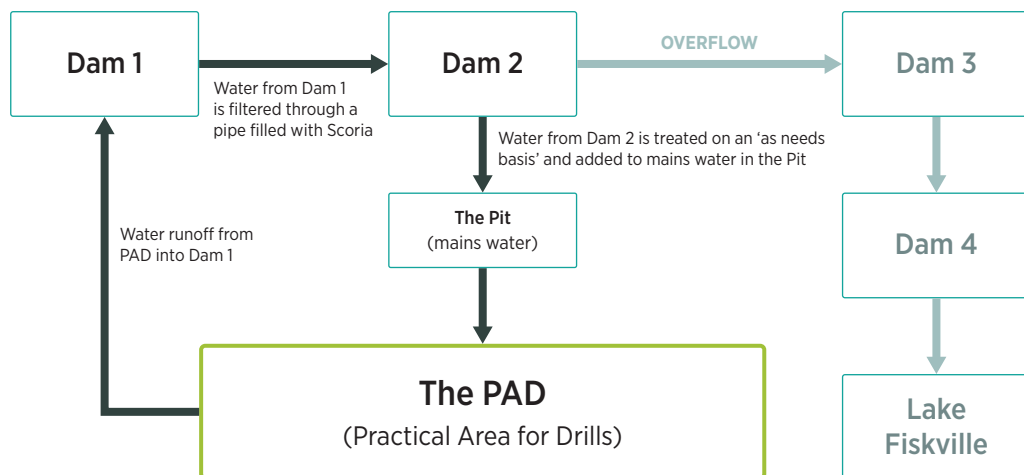
As discussed in Chapter 8, in 1997 the CFA wrote to EPA Victoria pointing out the need for an Australian standard for the use of fire retardants and foams. Unfortunately, very little came of that correspondence other than EPA Victoria's indication to the CFA that it would be happy to provide input to the development of guidelines.

The CFA's 2008 Annual Report states:

Implementation of the new foam has now been completed across the State by district mechanical officers and regional staff. This included the collection, flushing and disposal of all existing class B foam. CFA now has a class B firefighting foam concentrate standard across the State. With the completion of the project, arrangements for purchasing class B foam have now reverted to CFA regions.³³¹

4.5 Extinguishing fire - recirculated water

Figure 4.1 Fiskville water flow circa 2012



329 CFA, *CFA Annual Report 2007*, (2007), p.33

330 *Ibid.* p.42

331 CFA, *CFA Annual Report 2008*, (2008), p.39

Water is a constant presence in the lives of firefighters. Their deep understanding of its properties, including the potential risk contaminated water poses, is shaped by daily contact with and thinking about water. In a country such as Australia, ensuring there is enough water of the appropriate standard to extinguish a training fire is a difficult challenge for all fire training sites. It is particularly challenging for a rural community prone to periods of drought such as the Ballan region.

Concerns have been raised about potential environmental contamination at the Fiskville site, caused by the collection, storage and run-off of used firewater, and its potential effects on human health. The Joy Report describes the system that was used at Fiskville for collecting, treating and storing used firewater in the 1970s as ‘rudimentary’.³³² Indeed, Professor Joy states that as the surface of the PAD area was unsealed, much of the used (and potentially contaminated) firewater simply flowed into adjoining paddocks. The used firewater was ‘... contaminated by products of combustion, unburnt flammable liquids and fire suppression materials such as foam’.³³³

In the early years of Fiskville, run-off was collected from the PAD and directed into a treatment dam known as Dam 1. For many years a safety hose drew water pumped from Dam 1 to direct a spray or ‘fog’ of water protecting groups of firefighters attacking a fire, in case a hose or pump supplying mains water failed. In addition to this direct exposure to the recirculated firewater, run-off from the PAD flowed into the nearby concrete holding tank (the ‘pit’) supplying mains water to the PAD, causing further contamination of the primary water supply. As a result, instructors and trainees were exposed to a wide range of contaminants, including dissolved hydrocarbons, foam breakdown products and suspended fine particles (soot).³³⁴

Mr Cobb told the Committee that volunteers would be “... wet through from the hose sprays. Coats, trousers and helmets were used by others and became very dirty and were only roughly cleaned, if at all, before passing them on to the next course”.³³⁵

In the 1990s, after the redevelopment of the PAD, Dam 2 was built to increase the water supply available for training, with water now flowing from Dam 1 to Dam 2 via a pipe filled with scoria.³³⁶ A third dam was added in the mid-1990s and a fourth in 2010.³³⁷ Overflow from Dam 2 travelled via these two dams into the artificial Lake Fiskville, which Professor Joy described as ‘... the final link in the chain of treatment ponds before water leaves the property’.³³⁸ The water then ran into the nearby Beremboke Creek.

³³² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.41

³³³ Ibid.

³³⁴ Ibid. p.8

³³⁵ Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p.86

³³⁶ Scoria is volcanic rock commonly used as a water filtration device

³³⁷ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.41

³³⁸ Ibid. p.84

During periods of high rainfall, Lake Fiskville discharged to the downstream reach of Beremboke Creek at the southern end of the lake. Beremboke Creek flows into Eclipse Creek (via drainage channels) and then into the Moorabool River (approximately 19 kilometres downstream from Fiskville).³³⁹

The Joy Report states that ‘... the majority of analytical results for surface water at Lake Fiskville were below drinking water guidelines against which potential risks to human health were assessed’.³⁴⁰ The Committee notes that this water was not used for drinking and that drinking water guidelines are frequently used in the absence of agreed standards for fire training water.

Problems with the water at Fiskville continued even after the redevelopment of the PAD. Mr Michael Martin from the United Firefighters Union (UFU), who first went to Fiskville in 2004, discussed the skin rashes that trainers would experience following a day of drills:

While at Fiskville, I had multiple skin rashes but thought that it was just due to being wet. We would often go into the change rooms where we would take all our wet gear off — we had been soaked through from the day — and we would hang it up to dry. We would notice each other and make comments about how red our skin was and that. Like I said, I just thought it was the water. We would crack jokes, not knowing what we know now. Now I know it was due to the water - we were soaked through and the absorption into our skin.³⁴¹

Mr Gavan Knight, who lived at Fiskville from 2001 to 2008, told the Committee about awarding a CFA officer who had been exposed to dam water a ‘Captain Rash award’. He said: “It was joked about, but in hindsight it was one of those things where you think, although we were laughing about it at the time, was it actually more serious.”³⁴² Mr Knight also referred to “... itchy, flaky scalp stuff as a result of being in the showers at Fiskville”.³⁴³

Mr Justin Justin, Officer in Charge at Fiskville from 2011 to 2015, explained to the Committee that during his tenure, water for training was sourced from the pit on the side of the PAD. The pit was filled with a combination of mains water and water recycled from Dams 1 and 2:

The cycle of water was simple: water would be used on the PAD area ... and it would go through a triple interceptor to remove any contaminants, then the drain, and then drain into Dam 1, which was a settling pond. The water would then flow through a pipe that was filled with crushed rock or scoria into Dam 2 ...

Before a training session commenced, the pit was filled with mains water and if the mains water was insufficient during the day, dam water from Dam 2 would be used. The water in Dam 2 was mostly collected from natural run-off as well as from a substantial roof space on the Fiskville buildings. The pit often ran dry during the

³³⁹ AECOM, *Environmental Audit Report - Risk to Land, Surface Water and Groundwater*, (2014), p.87

³⁴⁰ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.84. The report was referring to testing conducted in 2010 by CFA OH&S consultants Wynsafe

³⁴¹ Mr Michael Martin, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.14

³⁴² Mr Gavan Knight, *Transcript of evidence*, 18 May 2015, p.50

³⁴³ *Ibid.* p.52

day because of the number of drills that were happening each day. Mains water was slow to refill due to the size of the town's mains pipe, so recycled water from Dam 2 was a necessary secondary supply to supplement the supply drawn from the mains water.³⁴⁴

(The Committee notes Professor Joy's observation that from the late 1990s onwards the water in Dam 1 was also continually aerated.³⁴⁵)

The Committee asked Mr Mick Tisbury from the UFU how the process of water recycling at Fiskville compares with the recently constructed training facility at Craigieburn. Mr Tisbury explained that the water at Craigieburn is recycled through a treatment plant that then delivers potable water. He said:

At Craigieburn we re-use all the water, capture all the water, apart from where we use the foam at our petrochemical plant. That is a separate treatment plant and that just gets treated and discharged to the sewers. So that does not get re-used, but the water gets re-used. It goes to 450,000-litre tanks underneath the ground. It goes through a treatment plant, which includes reverse osmosis and chlorination — a whole heap of technical stuff; that is why we paid the big bucks to get a technical bloke to come in and design it — then it goes to two above-ground 450,000-litre storage tanks and then it goes out to the firefighting.³⁴⁶

Mr Tisbury told the Committee that the Craigieburn system cost around \$750,000 to install.³⁴⁷

Mr Justin added that the water in Dam 2 at Fiskville was tested quarterly up to January 2012 after which it was tested monthly.³⁴⁸ WorkSafe also believed that testing was being carried out monthly.³⁴⁹ However, test results seen by the Committee show that the water was at times tested weekly.

Mr Justin further advised the Committee that if test results were outside water quality guidelines the PAD supervisor would obtain advice from a water chemist and implement action determined by the CFA's Water Management Plan. He said: "This approach was consistent with the advice from all external experts, being ALS, Wynsafe and HAZCON. As far as I was aware, the water being used in training was always within CFA guidelines."³⁵⁰

Despite the Water Management Plan in place at Fiskville, in 2012 WorkSafe identified a number of weaknesses. For example, at times there was a delay between testing and the results being known during which firefighting continued. A WorkSafe report from 10 July 2012 states:

344 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, pp.5-6

345 Professor Robert Joy, Chair, Independent Fiskville Investigation, *Transcript of evidence*, 3 June 2015, p.86

346 Mr Mick Tisbury, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.174

347 Ibid.

348 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.6

349 WorkSafe Entry Report 10 July 2012, Visit Number V00002100486L

350 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.6

Discussion also revealed that procedures surrounding the water quality testing were lacking: there was a delay between testing and the results being known (5 days to obtain the full results) however firefighting exercises continued; and where elevated readings were found there was no evaluation of the results of any action taken (e.g. dilution, aeration, etc.) to establish that such action was effective. Furthermore recommendations based on the test results (as provided by Central Highlands Water in some cases) were only obtained verbally - not in writing. CFA management and Anthony Lane advised that these issues would be addressed as part of their review.³⁵¹

Mr Justin told the Committee that none of ALS, Wynsafe, HAZCON or WorkSafe recommended that dam water at Fiskville no longer be used and that "... to my knowledge there was never a culture of covering up the water quality or anything else".³⁵²

However, as is discussed below, some Fiskville managers provided incorrect information to external organisations, such as the MFB and WorkSafe, and the CFA's Water Management Plan was not always adhered to (see also Chapters 6 and 7). This meant that these organisations made decisions based on incorrect information.

FINDING 38: That Fiskville staff and CFA managers provided incorrect information to regulatory authorities.

FINDING 39: That outside organisations training at Fiskville could not rely on the veracity of the information on water quality provided by the CFA.

4.6 Use of water following the Joy Report

The following section of this Final Report examines the use of water at Fiskville following the release of the Joy Report in June 2012. In particular, the Committee focuses on the misleading advice emanating from Fiskville that is evidence of a reckless disregard for the physical and emotional wellbeing of trainees.

The Joy Report made ten recommendations that concentrated on the environmental and health impacts of the site, including that soil, groundwater and surface water assessments be undertaken throughout the site.³⁵³ The CFA Board adopted and implemented all ten recommendations via its 'Informing the Future' program. The program's actions are summarised in the CFA's initial submission to this Inquiry.³⁵⁴ More comprehensive information is available on the CFA's website.³⁵⁵

The use of firewater was addressed in Recommendation 6 of the Joy Report, which states:

³⁵¹ WorkSafe Entry Report 10 July 2012, Visit Number V00002100486L

³⁵² Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.19

³⁵³ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.17

³⁵⁴ CFA, *Submission 60, Attachment 1*

³⁵⁵ CFA, *Fiskville investigation*, (www.cfa.vic.gov.au/about/fiskville-investigation/), viewed 18 January 2016

That procedures be put in place to protect the health of personnel potentially exposed to waters and sediments in Dams 1 and 2 of the firewater treatment system and, in particular, to manage the risks to individuals who have the potential to come into contact with sediments in the dams during routine maintenance.³⁵⁶

The CFA accepted this recommendation and agreed that no water from Dam 1 or 2 would be used in training until the OH&S risk was assessed.³⁵⁷ As part of its ‘Informing the Future Program’, the CFA also put in place OH&S measures to ensure minimal contact with the dams’ sediments during any maintenance work and made plans for installing water storage tanks and, potentially, water treatment systems.³⁵⁸

Two water storage tanks to store mains water were installed at Fiskville in 2012 — the first in June and the second in October. Mr Justin told the Committee that each tank held around 240,000 litres of water³⁵⁹ (the Committee also received evidence that they held 260,000 litres³⁶⁰).

The Committee was told that an MFB training drill may use as much as 9,000 litres of water per minute³⁶¹ and that the first tank would take five or six hours to refill overnight.³⁶² However, it also heard that the second tank would take much longer to refill because it was fed by a very small hose, at least initially.³⁶³ So although a decision had been made to commit to using mains water solely from a storage tank in mid-2012, the Committee doubts whether this would have been practically achievable until the second tank came online in October 2012, in particular because of the contradictory evidence in front of the Committee as outlined below.

For example, the Committee asked Mr Justin if the installation of both tanks had guaranteed a sufficient water supply to the site, to which he replied: “No, not really ... There were just limitations on the amount of training you could do.”³⁶⁴

According to the MFB’s submission to this Inquiry, the CFA issued a media release on 4 July 2012 stating that training was continuing at a reduced capacity and CFA recruits were being trained at the CFA’s Longerenong campus instead.³⁶⁵

³⁵⁶ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.16

³⁵⁷ CFA, *Submission 60*, p.34

³⁵⁸ *Ibid.* p.39

³⁵⁹ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.15

³⁶⁰ Mr Mick Tisbury, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.173. The Committee also viewed an email from Mr Green to WorkSafe dated 19 October 2012 stating that the tanks held 260,000 litres

³⁶¹ *Ibid.* p.173

³⁶² Mr John Myers, *Transcript of evidence*, 27 January 2016, p.15

³⁶³ Mr Mick Tisbury, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.173; Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.9 and 14

³⁶⁴ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.10

³⁶⁵ MFB, *Submission 416*, pp.9-10. The Committee was unable to locate this media release, in part because: the CFA’s media release page on its website is not organised in chronological order; and a search on the CFA’s website does not locate this media release

The Committee sought information on the number of drills conducted between 1 June 2012 and 31 October 2012. The CFA was unable to provide precise data on the number of drills, therefore only estimates have been provided. The Committee learnt that the number of drills conducted on a particular day was influenced by factors such as students' experience level, weather and the availability of training appliances.

The Committee was told drills designed for trainees to acquire initial firefighting skills required more water than drills that consolidated skills for more experienced trainees. As such, the CFA estimates that:

- For skill acquisition courses (District and Recruit courses) on average 15,000 litres of water were used per drill with on average six drills conducted per day
- For skill consolidation and assessment courses (Station Officer and Leading Fire Fighter courses) on average 5,000 litres of water were used per drill with anywhere between 6-24 drills conducted per day.

Based on figures provided to the Committee the largest quantity of water used in a single day at Fiskville between 1 June 2012 and 31 October 2012 was approximately 120,000 litres.³⁶⁶

However, the lack of accuracy in the figures provided by the CFA means the Committee cannot conclude that potable water only was being used at this time.

The Committee became aware of some confusion, and indeed anger, about when Fiskville switched to using uncontaminated mains water only — that is, water from the storage tank(s) not supplemented by water stored in either the pit or Dam 2. The Committee concluded that this problem arose because of poor record keeping and the imprecise use of language regarding the water at Fiskville and whether it was being sourced solely from the tank(s) or from a combination of sources.

In a media release dated 6 July 2012, the then CFA CEO Mr Mick Bourke said:

To provide certainty and comfort for all people doing live fire training at Fiskville, we made a decision last week to only use mains water until further notice. We will keep using mains water for training while we receive further expert advice about how we best manage our water systems in the future.³⁶⁷

Further, the CFA's submission to this Inquiry states: 'In June 2012, due to heightened concerns, CFA ceased using recycled dam water for training at Fiskville and switched to town mains water.'³⁶⁸

The Committee asked Mr Myers for his understanding of this issue and he advised the Committee that the CFA also installed two 'collar tanks' alongside the first tank "... and every time we trained we pumped town supply into the collar

³⁶⁶ Correspondence, Joanne Kummrow, Special Counsel, Victorian Government Solicitor's Office, to Chair, Environment, Natural Resources and Regional Development Committee, 2 March 2016

³⁶⁷ Mick Bourke, CFA, *Fiskville Water Quality*, (media release, 6 July 2012)

³⁶⁸ CFA, *Submission 60*, p.46

tanks and that went back through the back-up pumps”.³⁶⁹ Mr Myers stated that mains water only was being used from the end of June 2012 with the collar tanks providing 17,000 litres of back-up water until the second tank came online in October 2012.³⁷⁰

It was Mr Green’s recollection that water from Dam 2 was used to ‘top up’ the water supply until the second tank was installed in October 2012.³⁷¹ However, the Committee has viewed an email to Mr Justin from Cardno Lane Piper dated 17 July 2012 stating: ‘Following my inspection of the site and discussions with your PAD Supervisor [Mr Myers] and yourself, I understand that the Dam 2 water has not been used since 26 June 2012 and mains drinking water is the only supply of water for the PAD.’³⁷²

Further, as mentioned above, the CFA had accepted Professor Joy’s recommendation that no water from Dam 1 or 2 would be used in training until OH&S risks were assessed.

Mr Euan Ferguson, former Chief Officer of the CFA, added that it was his recollection that the back-up system in fact drew water from the pit and that the second tank was installed so that “we could bypass the pit”.³⁷³ This would indicate that the CFA continued to use the pit as a back-up system until October 2012 when the second tank came on line. Indeed, it was Mr Ferguson’s evidence that Fiskville was not using solely mains water from the storage tanks until around 12 October 2012.³⁷⁴

The Committee heard slightly different evidence from Mr Justin, who said that prior to October 2012 water from the first tank was mixed with water from the pit during training (not just as a back-up system), with the pit being filled by mains water.³⁷⁵ If this was the case, the concern, then, would have been about potential contamination of that mains water from the pit.

WorkSafe states that an inspector visited Fiskville on 20 March 2012 and was informed that water for the PAD was sourced from the pit (mains water topped up with water from Dam 2). If this water did not meet standards set by EPA Victoria and the Department of Human Services then only mains water was used for firefighting training. WorkSafe therefore concluded that ‘... the CFA were complying with their obligations under the [*Occupational Health and Safety Act 2004*] to ensure the health and safety of their employees’.³⁷⁶

Regarding when Fiskville used mains water only, WorkSafe’s submission states:

³⁶⁹ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.9. A collar tank is a small portable water container

³⁷⁰ *Ibid.* pp.14-15

³⁷¹ *Ibid.* p.15

³⁷² Correspondence from Ms Leanne Hughson, General Counsel, WorkSafe, to Chair, Environment, Natural Resources and Regional Development Committee, 17 February 2016

³⁷³ Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.22

³⁷⁴ *Ibid.* p.25

³⁷⁵ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.9

³⁷⁶ WorkSafe Victoria, *Submission 464*, p.4. WorkSafe CEO Ms Clare Amies initially stated that this occurred in December 2011 but later provided a correction to the Committee - see further Chapter 7

During a visit to the CFA head office on 10 July 2012, the WorkSafe Inspector was advised that only mains water was being used in firefighting exercises at Fiskville and that this was to continue until at least after the independent report by Professor Joy was tabled and Cardno Lane Piper had reviewed the report and provided a management plan in response to it. The Inspector was also advised by the CFA that whether or not recycled water from the dams would be used would be based on the assessed risk to health from its use.³⁷⁷

The evidence from WorkSafe is critical because the MFB relied on WorkSafe when deciding whether to continue using Fiskville for its training courses in 2012 (see Chapter 7).

This contradictory information from the CFA about the precise nature of water used at Fiskville in 2012 has caused a great deal of ill-feeling between Fiskville staff members and those that used the training facilities. For example, Mr Paul Roughead, an Operations Manager at Fiskville, referred to:

... malicious claims about Fiskville or its staff, such as claims which infer Fiskville staff used water from dams to supplement training water supplies after bulk storage tanks were installed on the PAD and town water only has been used for training. We have no understanding of the motive for that claim.³⁷⁸

It is the Committee's belief that the confusion arose because it is unclear if between June and October 2012 the Fiskville site used mains water from the first storage tank *only*. The language is confusing because the pit had always been filled with mains water, meaning that it always was correct to say that mains water was being used — albeit with the risk of contamination from hazardous material contained in the pit.

The difficulty the Committee faced centred on whether or not the water used for fire training between June and October 2012 was being supplemented by water from the pit or possibly from Dam 2. In other words, contradictory evidence, and, in some cases, the inability of key personnel to recall dates when asked by the Committee, means that the Committee cannot determine if between June and October 2012 Fiskville used water from its storage tank *only*.

The issue becomes even more complicated. It is also possible that a back-up system from Dam 2 was in place during those months but not used. In this case, despite the potential for — and indeed willingness of — Fiskville staff to use other water it would also be correct to say that water was being sourced from the storage tank *only*. Although the Committee believes this unlikely, the lack of clear evidence means it cannot rule this scenario out completely.

It would appear that the confusion resulted from a combination of misleading advice from the CFA to the MFB and WorkSafe and the imprecise wording used at times. For example, the CFA's statement from its submission (mentioned above) that the CFA ceased using recycled dam water for training at Fiskville is clear.

³⁷⁷ WorkSafe Victoria, *Submission 464*, pp.4-5. The same evidence is contained in WorkSafe Entry Report V00002100486L dated 10 July 2012

³⁷⁸ Mr Paul Roughead, Operations Officer Training Delivery, *Transcript of evidence*, 27 July 2015, p.8

However, the concluding words ‘and switched to town mains water’ confuse the issue because, as stated, mains water had always been used to fill up the pit. Therefore, there was no ‘switch’ to mains water.

The Committee believes that the CFA acted inappropriately. This confusion could easily have been cleared up by better record keeping at the CFA and, more importantly, more professional behaviour at the time. The Committee is firm in its view that the CFA could easily have avoided a great deal of concern over the use of water, including the legitimate concerns that the MFB and UFU had for the health of their employees and members.

Given the history of contamination at Fiskville, not to mention the concern in the public domain at the time, the lack of clarity in the information provided by the CFA during 2012 is perplexing. Clearly, it should not be as difficult as it has been for the Committee to determine exactly what happened less than five years ago.

Further, these events are not isolated. Rather they are emblematic of the way in which the CFA ran Fiskville. Doubts about the safety of the site and the water used date back several decades and have been exacerbated by the CFA’s inability to clearly explain its activities, including exactly what it did, when and why. Further examples follow below.

FINDING 40: That recirculated water contaminated by the products of combustion caused health problems, including skin rashes, which should have warned the CFA about water quality at Fiskville.

FINDING 41: That organisations training at Fiskville made decisions based on inaccurate information provided by the CFA, which may have led to people being exposed to contaminated water.

4.6.1 Dam 1 contaminants

Mr Justin told the Committee that while in charge of Fiskville between 2011 and 2015 his main concern about water quality concerned contaminants in the bottom of Dam 1. These had built up over the years that Fiskville had been in operation and Mr Justin considered them a threat to the long-term viability of water supply at the facility - a threat that nearly became a reality when Fiskville ceased using water from Dam 1 and Dam 2 following the Joy Report.

Mr Justin and his colleague Mr Martyn Bona believed that Dam 1 should have been remediated. To support their argument they commissioned environmental consultants ALS to inspect the dam. An ALS report, produced in February 2012, revealed that the contaminants in Dam 1 included arsenic, copper, lead, mercury, nickel, zinc, benzene, toluene, and xylene, and the dam’s sludge was considered ‘Category A industrial waste’ (the most hazardous of EPA Victoria’s three waste classifications).³⁷⁹ ALS recommended the remediation of Dam 1.³⁸⁰

³⁷⁹ A number of the same contaminants had been identified 24 years earlier in the AS James report into the buried drums- see Chapter 5

³⁸⁰ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, pp.8-9

This was not the first time the CFA had received this advice. An earlier report from Wynsafe, in April 2009, had recommended:

Funds should be sought from CFA to carry out a remediation of Dam 1 in the near future. Pressure to clean up this Dam will only increase with time from both an environmental and health and safety perspective. It is considered that contaminants from this Dam are impacting on the water quality of Dam 2 which is used for firefighting training and does not meet the recommended criteria.³⁸¹

Further, all three versions of the CFA's Water Management Plans contain the same sentence about the contamination of Dam 1 and the action purportedly being planned to address this, that being: 'Dam 1 contains sludge which is contaminated with hydrocarbons and heavy metals from past practices. Options for the remediation or removal of this sludge are being assessed.'³⁸²

The presence of these contaminants in the firefighting water challenges the idea promulgated by the Joy Report that the activities at Fiskville prior to the remediation of the PAD area were 'historical'.³⁸³ Instead, the pollution caused by the burning of known and unknown dangerous fuels continued to present a safety risk many years after these practices ceased.

The Committee asked Mr Bourke, CEO of the CFA between September 2009 and February 2015, if he was aware of the ALS report of 2012, to which he replied: "Not to my recollection."³⁸⁴

However, the Committee notes that, in a media release on 3 May 2013, Mr Bourke made reference to '... a report by ALS, which CFA commissioned, into training water quality in early 2012. As a direct result of the findings of that ALS report, Fiskville staff stepped up testing and treatment of the training water system in February 2012.'³⁸⁵ The Committee is unaware of any other 2012 ALS report into water quality to which Mr Bourke could have been referring.

Ms Claire Higgins, Chair of the CFA Board from October 2012 to August 2015, revealed that the CFA Board had not been notified of any water contamination issues at Fiskville prior to *Herald Sun* stories in December 2011 and June 2012.³⁸⁶ She also confirmed that the Board had not been made aware of the ALS report, an omission which she considered to be "striking".³⁸⁷ As noted, the CEO was aware of the report by May 2013 at the latest.

Mr Green told the Committee that he had seen the 2012 ALS report but had not examined it closely, despite being the Workplace Health and Safety Manager. Mr Green's explanation for this lack of knowledge was that the 'Informing the

381 Wynsafe Occupational Health Services, *SRS Proposal for Remediation of Sludge from Settling Pond at CFA Fiskville*, (2009), p.4

382 In all three versions of the management plan this sentence appears under the heading "2. Background"

383 See, for example, the title of the report—'Understanding the past to inform the future'

384 Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.5

385 Mick Bourke, CFA, *Fiskville update #29*, (media release, 3 May 2013)

386 Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.19

387 *Ibid.* p.28

Future’ program had commissioned the report.³⁸⁸ This is incorrect as the report was commissioned by Mr Justin and Mr Bona before the publication of the Joy Report and well before the ‘Informing the Future’ program was in place.

The Committee also asked Mr Bourke if Mr Green should have been aware of the contents of the ALS report at the time, to which Mr Bourke replied: “Without a doubt.”³⁸⁹

Of even greater concern, the Committee became aware of several earlier documents relating to the sludge in Dam 1. Mr James Stitz, Executive Manager, Frontline Learning and Development at the CFA, told the Committee that a report by environmental consultants SRS in 2009 identified contaminants in the sludge. Mr Stitz then engaged Wynsafe to analyse the report and provide advice.³⁹⁰

The Committee has also viewed a report from as far back as 1996 which found that ‘...significant hydrocarbon contamination is evident in sediments in Dam 1’.³⁹¹ As discussed in Chapter 8, EPA Victoria wrote to the CFA on 21 August 1996 referring to the environmental problems occasioned by the ‘discharge of contaminants’ from the PAD into ‘the pond’.³⁹²

Mr Lex De Man, former Executive Director, Operational Training and Volunteerism, advised the Committee that he had also engaged another consultant, PJ Ramsay, to provide advice on the sludge. However, he could not remember why he had needed the views of another consultant.³⁹³

In 2010, the CFA requested \$46 million from the Victorian Government to remediate Fiskville, including the sludge in Dam 1. In 2011, the Victorian Government provided \$13.7 million to the CFA, including \$6.5 million to upgrade accommodation at Fiskville.³⁹⁴ The money formed part of the CFA’s ‘Project 2016’, which involved the employment of an additional 342 firefighters, upgrading Fiskville and building new stations at a number of locations.³⁹⁵

CFA Board minutes from 25 July 2011 contain the following information: ‘The Chief Executive Officer noted the impacts of the recruitment of 342 new career firefighters and the impact beyond resourcing at Bangholme campus that necessitates funding of additional infrastructure at the Fiskville campus.’³⁹⁶

The minutes note that the following motion was carried:

³⁸⁸ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.8

³⁸⁹ Mr Mick Bourke, *Transcript of evidence*, 21 December 2015, p.5

³⁹⁰ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.6

³⁹¹ CRA ATD, *Fiskville Training College Review of Site Assessments and Remediation Options*, (1996), p.25

³⁹² Correspondence from Mr Paul Day, South West Region, EPA, to Mr David Clancy, Fire Officer, CFA Fiskville, 21 August 1996

³⁹³ Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.7

³⁹⁴ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, pp.6-7. The Committee has also seen this figure as \$6.3 million and \$6.8 million

³⁹⁵ James Stitz, CFA, *Fire Danger Period, Project 2016, Common Operating Picture*, (newsletter, 9 February 2013)

³⁹⁶ CFA Board Minutes, 25 July 2011

That the Board approve in principle, subject to approval from Government, the transfer of \$6.5M in funds allocated in support of leading Firefighter and Station Officer development and assessment programs at Bangholme Campus, to be immediately transferred to CFA Fiskville for the commencement of urgent capital works to support the increased training demand.³⁹⁷

The Minister for Police and Emergency Services approved the request.³⁹⁸

This allocation followed the 2011 *Report of Inquiry into the Effect of Arrangements made by the Country Fire Authority on its Volunteers*, which found: ‘Fiskville is a major training facility, which would appear to require infrastructure upgrading. It is apparent that there is, and will continue to be, limited availability for the training of volunteers.’³⁹⁹

In November 2011, Mr Justin and Mr Bona requested part of this money be spent on removing the sludge.⁴⁰⁰ When asked about this issue Mr Bourke told the Committee that the CFA employed “... skilled people at the field training grounds who have the capability to understand what is happening with their water supplies and, if they have got issues, to raise that with their executive directors”.⁴⁰¹ However, despite at least three reports to the CFA advising that the sludge in Dam 1 be remediated, the CFA did not approve the request of Mr Justin and Mr Bona.

Mr Bourke also told the Committee that, although he could not remember the request to remediate the sludge in Dam 1, it may have been rejected because of the plan to build water storage tanks and use mains water only in 2012.⁴⁰² The Committee considers this unlikely however, as the request was submitted in November 2011, before the Joy Report had been commissioned.

Mr Myers told the Committee that environmental consultants SRS had advised him that the contaminants did not present a threat to the users of the water at Fiskville as they remained in the sludge in Dam 1. He said that this advice came via conversation and not in writing.⁴⁰³

Mr De Man added that it was his view that Dam 1 was not remediated because water was not being drawn straight from it for training. Rather, it went via a number of filtration methods before being drawn from Dam 2. Further, the water was regularly tested to ensure it was safe for use in firefighting training.⁴⁰⁴ As stated earlier, when the water did not meet the accepted standards action was meant to be taken in accordance with the CFA’s Water Management Plan.⁴⁰⁵

397 Ibid.

398 Correspondence from Mr Ian Nicklen, A/Director, Department of Justice to Mr Mick Bourke, CEO, CFA. The Committee believes this letter to be dated 20 September 2011, however the letter itself is not dated

399 David Jones AM, CFA, *Report of Inquiry into the Effect of Arrangements made by the Country Fire Authority on its Volunteers*, (2011), p.61

400 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.11

401 Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.5

402 Ibid.

403 Mr John Myers, *Transcript of evidence*, 27 January 2016, p.8

404 Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.7

405 Mr James Stitz, Executive Manager Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.11

When asked by the Committee why priority was given to building works rather than remediation of the sludge in Dam 1, Mr De Man replied that the Victorian Government and the CFA had agreed that more firefighters needed to be trained. This meant increasing Fiskville's capacity, which Mr De Man felt was feasible as the Water Management Plan - including testing and actions to be taken when safe parameters were exceeded - ensured the safety of personnel on-site at Fiskville.⁴⁰⁶ Similar evidence was given by Mr Ferguson.⁴⁰⁷

As an example of this action, Mr Myers told the Committee of an occasion when *E. coli* levels in the pit were above the accepted parameter. Mr Myers said that training was temporarily suspended until the pit had been emptied, cleaned and refilled with mains water.⁴⁰⁸ While this would seem superficially to be a safe practice, if the source of the contamination at this time had been the pit itself, the Committee notes that simply refilling it would not have guaranteed that the water was safe. On another occasion, training was relocated from Fiskville to other CFA sites at Bangholme and Longerenong.⁴⁰⁹

This also contrasts with evidence noted above from WorkSafe that in 2012 there was a delay between testing and the results being known during which firefighting exercises continued. Despite this understandable concern, in an Entry Report in July 2012, WorkSafe stated: 'Based on the fact mains water is currently being used ... no action was taken'.⁴¹⁰

Further, Mr Ferguson told the Committee that he and other senior officers would at times join in on a training drill at Fiskville. Mr Ferguson said: "So if at any point there had been a suspicion that that firefighting water supply was unsafe to use, then we would have taken action to suspend the use until we had found out what the actual problem was."⁴¹¹

Mr Ferguson added:

... back in around 2012 I can recall standing up and talking to groups of instructors and students and also new recruits and saying, 'The advice we've got from our independent experts, from organisations like WorkSafe and so on, is that Fiskville is safe to use with the processes that we've got in place', and that included the use of the town water supply. Again I want to reiterate: if it had not been safe to use, that would have caused us to consider suspending until we had fixed that problem.⁴¹²

The Committee notes a January 2012 report from Hazcon Pty Ltd which provides support for this position. It states:

The general health and safety at Fiskville does not present an unacceptable risk to people attending the site once the purpose and activities of the training college is taken into account. Many of the training scenarios have elements of risk and are

406 Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.18

407 Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, pp.20-21

408 Mr John Myers, *Transcript of evidence*, 27 January 2016, pp.23-24

409 Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.32

410 WorkSafe Entry Report V00002100486L, 10 July 2012

411 Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.18

412 *Ibid.* p.25

intended to provide a controlled but realistic simulation to what the trainees will encounter in real-life situations. Chemical management in the PAD area is well managed and the limited number of chemicals used ensures that there is control over what exposure personnel may encounter during training exercises.⁴¹³

Further, the Committee has also viewed an August 2012 Cardno Lane Piper report which states:

These test reports have derived from the water monitoring program ... in the CFA's water management plans with testing by independent laboratories certified by the National Association of Testing Authorities ... The results have been reviewed by our team of water quality and health specialists and we can report that the results do not indicate any water quality issues that would make the water unsuitable for use in firefighter training.⁴¹⁴

However, the Committee also notes Mr Myers's admission that not all of the actions taken regarding water quality were recorded formally. Nor is it possible to determine what information was provided to the consultants or if all information provided was independently verified.

Mr Justin told the Committee about his frustration at the CFA's refusal to remediate the sludge in Dam 1 and suggested it reflected CFA senior management's lack of knowledge of the operational requirements at Fiskville. He did, however, agree that there had been an urgent need to upgrade the facilities at Fiskville: "I had inherited a facility that had had no injection of funding for quite some time ...".⁴¹⁵

The Committee heard evidence that financial constraints limited the CFA's ability to make improvements at Fiskville. For example, Ms Sherry Herman, the former Program Manager of the 'Informing the Future' program, told the Committee:

My view, having trawled through their financial records for years past to try and get an understanding of what happened there, is that they were grossly underfunded and they were doing everything on a shoestring. The people there ... were I think extremely personally engaged in trying to do the right thing, but had very little money to do it with, so they were very inventive in the way they went about making things work.⁴¹⁶

In 2014 / 2015, the CFA had an income of \$501.9 million.⁴¹⁷ Over many years the CFA has spent a considerable amount on reports and advice on contamination at Fiskville, without remediation works being done prior to January 2013 when EPA Victoria issued Clean Up Notices (see Chapter 10). The Committee learnt

413 Hazcon Health Safety and Environmental Consultants, *Health and Safety Review CFA Fiskville Training College* (2012), p.9

414 Report provided to the Committee by Mr Lex De Man at the public hearing on 27 January 2016 – Cardno Lane Piper, *Water Monitoring Results – Fiskville Week of 30 July 2012*, 3 August 2012, p.1. See also Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.27

415 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.15

416 Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.7

417 CFA, *CFA Annual Report 2014/2015*, (2015), pp.26-27

that from 2012/13 to 2013/14 the CFA spent just under \$2.9 million on remediation works at Fiskville. This figure represents works completed following the Joy Report and complying with the Clean Up Notices.⁴¹⁸

All organisations have limited funds and are judged on the priorities used to allocate these funds. In the case of Fiskville, accommodation facilities rather than the health and safety of recruits and others were the priority for the CFA.

BOX 4.3: Remediation of Fiskville’s dams after 2013

The dams at Fiskville have since been remediated in response to two EPA Victoria Clean Up Notices issued in January 2013 (see Chapters 8 and 10). The Committee asked Mr De Man if he wished the dams had been cleaned up earlier. Mr De Man agreed that that would have been preferable, however it was his view that the Water Management Plan meant staff and trainees at Fiskville were always safe. He said: “I would have preferred that [the remediation] was a lot sooner. Of course I would have preferred that it was a lot sooner, but the safety was not compromised of the personnel at the site.”⁴¹⁹

In March 2014, Cardno Lane Piper prepared a Draft Water Quality Management Plan for the CFA. It was intended that the plan would be implemented once remediation works were complete, a new water treatment plant was installed and water was being recirculated for use in training.⁴²⁰ The plan was never implemented and the pipes and taps remained contaminated with PFOS, which contributed to the closure of Fiskville in March 2015 (see Chapter 1).

FINDING 42: That senior management at the CFA was aware from 2009, at the latest, that contaminants in Dam 1 were an ongoing potential health threat to firefighting training drills.

FINDING 43: That CFA senior management repeatedly avoided taking responsibility for water quality at Fiskville.

FINDING 44: That considering the CFA’s annual budget, it is disappointing that more funds were not invested in remediation of, and water treatment at, the Fiskville site.

4.6.2 Class A recycled water

Another issue the Committee addressed during this Inquiry was the use of ‘Class A recycled water’ (sometimes also known as ‘reclaimed water’) at Fiskville. In particular, the Committee was keen to clarify: whether Class A recycled water was used; and if claims had been made that it was being used when in fact it was not.

⁴¹⁸ Correspondence, Joanne Kummrow, Special Counsel, Victorian Government Solicitor’s Office, to Chair, Environment, Natural Resources and Regional Development Committee, 29 February 2016

⁴¹⁹ Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.11

⁴²⁰ CFA, *Submission 60*, Attachment 4

BOX 4.4: Class A recycled water

In Victoria, 'Class A recycled' water is water produced from treatment processes such as:

- Primary, secondary (such as biological oxidation) and tertiary (such as nutrient removal) processes
- Advanced treatment (such as sand or membrane filtration)
- Disinfection (such as chlorination or ultraviolet treatment).⁴²¹

In 2007, the CFA and MFB signed a 'Class A Recycled Water Management Plan'. EPA Victoria signed the plan in January 2008 when Mr Bourke was CEO of EPA Victoria. The need to use recycled water was driven by water shortages caused by the long-term drought that affected Victoria around this time. The Plan was developed in accordance with the requirements of EPA Victoria's 'Guidelines for Environmental Management - Use of Reclaimed Water' (2003). The use of recycled water was guided by the CFA's Standard Operating Procedure 9.36, 'Recycled Water – Use and Management of'.⁴²²

The CFA's submission to this Inquiry states that it introduced a formal Water Management Plan for regional training grounds in March 2008 (which has been updated several times - see Chapter 6). The recommended criteria for water quality parameters, which the CFA claims were supported by EPA Victoria and the Department of Human Services, were set at:

- E. coli: < 10 organisms per 100 ml
- Biochemical oxygen demand: < 10 mg/l
- pH: 6.0-9.0
- Suspended solids: < 5 mg/l
- *Pseudomonas aeruginosa*: < 10 organisms per 100 ml.

The first four criteria complied with the Class A recycled water criteria as set out in the 'Class A Recycled Water Management Plan' and adopted by the CFA in its Standard Operating Procedure 9.36. However, when the CFA increased the quality parameter for E. coli (to < 150 organisms per 100 ml) in August 2009 (see below) it was no longer adhering to the 'Class A Recycled Water Management Plan'. (The issue of the CFA not adhering to its Water Management Plans is discussed further in Chapter 6.)

In June 2012, the CFA reduced the standard for E. coli back to < 10 orgs per 100 ml. This was documented in a revised Water Management Plan prepared by Cardno in October 2012.⁴²³

421 EPA Victoria, 'Class A reclaimed water supply to residential properties: the management framework', information bulletin, October 2003

422 CFA Board Minutes, 25 February 2008

423 CFA, *Submission 60*, p.46

At around this time the UFU and the MFB requested confirmation from the CFA about the use of Class A recycled water. On 20 June 2012, Mr Peter Marshall from the UFU wrote to Mr Bourke with the request: ‘Please confirm that the water used is classified ‘Class A recycled water’ and provide to us information regarding the monitoring of the water, when it was last monitored and the results of that testing’.⁴²⁴

Mr Bourke replied to Mr Marshall on 25 June 2012. He referred to the above quality parameters with the exception of the E. coli quality parameter, which according to Mr Bourke was at 150 organisms per 100 ml. Mr Bourke also stated that there was no Class A recycled water supply at Fiskville.⁴²⁵

On 26 June 2012, Mr Marshall again wrote to Mr Bourke: ‘You state there is no Class A recycled water supplied to Fiskville ... It was your staff that referred to the water as being Class A recycled water.’⁴²⁶

The Committee searched for evidence regarding this claim. In his submission to this Inquiry, Mr Tisbury states:

Between 2002 to about 2012, I attended Fiskville on numerous occasions on both Recruit Courses and Station Officer promotional courses. The same or similar drills to what I experienced during my Officer training were conducted at Fiskville for these courses. Invariably the same questions and comments would be raised with regard to the water quality, and the same response would always be received from CFA - that is that the water was tested to Class A standard ... Candidates and MFB instructors were assured by then Officer In Charge of Fiskville Peter Rau that the water was ok and tested to Class A water standards.⁴²⁷

Mr Rau left the CFA to work at the MFB in 2009. This means that he may have provided this advice to Mr Bourke prior to the E. coli level being raised to 150 organisms per 100 ml and therefore at a time when the water would have qualified as Class A recycled water. However, the Committee was unable to determine if this was the case.

Mr Tisbury further states:

In June 2012, MFB Station Officer Michael Anthony Martin (Tony), MFB Instructor and UFU Shop Steward contacted me via telephone from Fiskville raising concerns about water quality being used for firefighter training. CFA had advised him it’s tested to Class A standard.⁴²⁸

Mr Martin spoke with the Committee and confirmed: “At that point in time we had no concerns about the water because we kept asking if it was okay: ‘Yes. Class A water’.”⁴²⁹

424 United Firefighters Union of Australia, *Submission 449*

425 Ibid.

426 Ibid.

427 Mr Mick Tisbury, United Firefighters Union of Australia, *Submission 446*, p.3

428 Ibid. p.4

429 Mr Michael Martin, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.162

Mr Rau twice emailed Mr Justin, in April and May 2012, asking if all CFA sites were using Class A recycled water.⁴³⁰ On 15 May 2012, Mr Justin sent an email to Mr Lex De Man, the then Executive Director, Operational Training and Volunteerism, who forwarded it to Mr Rau. It stated:

Please see the information below that clearly outlines the quality of water maintained and used at Fiskville for firefighting purposes.

E. coli: <150 orgs per 100mL

Suspended solids: <5 mg/L

Pseudomonas aeruginosa: <10 orgs per 100mL

The first 4 [sic] criteria of the standard comply with Class A recycled water criteria recommended by the EPA and adopted by CFA in SOP 9.36 – Recycled Water – Use and Management of.⁴³¹

Mr Rau responded to Mr Justin on 20 June 2012:

Any update on the water quality issue? I have resent your original response (15 May) however this really only indicates that you have a policy SOP 9.36 and details the criteria for Class A water but it does not indicate that your testing has shown you are within those limits ... I believe it is prudent that MFB not undertake any water related training at Fiskville until it is confirmed that the water is deemed to satisfy the requirements of Class A water.⁴³²

The Committee could not locate a response to this email.

Mr Justin told the Committee that he was aware that the CFA had a Water Management Plan and that he believed the water to be Class A recycled water. However, he added that he was not familiar with the whole document as in his view it was the responsibility of the PAD supervisor.⁴³³

The MFB's Ms Kirstie Schroder told the Committee that although she had heard verbal reports that Class A recycled water was being used at Fiskville this had not been confirmed in writing. The MFB ceased training at Fiskville in June 2012. It was Ms Schroder's opinion that this decision was driven by the inconsistent advice given by Fiskville staff to the MFB as "... when we are concerned that we have not got all the information we erred on the side of caution and stopped our people going there to make sure we could assure ourselves that wherever we were sending them they were safe".⁴³⁴

Although Mr Justin's email on 15 May 2012 refers to water that is 'maintained and used at Fiskville for firefighting purposes', Mr Rau seemed to be of the belief that Mr Justin had only sent him the water quality parameters, not confirmation

430 MFB, *Submission 416*, p.6

431 Email correspondence. This indicates that Mr Justin had copied and pasted this paragraph from another document

432 Email correspondence from Mr Peter Rau, MFB to Mr Justin Justin, CFA, 20 June 2012

433 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.11

434 Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, pp.6-7. See also Appendix 7 regarding the MFB's decision to cease training at Fiskville

that Class A recycled water was being used. As noted, Mr Bourke confirmed on 25 June 2012 to Mr Marshall that Class A recycled water was not being used at Fiskville. However, as is discussed in Chapter 5, the CFA's Water Management Plan in 2012 continued to state that Class A recycled water was being used, despite the E. coli threshold being 15 times higher than that allowed in Class A recycled water.

This is another example of the CFA's poor information management and communication procedures creating confusion and concern over water quality at Fiskville. Yet again, this contributed to individuals losing trust in the CFA.⁴³⁵

Section 21(2)(c) of the *Occupational Health and Safety Act 2004* requires an employer to provide such information to its employees concerning health and safety at the workplace that is necessary for them to work safely. While the CFA did seek advice from regulators, it failed to notify trainees at Fiskville of its actions and the reasons for taking these actions.

FINDING 45: That poor record keeping and often contradictory information created a great deal of misunderstanding regarding the use of mains water at Fiskville, including: if mains water continued to be mixed with recirculated water until the installation of a second water storage tank in October 2012; and the use of Class A recycled water.

4.6.3 Other contaminants

Water testing at Fiskville produced results on a wide range of measurements, including: biochemical oxygen demands; oil and grease; pH; nutrients such as phosphorus and other forms of nitrogen; and suspended solids.⁴³⁶ Two contaminants of particular concern were *Pseudomonas aeruginosa* and E. coli.

Pseudomonas aeruginosa

Mr Tisbury explained to the Committee his understanding of water issues at Fiskville from 2012 onwards. Mr Tisbury, in his capacity as a highly experienced trainer at Fiskville, received a lot of complaints from other trainers about the water quality at Fiskville and frequently raised these complaints with the CFA. He said that he had become particularly concerned when test results at Fiskville detected the presence of *Pseudomonas aeruginosa*. This bacteria destroys hydrocarbons, but it can also be harmful to humans and is known to cause infections and sepsis. It is often found in hospitals - where it is particularly dangerous to immunocompromised individuals - and in damp environments.

Mr Tisbury stated that an environmental scientist at consultancy firm ALS informed him during a telephone conversation that *Pseudomonas aeruginosa* had been deliberately introduced into dams at Fiskville as a biological method

⁴³⁵ The Committee identified a further possible source of misunderstanding when it spoke with Mr Myers. He told the Committee that during the drought in early- to mid-2000s, Fiskville staff occasionally topped up the dams with Class A recycled water

⁴³⁶ Mr Geoff Cramer, Manager, Laboratory Services, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.3

of remediating hydrocarbons found in the water.⁴³⁷ However, the Committee has been contacted by this environmental scientist stating that Mr Tisbury’s memory is a misunderstanding of the conversation and that such a statement was never made.⁴³⁸

The Committee also discussed water quality at Fiskville with Mr Geoff Cramer, Manager, Laboratory Services at Central Highlands Water, which tested water samples from Fiskville. Mr Cramer said that he could not remember any *Pseudomonas aeruginosa* results standing out as being unusual for a firefighting site based in a rural area. Regarding *Pseudomonas aeruginosa*, he said that it is a naturally occurring bacteria in rural waterways, telling the Committee:

I do not know about anybody swimming in the dams, but I certainly would not recommend it ... If it was an exercise pool in a hospital environment and those organisms were present and there might be people with open wounds or something, it could be a real problem [but] environmental waterways that are not disinfected and if the water quality is not controlled, they are likely to be in those environments too.⁴³⁹

The Committee heard considerable evidence regarding trainees and others swimming in the dams at Fiskville, including trainees who were already ill.⁴⁴⁰

Mr Cramer added that levels in dams such as those at Fiskville were prone to vary greatly because *Pseudomonas aeruginosa* does not distribute itself evenly through a body of water. He said: “These types of organisms are not like salt in water. They are not consistently spread through the water column. Depending upon where you take the sample, you can get a massive difference.”⁴⁴¹ He explained that, for this reason, testing of lakes or bays, for example, usually includes several samples taken from a variety of areas.

Similarly, Mr Justin told the Committee: “It is my understanding, on *Pseudomonas [aeruginosa]*, that it is a natural pathogen that is found in most watercourses - that is my understanding. If it is in all watercourses, I would expect it to be [at Fiskville].”⁴⁴²

E. coli

Testing for *E. coli* in water is carried out because its presence indicates the potential for other pathogens that may also present a risk to human health.⁴⁴³

⁴³⁷ Mr Mick Tisbury, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, pp.169-170

⁴³⁸ Correspondence to Chair, Environment, Natural Resources and Regional Development Committee, received 31 July 2015

⁴³⁹ Mr Geoff Cramer, Manager, Laboratory Services, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.6

⁴⁴⁰ See Chapter 3

⁴⁴¹ *Ibid.* p.11

⁴⁴² Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.16

⁴⁴³ Mr Geoff Cramer, Manager, Laboratory Services, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.13

As stated above, in 2009 the CFA adjusted the quality parameter for E. coli from < 10 organisms per 100 ml of water to < 150 organisms per 100 ml of water. Mr Stitz told the Committee that the CFA had set the E. coli level to < 10 organisms per 100 ml to be as close as possible to a very conservative (that is, safe) water standard. However, he explained that this became difficult for the CFA to achieve, especially in rural areas. The CFA therefore sought advice from environmental consultants, who confirmed that the level could safely be raised to < 150 organisms per 100 ml.⁴⁴⁴

The CFA then contacted several regulators. In its submission to this Inquiry the CFA states:

The Department of Human Services had no objection to the proposed amendment. The EPA confirmed that the use of rainwater / stormwater is not regulated, and advised CFA to discuss appropriate E. coli levels and management practices with the Department of Human Services and Worksafe.

As a result of this consultation, the level for E. coli was amended to < 150 orgs per 100 mls in August 2009. A revised version of the Water Management Plans was issued in June 2010.⁴⁴⁵

The Committee has examined all of the relevant correspondence and notes that EPA Victoria advised the CFA that the use of stormwater is not regulated (the dams at Fiskville collected rainwater along with run-off firewater). This advice was in response to a CFA question regarding the use of ‘harvested stormwater’. It should be noted that EPA Victoria also informed the CFA that it should change the relevant documents to reflect that the revised E. coli level applies only to the stormwater used, not to the Class A recycled water.⁴⁴⁶

As noted above, neither the CFA nor water authorities were supplying Class A recycled water at Fiskville.

As well, EPA Victoria stated: ‘... we would advise you discuss appropriate E. coli levels and management practices for its use with DHS and WorkSafe’.⁴⁴⁷ Mr Stitz told the Committee that at the time Mr Green had told him that, despite this advice, the CFA was not required to contact WorkSafe.⁴⁴⁸

Although EPA Victoria advised the CFA to discuss the matter with WorkSafe, Ms Clare Amies, WorkSafe’s CEO, advised the Committee that WorkSafe did not take an interest in the water quality at Fiskville prior to December 2011. Ms Amies was of the belief that the matter was best handled by EPA Victoria:

It is appropriate that the CFA has written to the Environment Protection Authority, and it is not our role to engage in any influence over their role as a regulator in terms of water standards ... We would definitely look at the risk of exposure and what the

444 Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.16

445 CFA, *Submission 60*, p.46

446 Correspondence, from Mr Stephen Lansdell to Mr John Hollway, CFA, 17 July 2009. EPA Victoria’s inadequate involvement in the decision to raise the E. coli level is discussed in Chapter 8

447 Ibid.

448 Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.28

CFA was doing to ensure there was reduced risk of exposure, but I am not an expert or it is not our responsibility to determine what those standards are. Our role is to ensure that if that is the standard and it is causing harm to obviously investigate and look at that.⁴⁴⁹

(Further discussion on the role of WorkSafe and EPA Victoria concerning this issue can be found in Chapters 7 and 8 respectively.)

EPA Victoria's Mr Finegan also referred the Committee to the EPA Victoria document, *Guidelines for Environmental Management - Use of Reclaimed Water*. The document states that Class A recycled water (as discussed above) must have less than 10 E. coli organisms per 100 millilitres of water. The Guidelines suggest a range of uses for this water including agriculture and 'industrial open systems with workers exposed'.⁴⁵⁰ The outer extreme for water quality is 'Class D water', which allows greater than 10,000 E. coli organisms per 100 millilitres.⁴⁵¹ Mr Finegan informed the Committee that this is for non-food crops including instant turf.

As for the applicability of the Guidelines to a firefighting training facility such as Fiskville, Mr Finegan explained that occupational health and safety must be taken into account: "In a training facility where you have constant repeated exposures, I think you would expect to see a higher degree of protection of workers on that."⁴⁵²

EPA Victoria's Guidelines state that the Department of Human Services '... is responsible for ensuring that Class A reuse schemes do not pose a risk to public health'.⁴⁵³

The Committee was informed by Mr Cramer of Central Highlands Water that, as with *Pseudomonas aeruginosa*, E. coli levels are prone to short-term rises, frequently as a result of bird faecal matter - again, not unusual in rural areas. Regardless, Mr Cramer did consider an E. coli reading of 2,400 organisms per 100 ml, as was found in Dam 2 on 12 April 2011, as being unsafe for firefighting training.⁴⁵⁴ The Committee has no knowledge of what action was taken following this reading.

Mr Bourke advised the Committee that whenever water quality tests showed high levels of contaminants, such as E. coli, corrective action would have been taken, such as putting disinfectant or chlorine in the water. The Committee also notes Mr Bourke's evidence that Fiskville was closed each year through January and

449 Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.11

450 Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.11

451 EPA Victoria, *Guidelines for Environmental Management, Use of Reclaimed Water*, (2003), p.30

452 Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.11

453 Ibid. p.10

454 Mr Geoff Cramer, Manager, Laboratory Services, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.9

most of February, leaving the water stagnant. This means that any tests carried out during these months would be likely to show raised levels of contaminants such as *E. coli*.⁴⁵⁵

The Committee found no evidence that the CFA added *Pseudomonas aeruginosa* to the water at Fiskville, nor did the Committee receive evidence linking high *E. coli* levels to illness. However, the Committee is unable to reach a firm conclusion on these issues because of the poor record keeping at Fiskville. It is also important to note again that the Committee heard evidence of firefighters suffering rashes and gastrointestinal problems while at Fiskville.

It is concerning that WorkSafe considered the water quality at Fiskville to be the responsibility of EPA Victoria while EPA Victoria was referring the CFA to WorkSafe for advice. WorkSafe should have been concerned with the water quality at Fiskville at all times because it was crucial to the health and safety of firefighters. As discussed in Chapter 7, the Committee is concerned that WorkSafe does not appear to have used its clear statutory powers to test the water at Fiskville at any time despite devoting enormous resources to investigating the issue of water quality.

The Committee is also concerned that the CFA's Workplace Health and Safety Manager did not heed EPA Victoria's advice to contact WorkSafe.

RECOMMENDATION 6: That the Victorian Government introduce potable water as standard for firefighting training water to be complied with at all firefighting training facilities.

RECOMMENDATION 7: That EPA Victoria conduct regular environmental testing of firefighting training facilities across Victoria ensuring records are properly maintained for future use.

RECOMMENDATION 8: That the Victorian Government audit all CFA training facilities to assess their capacities, capabilities and infrastructure needs to ensure a safe workplace that meets firefighter training demand.

4.7 Contaminated dirt piles and their off-site impact

In January 2013, EPA Victoria issued two Clean Up Notices to the CFA regarding Fiskville (see Chapter 10). Fulfilling these Clean Up Notices involved the CFA removing soil contaminated by the chemicals used on the site. The Committee was concerned to learn that, despite claiming it had improved its practices following media coverage and the Joy Report, the CFA left several piles of contaminated soil on the edge of the Fiskville site near the property of Matthew and Beccara Lloyd. According to the Lloyds, the piles were not covered and dust and run-off went straight onto their land.⁴⁵⁶

⁴⁵⁵ Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.6

⁴⁵⁶ Mr Matthew Lloyd, *Transcript of evidence*, 18 May 2015, p.71

In contaminating the Fiskville site the CFA had also contaminated the Lloyds' property through water and burnt materials (see also the Case Study on the Lloyds at the end of this Final Report). Yet even when the extent of the contamination was known the CFA did not act sufficiently to stop potentially contaminated soil from blowing onto their property (as well as overflow from Lake Fiskville).

The CFA is an organisation that seeks to embody rural and regional Victoria. It was born in the country and is how country people protect themselves from fire. Many volunteers are farmers and rural workers who care for land, have a special bond with it, and understand the importance of clean land for growing crops and rearing livestock. In spite of these connections and the CFA's claims to stand with country Victoria it has committed what many see as a grave offence — to contaminate another farmer's land.

Mr Rob Croxford, Moorabool Shire's CEO, advised the Committee that EPA Victoria is responsible for run-off from contaminated material.⁴⁵⁷ However, Mr Finegan from EPA Victoria was unable to comment on the piles apart from suggesting that if the piles had been covered with an impervious clay, then the water running off the piles would not be contaminated.⁴⁵⁸

Mr Darryl Strudwick from environmental auditors AECOM Australia told the Committee that he was aware of plans to cap the piles of dirt, which he considered "... an acceptable management for that part of the site".⁴⁵⁹ However, when the Committee carried out a site visit at Fiskville it viewed loose soil and was told that Fiskville staff intended to control contamination by growing vegetation on the soil.

Speaking about how the issue of the contaminated dirt piles has been handled, Mr Croxford said: "I think it has come to pass that there are certain things there that are not desirable and need attention, absolutely."⁴⁶⁰

The Committee is of the very firm belief that it is unacceptable for the Lloyds to worry about further contamination of their land. When asked by the Committee what the role of EPA Victoria is concerning the Lloyds and the piles of dirt, Mr Finegan replied: "... ensuring that there is confidence as to what is the environmental consequence of living next door to the Fiskville site".⁴⁶¹

Evidence heard from the Lloyds suggests that they are not confident about living next door to the Fiskville site. Not only did the CFA contaminate the Lloyds' property from firewater run-off, it is causing further pain - and perhaps further contamination - by its improper handling of these contaminated dirt piles.

457 Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.13

458 Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.14. The Committee heard evidence from contamination experts in Germany that using impervious clay is '1970s technology'

459 Mr Darryl Strudwick, Auditor, AECOM Australia, *Transcript of evidence*, 25 May 2015, p.96

460 Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.13

461 Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.16

5

CFA organisational culture and approach to health and safety

AT A GLANCE

Background

This Chapter examines aspects of the CFA's organisational culture that may have contributed to the problems experienced at Fiskville. It starts with a discussion of the CFA's culture and how management lost the trust of many people. It also considers how the CFA has responded to external reviews (including the Coronial Inquest into the deaths of five firefighters during a wildfire at Linton in 1998) and introduced policy changes that in many cases have not been implemented 'on the ground'. The CFA's Water Management Plans are an illustration of policies that were not complied with.

The Chapter also considers the CFA's failure to prevent and manage contamination, using the handling of buried drums containing chemicals as an example. The failure to respond to external reviews, prevent and manage contamination, and implement policies at Fiskville has contributed to the loss of trust amongst the CFA community.

Throughout this Chapter the CFA's approach to occupational health and safety is used to illustrate the problems. There is also a discussion about CFA management of occupational health and safety at the end of the Chapter.

This Chapter addresses Terms of Reference (1), (2) and (3), with particular emphasis on (3).

Key findings

- That the culture at Fiskville did not encourage internal criticism or complaints regarding occupational health and safety problems. During Fiskville operations, CFA trainees and others felt reluctant to raise criticism internally. This is because the CFA did not respond appropriately when concerns about exposure to contamination and health risks were raised, and firefighter trainees' perceptions that they may jeopardise their opportunities.
- That the CFA ignored concerns raised by the United Firefighters Union and withheld important information from trainees and others. This was in breach of the *Occupational Health and Safety Act 2004* and resulted in ongoing exposure to contaminated water.
- That the CFA Board and senior management did not provide enough information about the contamination at Fiskville to those who were affected, despite the legislative requirement to do so.
- That the anxiety of staff, trainees (both CFA and those from other organisations) and members of the community caused by the contamination was fuelled by a lack of information.

- That the commissioning of consultants' reports shows that CFA management was aware of safety concerns. However, the CFA did not share the information contained in the reports and reassure people affected.
- That a consultant advised the CFA in 2009 that the 2008 Water Management Plan was not being complied with.
- That the CFA did not follow the advice contained in a consultant's report in 2012 about keeping records of action taken to address water test results outside the parameters set out in the Water Management Plan.
- That the CFA's Water Management Plans (dated March 2008, June 2010 and May 2012) were not always complied with, and CFA practice should have been to stop using water for firefighting training when test results exceeded the acceptable levels for contaminants set out in the plans.
- That the CFA's failure to immediately provide Mr Alan Bennett with the results contained in the AS James Geotechnical Pty Ltd report may have been prejudicial to Mr Bennett's medical treatment because he required as much information as possible about the chemicals to which he was exposed.
- That if the CFA had removed buried drums before knowledge about the location of the drums was lost, the incident in early 2002 - exposing several people to the chemicals in the drums - would not have occurred.
- That the CFA has failed to implement recommendations of external reviews, particularly in the area of occupational health and safety.

5.1 Introduction

The organisational culture of the CFA was a recurring topic of interest throughout this Inquiry. The Committee was interested in examining this theme to understand how the culture may have contributed to the problems at Fiskville. The evidence revealed that many CFA employees lost trust in the CFA leadership due to the way that contamination was handled at Fiskville - particularly because they were not kept informed about how problems were being managed.

The Committee learnt that policy changes at the top of the CFA have not necessarily filtered throughout the organisation and influenced day-to-day operations. The CFA's lack of compliance with the Water Management Plans is an illustration of this. The Committee also examined the CFA's failure to prevent and manage contamination, using the handling of buried drums containing chemicals as examples. This was not handled well at two separate periods of time: between 1988-1991; and between 1996-2002.

There is also evidence that the CFA has not necessarily responded to the recommendations of external reviews. This has meant that opportunities to positively influence the culture of the organisation and win back people's trust have been lost.

This Chapter concludes by examining the CFA's approach to the management of occupational health and safety. The Committee has concerns with the CFA's failure to implement the recommendations of external reviews about this important subject, and failure to allocate adequate resources.

This Chapter responds to Terms of Reference (1), (2) and (3), with particular emphasis on the actions taken by executive management (that is, (3)).

5.2 CFA culture

This section starts with a brief overview of what is meant by the culture of an organisation, the importance of leadership in influencing that culture and the evidence the Committee received about the CFA's culture at a general level.

The Victorian Public Sector Commission defines organisational culture as

... the shared values and beliefs that guide how members of an organisation approach their work and interact with each other. It is expressed and manifested through the behaviours, customs and practices these members collectively display.⁴⁶²

Another way of understanding what is meant by the culture of an organisation can be found in the Victorian Ombudsman's use of the phrase 'the tone at the top' of an organisation. The Ombudsman says: 'A board is responsible for setting 'the tone at the top' of an organisation, not only by ensuring it has appropriate values, policies and procedures in place, but also by showing leadership in how it applies to them.'⁴⁶³

Dr Kate White, co-author with Mr Robert Murray of the book, *State of Fire: A history of volunteer firefighting and the CFA*,⁴⁶⁴ spoke to the Committee about the culture of the CFA. She told the Committee that the CFA has frequently been compared to a 'paramilitary' organisation, a comparison that can be traced to 1975 and a claim made by the United Firefighters Union's Victorian Secretary, William Webber.⁴⁶⁵

A paramilitary organisation is a non-military organisation that shares some similarities with the military - for example, a hierarchical organisational structure where each person is required to follow the commands of the person above them (sometimes referred to as a 'chain of command') and people within the organisation having a shared 'mission' or focus.⁴⁶⁶

⁴⁶² Victorian Public Sector Commission, *What is Organisational Culture?*, (www.vpsc.vic.gov.au/html-resources/organisational-culture/what-is-organisational-culture/), viewed 12 December 2015

⁴⁶³ Victorian Ombudsman, *A Review of the Governance of Public Sector Boards in Victoria*, (2013), p.45

⁴⁶⁴ Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, Hargreen Publishing Company, Melbourne, 1995

⁴⁶⁵ Dr Kate White, Federation University, *Transcript of evidence*, 9 November 2015, p.3

⁴⁶⁶ For further information about military culture see: S.A. Redmond, S.L. Wilcox, S. Campbell, A. Kim, K. Finney, K. Barr and A.M. Hassan, 'A Brief Introduction to the Military Workplace Culture' (2015) 50(1) *Work* 9-20

State of Fire reveals that from the inauguration of the CFA in 1945 and on through the 1950s many CFA Board members were former commissioned officers in World War II.⁴⁶⁷ While it is not unusual for people returning from major conflicts to reintegrate into society, the book gives another example of a military influence on the CFA. The Authority's first permanent Chairman, Richard Eason, helped develop the 1968 training manual, 'Tactics and Administration in the Field' (also known as 'Eason's Little Red Book'). Murray and White state that this training guide was '... the first attempt to formalise firefighting on a military basis and provide volunteers with a uniform framework of operation'.⁴⁶⁸

A telling comment was made by Mr Trevor Roche, the CFA's Chief Officer from 1995 to 2001. Mr Roche told the Committee that he had initially resisted the structural changes of the mid-1990s, as he was used to a "semi-militarised" organisation and was uncomfortable with changes being implemented by "civilian people". However, he now believes that the changes improved the administration and management structure of the CFA.⁴⁶⁹

In a January 2016 article in *The Age*, Mr John Schauble, a CFA volunteer for more than 30 years, writes: "The language of firefighting long ago adopted quasi-militaristic terms. Firefighters are organised in "brigades" led by captains, lieutenants and commanders. They "fight" or "battle" fires, lengthy bushfires becoming "campaigns".⁴⁷⁰

Evidence the Committee heard at public hearings was consistent with this theme. For example, Mr Alan Bennett, who spent many years at Fiskville in the 1980s, said: "There was still a measure of military style about the fire authority when I worked for them ...".⁴⁷¹

Mr Tony Ford, who trained at Fiskville in 2000 and worked as a guest instructor in 2008, provided the following response to a question from Committee member Ms Vicki Ward:

Ms WARD—My questions focus on the workplace culture at Fiskville. Firstly, the Joy Report mentions a culture of firefighters encouraged to be uncomplaining, brave and to follow orders. You hinted around this when you were talking about your stories of your own training in 2000 and your experiences around the dam.

Mr FORD—You are correct about the 'Be brave, be quiet and we'll be right' sort of an attitude.⁴⁷²

⁴⁶⁷ Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, p.192

⁴⁶⁸ Ibid. p.203

⁴⁶⁹ Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.4

⁴⁷⁰ John Schauble, "Hero firefighters' speaks volumes about society rather than the firefighters themselves", *The Age*, (www.theage.com.au/victoria/hero-firefighters-speaks-volumes-about-society-rather-than-the-firefighters-themselves-20160110-gm2s3e.html), viewed 10 January 2016

⁴⁷¹ Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.292

⁴⁷² Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.125

Mr Kevin Etherton, who worked at Fiskville as an instructor in the mid-to-late 1980s, told the Committee: “You were given orders and you followed those orders.”⁴⁷³ Mr Norman Carboon, a senior instructor at Fiskville between 1978 to 1981, also referred to the “chain of command” in his evidence.⁴⁷⁴

A more recent example was provided by the CFA’s current Operations Manager, Mr Mark Glover, who told the Committee that the culture at Fiskville is such that when a problem is identified “... we would solve it there and then”.⁴⁷⁵ This was reflective of what Mr Ben Hatfield (a member of the Ballan Fire Brigade since 1999) described as the broader attitude within the CFA:

The CFA in general has a very can-do attitude. I think one of the strengths of the CFA is that when something happens, we get in and get it done. That is what happens when we have major bushfires. We see people from all over the state get in and get the job done.⁴⁷⁶

Dr White suggested that another effect of the CFA’s paramilitary culture is prioritising the protection of the CFA’s reputation at all times over admitting errors.⁴⁷⁷

The CFA’s paramilitary culture was also discussed in the Joy Report, with Professor Joy stating that this culture ‘... has strengths in firefighting situations, but may have contributed to a failure to recognise or address unnecessary risks during training’.⁴⁷⁸

The Committee also notes that some witnesses made a distinction between the CFA’s culture on the training ground and during actual fires. Mr Michael James, a CFA firefighter for 27 years, told the Committee:

Back in [the 1980s], and to a certain degree now, the CFA operates, certainly operationally, as a paramilitary-style operation, certainly on the fireground. It does not operate that way during training or normal activities and did not in that time. As an instructor I was encouraged to identify any issues that I had, even as a junior instructor back in 1988.⁴⁷⁹

However, as is noted below, it is one thing being able to raise issues; it is quite another for them to be addressed.

Mr Euan Ferguson, Chief Officer from 15 November 2010 to 14 November 2015, made the distinction between operations and training in relation to health and safety procedures in response to questioning by Committee Chair Ms Bronwyn Halfpenny:

⁴⁷³ Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.36

⁴⁷⁴ Mr Norman Carboon, *Transcript of evidence*, 15 June 2015, p.200

⁴⁷⁵ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.3

⁴⁷⁶ Mr Ben Hatfield, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, p.278

⁴⁷⁷ Dr Kate White, Federation University, *Transcript of evidence*, 9 November 2015, p.6

⁴⁷⁸ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.7

⁴⁷⁹ Mr Michael James, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.181

Mr FERGUSON—What happens within the organisation to reinforce that safety culture is largely done on operational matters through the chief officer’s standing orders or through the chief officer’s standard operating procedures and there is a folder on each which are quite comprehensive. They are maintained and reviewed on a periodic basis and re-issued.

The CHAIR—But it does not extend to training?

Mr FERGUSON—No. This is probably more related to the operational service delivery.⁴⁸⁰

The Committee has concluded that the ‘paramilitary’ elements of the CFA’s training culture did not foster a safe workplace at Fiskville. It encouraged people to ascribe blame to those higher up in the organisation, rather than accepting responsibility or speaking up when they had concerns. It also meant that the common ‘mission’ of fighting fires, including making drills as realistic as possible, overshadowed the need to have appropriate safety measures in place during training.

5.2.1 Reluctance to raise criticism internally

A particular theme about the CFA’s culture that arose during the Inquiry was that CFA employees were reluctant to raise criticism within the organisation. This was also a problem identified by the 2015 Fire Services Review, which observed ‘fear regarding repercussions for speaking up’.⁴⁸¹

Mr James told the Committee that in 1988 he had tried unsuccessfully to make breathing apparatus compulsory for a practical exercise he ran. Mr James took a group of students inside a burning two-storey building to give students exposure to, and an awareness of, the behaviour of smoke and heat inside a burning building. He told the Committee:

The appropriate way to raise my safety concerns was via the chain of command - to the senior instructor present. I clearly identified an unsafe practice, advised management via the appropriate method but the unsafe activity continued. I have been advised that this drill was still being taught many years later at Fiskville without the appropriate respiratory protection which I had identified and requested.⁴⁸²

Mr James went on to say:

During my time as a full-time instructor at Fiskville I clearly identified unsafe practices but was refused the opportunity to operate safely. In my opinion the management of CFA and some staff at Fiskville failed in their duty of care to provide a safe workplace and should be called to account for their failings.⁴⁸³

⁴⁸⁰ Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.8

⁴⁸¹ David O’Byrne, Victorian Government, *Report of the Victorian Fire Services Review - Drawing a line, building stronger services* (2015), p.33

⁴⁸² Mr Michael James, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, pp.179-180

⁴⁸³ *Ibid.* p.181

Mr Tony Ford, a CFA member for 28 years, told the Committee that it can take many years to get accepted into a course at Fiskville, which made trainees wary of raising issues for fear their prospects would be harmed. Instead, they may have chosen to speak with either the United Firefighters Union (UFU) or the MFB.

Mr Trevor Lansdown, who had 27 years in the CFA and whose father served the CFA for 60 years, was very clear in his evidence about his time as a recruit:

I discovered at the same time that Fiskville had a toxic culture. You need to understand that as a recruit you had no voice. Anything you did or did not do or say would be held against you. The power they had over you was that if you did not fit in, you were gone. That was the end of your career ... Basically your reputation was what your career moved by, so the culture there was that you just had no voice. That culture runs through the CFA from top to bottom, even to today.⁴⁸⁴

The Committee also heard from Mr John Myers, a former PAD supervisor at Fiskville. Mr Myers, who retired from the CFA in 2015, told the Committee that "... not once did I get an injury report. They came through my office from the PAD. Not once did I get anybody say they were sick or had diarrhoea or they had rashes - not once - in all the years I was there."⁴⁸⁵

However, Ms Kirstie Schroder, the MFB's Director, Operational Learning and Development, told the Committee that the MFB received a large influx of health complaints and reports regarding Fiskville immediately following the publication of a *Herald Sun* story on water quality at Fiskville in June 2012.⁴⁸⁶

Mr Tony Ford also provided an example of a recruit who had followed orders despite being ill:

One recruit had been off sick for a week and returned with a doctor's certificate stating he could not do physical education for the coming week. Despite this he was told that, if he did not swim the dam, he would be sacked. He reluctantly swam the dam, still suffering the effects of glandular fever.⁴⁸⁷

Mr Cory Woodyatt (senior station officer at Melton fire station), who witnessed the above incident, echoed Mr Ford's comments about CFA recruits being grateful to be accepted into Fiskville. For example, when Mr Woodyatt became a career firefighter in 2000 he was in a course of 20 out of 1,500 applicants. Mr Woodyatt described firefighting as a "dream job" and that as such "you are pretty scared to say no to anything".⁴⁸⁸

Mr Lansdown provided a further example from his recruit course in 2002:

⁴⁸⁴ Mr Trevor Lansdown, *Transcript of evidence*, 15 June 2015, p.208

⁴⁸⁵ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.24

⁴⁸⁶ Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.4; Ruth Lamperd, 'Questions at Fiskville', *Herald Sun*, 30 June 2012, p.19

⁴⁸⁷ Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.121

⁴⁸⁸ Mr Cory Woodyatt, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.188

I can remember an incident with another recruit who had a respiratory issue on the day. We had a thing called the Fiskville flu that went through us. Everybody had this flu thing. It was a bronchitis-like flu. It was quite interesting. It went around the whole squad. After hearing some of the evidence this morning [15 June 2015], a couple of things sort of clicked in my mind. During the drill on the PAD he collapsed. He had to be revived by oxygen. No ambulance was called. I thought if someone collapsed and you had to revive them by oxygen, you probably should call an ambulance - but no, that was not the case. I cannot remember any incident report being filled in.⁴⁸⁹

The Committee notes that this incident occurred at about the same time as the incident in early 2002 when a CFA contractor was overcome by fumes from buried drums containing solvents that he accidentally ripped open. The incident is discussed in Chapter 7 where it is noted that no report was made by the CFA to WorkSafe, despite a statutory obligation to do so. The incident described by Mr Lansdown may also have been reportable.⁴⁹⁰ At the very least an internal incident report should have been completed.

Professor Joy discussed occupational health and safety at Fiskville: ‘The Investigation concludes individual staff raising safety issues were challenging the predominant culture and practice and notes they were at times seen as “trouble makers”.’⁴⁹¹ He adds that CFA senior management in the mid-1990s, in particular, would ignore requests for safety improvements from Fiskville staff and that ‘... the Investigation saw no evidence of a fundamental, lasting cultural shift to considering health, safety and environment issues in planning and operational practice’.⁴⁹²

It was initially difficult for the Committee to understand why so many staff and trainees fell ill apparently without the knowledge of senior management at Fiskville or the CFA Board. (Such was the extent of the problem at Fiskville that a term was coined: the “Fiskville flu”.⁴⁹³) For example, in correspondence to the UFU dated 25 June 2012, the then CEO of the CFA, Mr Mick Bourke, responded to concerns raised by the Union. Mr Bourke stated: ‘... I note allegations of illness from [sic] the water used in training at Fiskville and advise that no related incidents have been reported to management at this site’.⁴⁹⁴

Mr Bourke’s statement is contradicted by the CFA confirming to WorkSafe in August 2012 that there had been ‘... *further* reports of persons suffering gastroenteritis and skin rashes as a result of exposure to firefighting water’.⁴⁹⁵

489 Mr Trevor Lansdown, *Transcript of evidence*, 15 June 2015, p.208

490 Regulation 7(b) of the *Occupational Health and Safety (Incident Notification) Regulations 1997* required the CFA to report any incident in which a person required medical treatment within 48 hours of exposure to a substance.

491 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.125. Note that the quote marks refer to personal interviews carried out by Professor Joy’s team

492 Ibid. p.127. The CFA’s management of occupational health and safety is discussed in section 5.9. Further discussion can be found in Case Study 1 about Mr Brian Potter - in particular his belief that the CFA was not prepared to listen to him. This is also discussed in Chapter 3 under the heading: ‘How the CFA treated people who raised concerns: betrayal by “the family”’.

493 Mr David Card, *Transcript of evidence*, 18 May 2015, p.43; Mr Trevor Lansdown, *Transcript of evidence*, 15 June 2015, p.208

494 United Firefighters Union of Australia, *Submission 449*

495 WorkSafe Victoria, *WorkSafe Background Paper*, (27 April 2015), paragraph 32 (emphasis added)

As another example, Mr Andrew Ford and Mr Adam Barnett from Volunteer Fire Brigades Victoria both told the Committee that they were unaware of any illnesses at Fiskville until the *Herald Sun* story was published in December 2011.⁴⁹⁶

The Committee also heard from the MFB's Acting Deputy Chief Officer Mr Robert Purcell. He told the Committee that the biggest concern he had felt about sending MFB recruits to Fiskville in 2011 was not their safety but the fact that the trainees had to spend a large amount of time away from their families.⁴⁹⁷

Further, Professor Joy writes: 'An extensive search of CFA's occupational health and safety incident reports for the period 1970-1999 did not reveal a single incident relating to exposure of 'chemicals' or 'hazardous materials' or 'fumes' at CFA training grounds.'⁴⁹⁸ He adds that the occupational health and safety incidents that were reported generally related to physical incidents, such as sprains and broken bones. The Committee agrees with Professor Joy's statement: 'The lack of any formally documented OHS incidents of acute or direct exposures to hazardous materials during training may arguably reflect a generally poor or variable historical level of reporting of OHS incidents at CFA.'⁴⁹⁹

That is, the lack of documentation is not evidence of a lack of incidents. Rather it is the result of a failure to report the incidents that did occur.

The evidence heard by the Committee led it to identify a source of conflict between the CFA and the UFU. The Union repeatedly raised concerns with the CFA on behalf of its members - particularly concerns about water quality. The Committee is of the view that these were not accepted or responded to appropriately by the CFA.

The Committee was keen to examine the internal transfer of knowledge at the CFA over the years. The Committee spoke with Victoria's Emergency Services Commissioner, Commissioner Craig Lapsley, on this subject in relation to the closure of Fiskville. Commissioner Lapsley, who had worked for the CFA for many years, told the Committee that, in his opinion, CFA senior management, rather than the Board, were resistant to suggestions that Fiskville should close. He ascribed this resistance to a combination of pride and the CFA's 'can do' attitude: "Anyone who mentioned that [Fiskville] should not be there was probably not included in the discussion all that often. They did not want to hear that."⁵⁰⁰

⁴⁹⁶ Mr Andrew Ford and Mr Adam Barnett, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.225

⁴⁹⁷ Mr Robert Purcell, Acting Deputy Chief Officer, Regional Director North West Metro Region, MFB, *Transcript of evidence*, 6 November 2015, p.9

⁴⁹⁸ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.11

⁴⁹⁹ *Ibid.* p.97

⁵⁰⁰ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.10. Commissioner Lapsley began his role as Emergency Services Commissioner in July 2014 and had been the Fire Services Commissioner since 2010. Prior to this, Commissioner Lapsley had 25 years' experience working at the CFA

Mr Andrew Ford told the Committee that in his opinion it is unusual for large organisations to encourage dissent or internal criticism. However: “As a general thing for CFA the invitation for people to raise a concern or raise a criticism about an unpopular issue should be an absolutely pursued element of the culture.”⁵⁰¹

FINDING 46: That the culture at Fiskville did not encourage internal criticism or complaints regarding occupational health and safety problems. During Fiskville operations, CFA trainees and others felt reluctant to raise criticism internally. This is because the CFA did not respond appropriately when concerns about exposure to contamination and health risks were raised, and firefighter trainees’ perceptions that they may jeopardise their opportunities.

FINDING 47: That the CFA ignored concerns raised by the United Firefighters Union and withheld important information from trainees and others. This was in breach of the *Occupational Health and Safety Act 2004* and resulted in ongoing exposure to contaminated water.

5.3 Importance of trust

Maintaining the trust of both employees (including volunteers) and the broader community is crucial for the successful operation of an organisation. The following section discusses some of the ways in which trust was lost within the CFA. This discussion builds on the overview of the evidence the Committee received about people’s trust in the CFA in Chapter 3.

5.3.1 Trust of employees (including volunteers)

‘Employee trust’ refers to the feeling that an employer will reciprocate an employee’s efforts in good time.⁵⁰² A trusting employee accepts the risks associated with depending on their employer because they believe in the employer’s positive intentions and assume that they will act predictably.⁵⁰³

Employers instil trust in their employees when they reliably meet their goals and responsibilities, act in a way that signals genuine care for the well-being of their employees, and adhere to principles such as honesty and fairness.⁵⁰⁴

Trusting employees expect their employers to competently perform their duties and treat them in a respectful and non-harmful way.⁵⁰⁵ Employees are more likely to trust an organisation that listens and responds to their needs and desires, does not take advantage of their work, and follows ethical values.⁵⁰⁶

501 Mr Andrew Ford, Chief Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.225

502 Antoinette Weibel, et al., *How do controls impact employee trust in the employer?*, (2015), Human Resource Management, p.3

503 Ibid.

504 Ibid.

505 Ibid.

506 Ibid. p.23

From the employer's perspective it is important that employees are trusting of them. This is because it is generally accepted that trusting employees are more cooperative, work harder, are more loyal and problem-solve more effectively.⁵⁰⁷

5.3.2 Trust of the community

As noted in Chapter 3, many people consider the CFA to be like 'a big family', and trust the CFA to look after them in a way that family members look after each other. The essential function that the CFA plays in protecting lives and property in rural communities in a bushfire-prone State also means that many people who are not CFA employees place their trust in the CFA. This is reflected in the CFA's Vision: 'To work together with communities to keep Victorians safe from fire and other emergencies.'⁵⁰⁸

The community's trust in the CFA can be considered one element of a 'social licence' to operate. This licence may be defined as 'the level of acceptance or approval continually granted to an organisation's operations or project by local community and other stakeholders'.⁵⁰⁹ Social legitimacy and credibility are the other elements of this licence. Baba and Raufflet argue that '... social legitimacy comes from engagement and information sharing with the community. Credibility is created by consistently providing true and clear information.'⁵¹⁰

5.3.3 Loss of trust at the CFA: failure to inform those affected by the contamination

The recent Fire Services Review identified a 'fundamental collapse in trust and goodwill' within the fire services in Victoria.⁵¹¹

As noted above, the ways that an organisation can instil trust in their employees and the broader community are by:

- Showing it cares for people's well-being
- Behaving in an open and honest manner
- Providing true information.

Commissioner Lapsley discussed whether the culture within emergency services in Victoria supports access to information:

⁵⁰⁷ Ibid. p.1

⁵⁰⁸ CFA, *CFA Annual Report 2015*, (2015), p.4

⁵⁰⁹ Leeora Black and Sara Bice, Australian Centre for Corporate Social Responsibility *Defining the elusive and essential social licence to operate*, (accsr.com.au/news/defining-the-elusive-and-essential-social-licence-to-operate/), viewed 21 April 2016

⁵¹⁰ Sofiane Baba and Emmanuel Raufflet, 'Managing Relational Legacies: Lessons from British Columbia, Canada' (2014) 4(1) *Adm. Sci.* p.20

⁵¹¹ David O'Byrne, Victorian Government, *Report of the Victorian Fire Services Review - Drawing a line, building stronger services* (2015), p.2

Transparency of information is a critical thing. Timely access to information is critical. Have we got that yet? No, we have not. Have we got a culture that wants it? No, we have not. That is why the strategic action plan to some of those are about systems. We have to fix systems, but we also have to fix culture or change culture.⁵¹²

Commissioner Lapsley referred to “timely access to information” as being “critical”. The CFA failed to provide timely information on health, safety and environmental damage on and off its property for many years at Fiskville. In the specific area of the safety risks that arose at Fiskville, the CFA had and has legislative responsibilities to keep people informed. This responsibility applies to both employees and other people who may be affected by the CFA’s conduct at Fiskville.⁵¹³

As discussed in Chapter 1, s. 21(2)(e) of the *Occupational Health and Safety Act 2004* imposes duties on employers for the benefit of their employees and states:

An employer must —

(e) provide such information ... to employees of the employer as is necessary to enable those persons to perform their work in a way that is safe and without risks to health.⁵¹⁴

Duties of this nature have existed in Victorian law since 1981.

The Committee heard evidence from CFA employees who had not been provided with information. For example, Mr Chris Bigham, Fiskville’s Acting Operations Manager, and Mr Paul Roughead, Operations Officer, appeared at a public hearing on behalf of Fiskville staff members. They expressed concern about what they perceived to be the CFA’s lack of transparency. They also felt vulnerable to the possibility of their integrity as trainers being questioned by people within and outside of the firefighting community. Mr Roughead said:

We had no opportunity to do that⁵¹⁵ in this instance because no-one shared information with us, and that is deeply disturbing ... at no time has anyone shared any information with us to say there was a problem with the water quality. As far as we were aware, the water was safe to use and we were out there with it all the time ... we are grateful that it has been identified, but we question why when that knowledge became available it was not shared with us immediately. People have known about that for a period of time. Had they shared it with us, we might have helped mitigate the extent of the exposure and helped manage potential health risks that were associated with the exposure. We have had no opportunity to do that.⁵¹⁶

512 Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.13. Commissioner Lapsley was referring to the State Crisis and Resilience Council strategic action plan. See: <https://www.emv.vic.gov.au/plans/strategic-action-plan/>; accessed 17 November 2015

513 See generally Chapter 1

514 Unlike other such duties imposed by this Act, this duty is not qualified by ‘reasonably practicable’: see generally *DPP v Vibro-pile (Aust) Pty Ltd [2015] VSCA 55 at [109]*; see also: s. 22(1)9c - Duties of employers to monitor health and conditions etc; and s. 23 - Duties of employers to other persons

515 Mr Roughead is referring to taking corrective action, which he said he would do when he became aware of problems

516 Mr Paul Roughead, *Transcript of evidence*, 27 July 2015, p.301

Mr Bigham said:

... PFOS was already known to be present on the site. However, we had been assured there were no associated health risks with it. In fact we were told it was safer to swim across Dam 2 than the Yarra River ... I will leave the names out of it, but that was the advice we were getting from the scientific evidence and from doctors ... I have trained over 400 firefighters at that facility. I would not have trained 400 firefighters if I had thought the water was unsafe to use.⁵¹⁷

Mr Bennett sought information about the chemicals he was exposed to when burying drums. This is discussed further below and in Case Study 2.

Section 23(1) of the *Occupational Health and Safety Act 2004* imposes a duty for the benefit of 'other persons' and states:

An employer must ensure, so far as is reasonably practicable, that persons other than employees of the employer are not exposed to risks to their health or safety arising from the conduct of the undertaking of the employer.

The former Chief Health Officer, Dr Rosemary Lester, told the Committee that she was comfortable with the CFA leading the response to the environmental contamination and health risks caused by actions at Fiskville, including the information it made public. In her view, the source of information is irrelevant, as long as it is accurate:

... the CFA were undertaking coordination of this very, very comprehensive investigation and it was agreed that they would continue to coordinate this. I do not think you can say it is anyone's responsibility. The important thing is: is the information clear and accurate?⁵¹⁸

However, the Committee learnt that once trust in an organisation has been lost following an incident, that organisation will find it difficult to lead the response to that incident. The way the CFA managed the contamination may also have led to a further loss of trust by employees and others.

Neighbouring landowner Mr Matthew Lloyd spoke about the stigma associated with his farm:

I think the stigma of where we live has ruined even the value of our land now. Even if we cleaned it and everything like that, people are going to say, 'You live right next to a toxic wasteland, virtually'. It is never going to be the value of what it should be, despite the work we have put into it and what we have made it. I do not know that whatever they could do now is going to change the stigma that is around our farm and our area for what we do. It is just going to be there. People know. The town talks.⁵¹⁹

Mr Andrew Ford commented that the truth regarding contaminants and the safety or otherwise of Fiskville needs to be revealed by an independent source, in order to restore confidence among firefighters and the community. It was his

517 Mr Chris Bigham, Acting Operations Manager, CFA, *Transcript of evidence*, 27 July 2015, p.303

518 Dr Rosemary Lester, *Transcript of evidence*, 14 December 2015, p.9

519 Mr Matthew Lloyd, *Transcript of evidence*, 18 May 2015, p.70

view that the CFA has not handled the situation well so far: “I do not want the CFA board telling you what the technical expert said. I would like a technical expert telling you what they said, so you know you have got it from them.”⁵²⁰

For many years the CFA had been receiving advice from technical consultants, which are referred to throughout this Final Report. The commissioning of such reports is an indication that there were some safety concerns amongst CFA management.

Many of these consultant’s reports refer to action that the CFA should take to ensure the safety of trainees at Fiskville. For example, in 2010 the CFA commissioned a report from Wynsafe Occupational Health Services, *Perfluorochemicals in Firefighting Water at CFA Fiskville*, which found that: ‘... if current standard operating procedures (SOPs) are followed, and related personal protective equipment (PPE) is used, personnel will suffer no adverse health effects from exposure to PFOS [perfluorooctane sulfonate] and / or PFOA [perfluorooctanoic acid] in the firefighting water’.⁵²¹

If the CFA had passed on this information, accompanied by the reassurance that they were complying with the SOPs and that PPE was to be used at all times, this may have provided some comfort to trainees. The evidence before the Committee is that this information and reassurance was not provided to those affected.

The Committee’s view is that the commissioning of a report is not sufficient on its own. It is the actioning of recommendations and sharing of the contents of reports that is crucial - particularly in light of the requirements under the *Occupational Health and Safety Act 2004* to keep people informed.

The failure to share information led to fear and distress, particularly when the *Herald Sun* published its story in December 2011⁵²² and when water contamination was revealed by another *Herald Sun* article in June 2012.⁵²³ This fear and distress, and the loss of trust discussed above, may have been lessened by better provision of information in the preceding decades.

FINDING 48: That the CFA Board and senior management did not provide enough information about the contamination at Fiskville to those who were affected, despite the legislative requirement to do so.

FINDING 49: That the anxiety of staff, trainees (both CFA and those from other organisations) and members of the community caused by the contamination was fuelled by a lack of information.

FINDING 50: That the commissioning of consultants’ reports shows that CFA management was aware of safety concerns. However, the CFA did not share the information contained in the reports and reassure people affected.

⁵²⁰ Mr Andrew Ford, Chief Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.230

⁵²¹ Wynsafe Occupational Health Services, *Perfluorochemicals in Firefighting Water at CFA Fiskville*, 2010, p.5

⁵²² Ruth Lamperd, ‘Cancer town’, *Herald Sun*, 6 December 2011, p.1

⁵²³ Ruth Lamperd, ‘Questions at Fiskville’, *Herald Sun*, 30 June 2012, p.19

The provision of information contained in technical reports to WorkSafe is discussed in Chapter 7.

5.4 How the Department of Defence kept the community informed about contamination

The Committee considers the manner in which the Department of Defence informed communities about contaminants at two sites that it is responsible for has been better in some ways than how the CFA has managed the problems at Fiskville. The two sites are:

- The Army Aviation Centre at Oakey in Queensland
- The Royal Australian Air Force (RAAF) Base at Williamtown in New South Wales.
- An overview of the strategy adopted by the Department of Defence at each site is provided below.

5.4.1 Army Aviation Centre, Oakey, Queensland

The Department of Defence is undertaking a long-term environmental investigation and assessment of the groundwater beneath the Army Aviation Centre Oakey site and its surrounds. The purpose of the investigation is to understand how groundwater may have been affected by firefighting foams containing PFOS and PFOA. The foams were used as part of training activities between 1970 and 2005.

According to a Queensland Government submission to the Senate References Committee on Foreign Affairs, Defence and Trade:

... the Queensland Government is working to assist the Department of Defence in fulfilling its important obligations to the Oakey community. In order to provide a single point of contact to facilitate this engagement, the Queensland Government has formed an interdepartmental committee, chaired by the Department of Premier and Cabinet, and comprising representatives from Queensland Health, the Department of Agriculture and Fisheries, the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines.⁵²⁴

As part of its community consultation the Department of Defence developed a website and set up a Community Hotline Number. In 2012, the Department of Defence held its first Community Information Session. The session provided information on PFOS and PFOA and where they were found on the site. As well, residents were told to stop drinking bore water (many residents in Oakey use bore water) and Queensland Health advised residents not to consume eggs, fish caught in the local creeks or milk from animals raised within the contamination zone.

⁵²⁴ Queensland Government, Submission No 112 to Senate References Committee on Foreign Affairs, Defence and Trade, Contamination of Australian Defence Force facilities and other Commonwealth, state and territory sites in Australia inquiry, p.1

The Department of Defence website lists around 15 reports relevant to the contaminated land. From mid-2015 to mid-2016, the Department of Defence also carried out a hydrogeological assessment and a human health and ecological risk assessment.⁵²⁵

5.4.2 RAAF Base Williamtown, New South Wales

The Department of Defence is undertaking a long-term environmental investigation and assessment of the groundwater beneath the RAAF Base Williamtown site. The purpose of the investigation is to understand how the groundwater may have been affected by the use of firefighting foams containing PFOS and PFOA. The foams were used as part of training activities between 1970 and 2008.

Both PFOS and PFOA were detected during groundwater monitoring at Williamtown in December 2011. The Department of Defence and New South Wales Environment Protection Authority (EPA) met on 10 May 2012. The Department of Defence advised the EPA about the elevated levels of PFOS and PFOA in the stormwater on the base and in the groundwater.

On 18 November 2013, New South Wales EPA notified the Commonwealth Department of the Environment about the contamination, stating that as the Department of Defence is a Commonwealth Government agency New South Wales EPA has no regulatory role and that the Department of the Environment may wish to be part of future discussions between agencies.⁵²⁶

On 11 September 2015, New South Wales EPA took over the coordination role of the various state agencies from the Department of Premier and Cabinet and led the State Government response (with continued support from the Department of Premier and Cabinet's Hunter office).

According to a December 2015 report on the historical management of contamination at the Williamtown RAAF base,⁵²⁷ on 4 September 2015 New South Wales EPA conducted a letterbox drop to properties in Williamtown affected by the contamination.⁵²⁸

Also in September 2015, the Department of Defence held a community forum to discuss the results of an environmental investigation. Representatives from the Department of Defence, Hunter Water, New South Wales Department of Primary Industries and well as New South Wales EPA presented at the forum. Additionally, the Department of Defence produced a flyer outlining the environmental investigation that was about to take place.

525 Department of Defence, *Oakey - Army Aviation Centre - Groundwater Investigation Project* (www.defence.gov.au/id/oakey/), viewed 25 January 2016

526 MP Taylor and I Cosenza, Macquarie University, *Contaminated Sites Review Stage One Interim Chronology*, (2015), p.13

527 *Ibid.* pp.13-18

528 *Ibid.* p.18

New South Wales State authorities have produced a number of factsheets within the Williamstown area. For example, New South Wales Health produced a factsheet on PFOS and PFOA that provided an overview of the issues at Williamstown and PFOS generally. The factsheet, dated 11 September 2015, and updated on 6 October 2015, covered the following questions:

- What is the issue?
- What areas are potentially affected?
- What are PFOS and PFOA?
- What are the potential health effects of PFOS and PFOA?
- How are people exposed to PFOS and PFOA?
- What can I do to reduce my exposure?
- Is there a test to determine likely health effects?

New South Wales Health has also provided community members affected by the RAAF Base Williamstown contamination issue with access to a dedicated mental health service.⁵²⁹

The New South Wales Government also produced an ‘FAQ’ document dated 17 November 2015 that explains action taken on the contamination, the chemicals involved, the size of the investigation area, and a series of questions on issues pertaining to health, fisheries and livestock and produce.⁵³⁰

In December 2015, the New South Wales Government announced a package that would:

- Connect affected developed properties within the investigation area to town water
- Invest in new contamination testing equipment
- Employ additional community liaison staff to help address the concerns of the local community.⁵³¹

As well, the New South Wales Government established the Williamstown Community Reference Group ‘... to enable the community to engage directly with government agencies and experts about the Williamstown RAAF Base Contamination’.⁵³² The group comprises representatives from the New South Wales Government and Departments, the Department of Defence, and community members and representative of community groups. The Terms of

⁵²⁹ NSW Health, PFOS and PFOA Williamstown RAAF Site Contamination, (www.health.nsw.gov.au/factsheets/Documents/RAAF-site-contamination.pdf), viewed September 2015

⁵³⁰ See: (<https://www.epa.nsw.gov.au/.../epa/152670-williamtown-faq-171115.pdf>), viewed 25 February 2016

⁵³¹ Premier of New South Wales, *NSW Government Help for Williamstown Residents*, (Media Release, 23 December 2015)

⁵³² NSW EPA, Williamstown Community Reference Group, (<https://www.epa.nsw.gov.au/mediainformation/community-reference-williamtown.htm>), viewed 16 February 2016

Reference for the group state that it was formed ‘... to address concerns related to the detection of PFOA and PFOA in nearby surface water, groundwater and biota in the vicinity of the Williamstown RAAF base’.⁵³³

However, a Senate Inquiry into contaminated land owned by the Department of Defence found that at Williamstown ‘... it is clear notification of the community should have occurred earlier. Further, delays in notification and advice have contributed to a sense of mistrust in the affected communities regarding the approach of Defence and other government agencies to the contamination.’⁵³⁴

This demonstrates that the Department of Defence’s approach may not necessarily be described as ‘best practice’. There are, however, things that can be learnt from the approach, as shown in the following comparison.

5.4.3 Comparison of the CFA’s and Department of Defence’s approaches

The Committee has conducted a comparison of the way the Department of Defence kept the community informed and the approach of the CFA. The CFA’s approach was summarised by the current CEO Ms Lucinda Nolan as follows:

There was obviously the offer of testing for PFOS and that extended to local community members and was promoted through the local media. There was a Fiskville update distributed to neighbouring properties through the mail. Dr Roger Drew⁵³⁵ provided group presentations to those who may have been impacted and provided information and a forum to raise questions or concerns directly. Dr [Michael] Sargeant,⁵³⁶ and in some circumstances Dr Drew, met privately with some of those concerned about any health issues. Since the closure of Fiskville there have been blogs, CFA website updates, individual engagement with neighbours re property testing and medical health checks, Department of Health and Human Services-led neighbour engagement during October, November and December 2015, meetings with Ballan fire brigade and the brigade captain, working with Moorabool Shire and Shire-led community briefings.⁵³⁷

The Committee is aware that both Oakey and Williamstown are more densely populated than the area where Fiskville is located and that the CFA had to design measures that were appropriate for the population. However, the Committee is concerned that the community information sessions were run by Dr Roger Drew, a consultant employed by the CFA who had worked closely with the CFA’s legal advisers in devising the legal defence strategy of the CFA.⁵³⁸ This may be

⁵³³ NSW Government Department of Premier and Cabinet, *Williamstown Contamination Investigation Community Reference Group (CRG) Terms of Reference*, (2015)

⁵³⁴ Foreign Affairs, Defence and Trade References Committee, *Inquiry into Fire Fighting Foam Contamination. Part A - RAAF Base Williamstown*, Commonwealth of Australia, Canberra, 2016, p.64

⁵³⁵ A toxicologist contracted by the CFA

⁵³⁶ A General Practitioner contracted by the CFA

⁵³⁷ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.11

⁵³⁸ See CFA invoice from Ashurst lawyers dated 19 June 2013; As noted in Chapter 2, several reports by Dr Drew were prepared for Ashurst, for example ToxConsult, *Health Impact Assessment from Consumption of Fish from Lake Fiskville* - prepared for Ashurst 1 April 2014. The role of Dr Drew in relation to Fiskville is discussed further in Chapter 8

compared to the information sessions run in Williamstown, which were run by the Department of Defence, Hunter Water, the New South Wales Department of Primary Industries and New South Wales EPA.

The Committee is also concerned that there was no formal mechanism for members of the community to be involved in decision-making about how their concerns about contamination at Fiskville were being addressed. This may be compared with the Williamstown Community Reference Group (as noted above, this was comprised of representatives from the New South Wales Government and Departments, the Department of Defence, community members and representative groups).

The Committee also notes that no Victorian regulators have a website providing information about contamination at Fiskville and potential health risk. EPA Victoria has produced a factsheet on perfluorinated chemicals, but this does not mention Fiskville. In comparison:

- EPA New South Wales has a page entitled ‘Williamstown RAAF Base contamination’⁵³⁹
- The New South Wales Health Department has a page entitled ‘Frequently Asked Questions - Williamstown RAAF Site Contamination’.⁵⁴⁰

The CFA cannot be criticised for the lack of information provided by Victorian regulatory agencies. However, the Committee notes that members of the public with concerns may have appreciated access to information from a source other than the CFA. Furthermore, as a need remains for high-quality, accurate and independent information about Fiskville, the Committee’s concerns in this regard are not merely historical.

5.5 Failure to implement policies

A consistent theme that emerged from the evidence in this Inquiry is that at different points in time CFA management either:

- Had a very different perception about training practices at Fiskville to what was happening ‘on the ground’; or
- Were attempting to introduce new policies, but they were not enforced ‘on the ground’ at Fiskville.

5.5.1 Management holding inaccurate perceptions

Chapter 6 provides extensive detail about the information that was available to CFA executive management about: chemical contamination; occupational health and safety; dangerous goods storage and disposal; and concerns surrounding

⁵³⁹ NSW EPA, *Williamstown RAAF Base contamination*, (www.epa.nsw.gov.au/MediaInformation/williamstown.htm), viewed 16 February 2016

⁵⁴⁰ NSW Health, *Frequently Asked Questions - Williamstown RAAF Site Contamination*, (www.health.nsw.gov.au/factsheets/Pages/RAAF-site-contamination-faq.aspx), viewed 16 February 2016

water supply and quality. This section provides three examples of members of CFA executive management whose evidence to the Committee contradicted other evidence about events at Fiskville.

Mr Roche, Chief Officer at the CFA from 1995 to 2001, said that the training at Fiskville was the best training available at the time and that the CFA was “acutely aware” of meeting its legislative requirements:⁵⁴¹

The people who ran the facility and taught at the facility, bearing in mind that when it first started there were only three people at that facility and it grew over the years, in my view they had a very high professional standard and took pride in their work ... I was more than satisfied with the work that was done there.⁵⁴²

The Committee is aware that on 31 May 1996, Mr Roche was provided with an audit report prepared by CFA employee Mr David Clancy that analysed use of dangerous goods, occupational health and safety, and compliance with the *Environment Protection Act 1970*. (This report is discussed in more detail in Case Study 3.)

Mr Clancy’s audit report made 44 recommendations, several of which related to a lack of compliance with legislation, such as:

Storage of explosives were not stored in compliance with the *Dangerous Goods (Explosives) Regulations 1988*. A proper explosives store at Fiskville required the construction of a separate building on the property, this was felt to be inappropriate due to security and the high risk of this being breached. The storage of the explosives were subject to two directions from HSO [Health and Safety Organisation].⁵⁴³

It has been evident for some time that there is a need for an induction program at Fiskville for any new staff, such a program is being worked on at this point and it will need to address training issues under Reg 427 of the Dangerous Goods Regulations.⁵⁴⁴

Only licensed operators to use the equipment and place the offending staff on notice if unlicensed operators are found to be operating equipment.⁵⁴⁵

Implement a process for the immediate removal of the two disused underground fuel tanks in accordance with AS1940-1993 Storage and Handling of Flammable and Combustible Liquids.⁵⁴⁶

The Committee heard evidence from Ms Angela Seach from the CFA’s Organisational Development department about more recent times. She told the Committee that the culture of the CFA is to “... dot every i and cross every t and make sure that everything is nailed down to a procedure”.⁵⁴⁷ This evidence contrasts with the evidence of Mr Myers in responding to a question from Committee member Mr Bill Tilley:

⁵⁴¹ Mr Trevor Roche, *Transcript of evidence* 14 December 2015, p.11

⁵⁴² *Ibid.* p.8

⁵⁴³ David Clancy, *Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*, (1996), p.26

⁵⁴⁴ *Ibid.* p.38

⁵⁴⁵ *Ibid.* p.39

⁵⁴⁶ *Ibid.* p.40

⁵⁴⁷ Ms Angela Seach, Acting Executive Manager, Organisational Development, CFA, *Transcript of evidence*, 27 January 2016, p.13

Mr TILLEY—With your practice as frontline, did you document any of the procedures or any of the things that you undertook?

Mr MYERS—I did not document all of them, I must admit - a bit old school. I did not document all of them.⁵⁴⁸

The Committee also heard evidence about the use of Dam 1 from Mr John Peberdy (member of the Board since 2009 and currently Acting Chair):

... as far as Dam 1 was concerned, the understanding I was given is that Dam 1 is a settling pond. Basically water flowed into it but we did not use water from it - but the sediment there is at the bottom of the dam predominantly. We are not using the water from that dam.⁵⁴⁹

Mr Jeff Green, Manager Workplace Health and Safety, provided similar evidence: “I mean, it would have been ideal to remediate the dam, yes. But again my understanding was that it was not used for firefighting water; it was a settling pond”.⁵⁵⁰

Again, Mr Peberdy’s and Mr Green’s evidence about Dam 1 not being used, and Ms Seach’s evidence about ‘dotting every i and crossing every t’, are both contradicted by the evidence of Mr Myers in response to questioning by Committee member Ms Vicki Ward:

Ms WARD—Was Dam 1 ever stopped from draining into Dam 2?

Mr MYERS—No.

Ms WARD—So water from Dam 1 continued to go into Dam 2 through the scoria?

Mr MYERS—Yes, yes. I was told by SRS that the contaminants were in the sludge and they were not in the water as such, so once it went through the scoria into Dam 2, you would not get all that stuff leaching into Dam 2 ...

The CHAIR—Was that in writing?

Mr MYERS—No, just informal - informal talk.⁵⁵¹

5.5.2 Management policies not being implemented

The Committee found several examples of CFA policies not being effectively implemented at Fiskville. The Committee’s observations in this regard were echoed in the recent Fire Services Review, which noted that ‘... the CFA has developed a training strategy, but its operational arm seems to have limited knowledge or awareness of its content. At a minimum there is a serious gap in communication.’⁵⁵²

⁵⁴⁸ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.24

⁵⁴⁹ Mr John Peberdy, Acting Chairperson, CFA, *Transcript of evidence*, 29 January 2016, p.4

⁵⁵⁰ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 28 January 2016, p.12

⁵⁵¹ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.8

⁵⁵² David O’Byrne, Victorian Government, *Report of the Victorian Fire Services Review - Drawing a line, building stronger services* (2015), p.25

Ms Sherry Herman, former Program Manager of the CFA's Informing the Future Program, believed that an ongoing challenge for the CFA has been persuading the organisation's different components to agree to a single occupational health and safety policy:

When I was trying to facilitate the development of health and safety procedures at the training campuses, it did meet with resistance. We would often find that things were happening that they were not telling us about. The health and safety guys would go down and have a look and come back to me and go, 'Hey Sherry, do you realise this is actually going on?', and I would have to escalate that and that would cause angst, because there were established ways of doing things at the campuses that I think the managers of those campuses had fallen into the practice of doing because it was expedient and because they could never get money for things. It was very hard to change that type of culture. When you try to come in over the top of that and provide an expert, they were suspicious of the experts and they sometimes saw them as people who were going to slow them down and make things harder⁵⁵³

Ms Claire Higgins, who was Chair of the Board from 1 October 2012 to August 2015, also gave evidence about the lack of occupational health and safety policies: "I would say that in terms of culture people felt strongly about the importance of safety, particularly following Linton. I am not sure that our systems and procedures were strong enough to give us the level of assurance that we might have liked to have had."⁵⁵⁴

(This view is illustrated by the failure to report a major health and safety incident to WorkSafe in 2002, which was a breach of the policy at the time. See Chapter 7.)

The CFA's most recent governance framework commits to: 'An obligation to ensure that Volunteer views, opinions and concerns are fully considered before adopting any new or changed policies, procedures or approaches which impact on them as Volunteers'.⁵⁵⁵ It also states: 'CFA leaders absorb bad news as well as good, and employees through CFA are encouraged to trust that they can communicate up the organisation without fear of negative repercussions.'⁵⁵⁶

This policy does not match what is happening 'on the ground', as shown by the discussion above about people's reluctance to raise safety concerns at Fiskville. The Committee believes that the CFA must do more to make trainees confident that raising concerns will not harm their acceptance into training courses.

As part of the recent improved capacity within the CFA, Ms Higgins referred to the CFA's commitment, following the Joy Report, to implementing two standards concerning occupational health and safety and the environment (AS 4801 and ISO 14001). An important part of these standards is accreditation, meaning the CFA will have to show how the standards are being met throughout the organisation. Ms Higgins provided the following evidence in response to questioning by Committee Chair Ms Bronwyn Halfpenny:

⁵⁵³ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.8

⁵⁵⁴ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.8

⁵⁵⁵ CFA, *Draft CFA Governance Framework* (2015), p.5

⁵⁵⁶ *Ibid.* p.7

Ms HIGGINS—The beauty of being compliant with the standards is that you then get accredited by the standards agency. I guess what it is doing is providing rigour and assurance around the systems and procedures for occupational health and safety or environment, whichever.

The CHAIR—But there was not really any discussion about how it was going to be implemented because the board genuinely may have thought it needed to do this? This is what we are going to do; this is what we aspire to do. I guess there is always the issue of how you assured yourself or felt confident that it was going to go through the whole of the organisation.

Ms HIGGINS—The first step would be the gap analysis. The next step would be the implementation plan. Part of that implementation plan would be assurances around how it would be disseminated across the organisation and certainly auditing against that standard. The standards association would go to multiple sites and talk to people to understand the connectivity to the implementation of the standard to, say, someone working on the Fiskville site.

The CHAIR—But that had not happened yet?

Ms HIGGINS—No, no. That is right. That was a commitment that the CFA made in response to the Joy Report. As I say, in the intervening period my recollection is that **there was not an extensive amount done around the implementation of those standards yet**, but it was definitely on the work plan of the health safety environment committee.⁵⁵⁷

Therefore, the standards were adopted by the Board following the Joy Report in 2012, yet there had been no action to implement them by the time Ms Higgins ceased performing the role of Chair of the Board in August 2015.

5.5.3 Compliance with Water Management Plans

The CFA produced three versions of its 'Management Plan Firefighting Water CFA Training College Fiskville', dated March 2008, June 2010 and May 2012. Full text versions of these are provided in Appendix 8.

The Committee considered a specific timeframe: from March 2008 - when the first Water Management Plan came into force - until June 2012 - when uncertainty surrounding reliance on mains water began. (Water usage at Fiskville from June 2012 is dealt with in detail in Chapter 4.) In doing so it examined particular aspects of the Plans and the CFA's compliance with them.

Reference to Class A recycled water

Each version of the Water Management Plan provides acceptable levels for five contaminants. The standards contained in each plan are summarised in the Table 5.1 below.⁵⁵⁸ (Note that these are not the only substances that water testing identified. They are, however, the only substances that the CFA included standards for in their Water Management Plans.)

⁵⁵⁷ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, pp.6-7 (emphasis added)

⁵⁵⁸ In all three versions of the management plan these standards appear under the heading '3. Operational Considerations'

Table 5.1 CFA Water Management Plans - standards

Measure	Level in 2008 Plan	Level in 2010 Plan	Level in 2012 Plan
E Coli	<10 orgs per 100ml	<150 orgs per 100ml	<150 orgs per 100ml
BOD ^(a)	<10 mg/l	<10 mg/l	<10 mg/l
pH	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0
Suspended solids	<5 mg/l	<5 mg/l	<5 mg/l
Pseudomonas Aeruginosa	<10 orgs per 100ml	<10 orgs per 100ml	<10 orgs per 100ml

(a) Biological Oxygen Demand.

It can be seen from Table 5.1 that all standards remained consistent from 2008 to 2012 except the safe levels of E. coli. In 2009, the level for E. coli was increased from <10 organisms per 100 ml to <150 organisms per 100 ml. It remained <150 organisms per 100 ml until June 2012. The background to this policy change is discussed in Chapter 7.

The impetus for the introduction of a Water Management Plan containing these standards was a 2007 report by Wynsafe Occupational Health Services:

It is recommended that Class A standard water plus a Pseudomonas of 10 orgs per 100 ml or less should be the target standard for firefighting water at training grounds. Testing has shown that the standard is generally achievable and adoption of this standard brings it in line with the CFA Draft SOP 9.37 “recycled Water – Use and Management of” which states that Class A recycled water may be used for operational activities, including training. The SOP also states that Class B or Class C recycled water may not be used for training purposes.

The recommended standard is therefore:

E. coli less than 10 orgs per 100 ml

BOD less than 10 mg / l

pH 6.0-9.0

Suspended Solids less than 5 mg / l

Pseudomonas less than 10 orgs per 100 ml.⁵⁵⁹

All three of the CFA’s Water Management Plans claimed: ‘The first 4 criteria of the standard comply with the Class A recycled water criteria recommended by the EPA and adopted by CFA in SOP 9.36 - Recycled Water - Use and Management Of.’⁵⁶⁰

⁵⁵⁹ Wynsafe Occupational Health Services, *Management of the Quality of Firefighting Water at CFA Field Training Grounds*, (2007), p.8

⁵⁶⁰ As noted in Chapter 4, in Victoria Class A reclaimed water is water produced from treatment processes such as:

- Primary, secondary (such as biological oxidation) and tertiary (such as nutrient removal) processes
- Advanced treatment (such as sand or membrane filtration)
- Disinfection (such as chlorination or ultraviolet treatment).

The CFA's submission to this Inquiry provides further background about the CFA's recycled water policy:

The first 4 criteria complied with the Class A recycled water criteria as set out in the "Class A Recycled Water Management Plan" agreed between CFA, MFESB and relevant water authorities in September 2007, and adopted by CFA in SOP 9.36 – "Recycled Water – Use and Management of". The level of *Pseudomonas aeruginosa* was based on advice from Ecowise Environmental (6 March 2008) as being an appropriate standard for firefighting water.⁵⁶¹

Correspondence from EPA Victoria to the Committee confirms that EPA Victoria approved the CFA and MFB's recycled water policy on 15 January 2008.⁵⁶²

The Committee is concerned that the Water Management Plans dated 2010 and 2012 that list the standard for E. coli bacteria as <150 organisms per 100 ml were not in fact compliant with the guidelines for Class A recycled water. The EPA's Guidelines for Environmental Management Use of Reclaimed Water⁵⁶³ state:

The principal focus for schemes requiring Class A reclaimed water is demonstrating that the treatment rain process can achieve sufficient log removal of pathogens from raw sewage to final product water to achieve median quantitative standards of:

- **less than ten E. coli per 100 millilitres;**
- less than one helminth per litre;
- less than one protozoa per 50 litres; and
- less than one virus per 50 litres.⁵⁶⁴

Mr Finegan confirmed this to the Committee when he referred to the EPA's Guidelines in stating: "Class A water, for example, will have an indicative objective of less than 10 E. coli organisms per 100 millilitres of water."⁵⁶⁵ That is, the guidelines cited above have been in place since 2003 and continue to apply.

Therefore, the Committee's view is that the 2010 and 2012 plans are misleading because they claim that a standard of <150 organisms per 100 ml for E. coli meets the criteria for Class A recycled water when it does not. This is inappropriate for a policy that is crucial to the CFA's management of water contamination.

This became particularly problematic when people outside the CFA were misled about whether the CFA was using Class A recycled water. As discussed in Chapter 4, the UFU and the MFB both asked the CFA whether or not it was using Class A recycled water at Fiskville for training and were told different things by different people within the CFA.

⁵⁶¹ CFA, *Submission 60*, p.46

⁵⁶² Correspondence from Mr Nial Finegan, CEO, EPA Victoria, to Chair, Environment Natural Resources and Regional Development Committee, 13 November 2015

⁵⁶³ EPA Victoria, *Guidelines for Environmental Management, Use of Reclaimed Water*, (2003), p.18

⁵⁶⁴ *Ibid.* p.29 (Emphasis added)

⁵⁶⁵ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.11

Mr Bourke, then CEO of the CFA, wrote to Mr Peter Marshall from the UFU on 25 June 2012 clearly stating that there was no Class A recycled water supply at Fiskville.⁵⁶⁶

Yet on 15 May 2012, Mr Justin Justin, then Officer in Charge of Fiskville, sent an email regarding water to Mr Lex De Man, then Executive Director, Operational Training and Volunteerism. The email, which Mr de Man forwarded to Mr Peter Rau, Chief Officer of the MFB, quoted the following sentence from the Water Management Plan: ‘The first 4 criteria of the standard comply with the Class A recycled water criteria recommended by the EPA and adopted by CFA in SOP 9.36 – Recycled Water – Use and Management Of.’

This may have led the reader to believe that Class A recycled water was in use. As such:

- Inconsistent information was being provided
- Not all of this information aligned with the CFA’s Water Management Plan.

5.5.4 Response to test results that did not meet the standards

As noted above, the CFA’s Water Management Plans provide acceptable levels for five contaminants. Two of these - *E. coli* and *Pseudomonas aeruginosa* bacteria – are useful examples in assessing the CFA’s response to test results that did not meet the standards outlined in the Water Management Plans.

(Again, the standard for *E. coli* was <10 organisms per 100 ml in 2008, then became <150 organisms per 100 ml in the 2010 and 2012 Plans. The standard for *Pseudomonas aeruginosa* remained consistent at <10 organisms per 100 ml.)

The schedule for water sampling and analysis for both of these bacteria was stipulated in the Water Management Plans and changed over time.⁵⁶⁷ According to the March 2008 Management Plan testing for *E. coli* was quarterly, and testing for *Pseudomonas aeruginosa* biannually (in July and December). According to the June 2010 Management Plan the schedule was modified to quarterly testing for both types of bacteria. In the May 2012 Management Plan the schedule was modified to monthly testing for both types.

The Committee analysed the results of water testing carried out at Fiskville and identified results that do not meet the standards. Examples of these are provided in Table 5.2 below - that is, all results cited below exceed the levels provided in

⁵⁶⁶ Correspondence from Mr Mick Bourke, CEO, CFA, to Mr Peter Marshall, Secretary, United Firefighters Union of Australia, Victorian Branch, 25 June 2012

⁵⁶⁷ In all three versions of the Water Management Plan the testing schedule appears under the heading ‘4. Schedule for Water Sampling and Analysis’

the Water Management Plan that applied at the time.⁵⁶⁸ These examples are all from March 2008 or later. March 2008 was when the first Water Management Plan (outlining standards for *E. coli* and *Pseudomonas aeruginosa*) was introduced.⁵⁶⁹

Table 5.2 Examples of water testing at Fiskville, 2008-2012

Date	E.coli		Pseudomonas Aeruginosa	
	Dam 1	Dam 2	Dam 1	Pit
	2008 standard: <10 orgs per 100ml 2010 and 2012 standard: <150 orgs per 100ml in the 2010 and 2012		2008, 2010 and 2012 standard: <10 orgs per 100ml	
5/06/2008				800 orgs per 100ml
9/12/2008	120 orgs per 100ml	13 orgs per 100ml		
16/03/2010	650 orgs per 100ml	91 orgs per 100ml		
12/04/2011	200 orgs per 100ml	2400 orgs per 100ml	210 orgs per 100ml	
29/02/2012		280 orgs per 100ml		

The Water Management Plans are clear about the action that should have been taken when the results did not meet the standards. All three versions of the Plan clearly state that water is not to be used in a number of instances, including when ‘unacceptable analytical test results are received’.⁵⁷⁰ The ‘control measures’ section of the plan also required: ‘Acceptable test results must be obtained before any water source can be used again.’⁵⁷¹

Mr James Stitz, CFA Executive Manager Frontline Learning and Development, confirmed this in evidence to the Committee:

Water must not be used if any of the conditions were as listed in ‘3 - Operational considerations’, and they talked about whether water looked visibly contaminated, smelled or in essence did not meet water quality standards. If the water analysis results indicate the water is not of the agreed standard, then the storage location is to be immediately isolated and tagged out. Notify the following: the manager of CFA Fiskville, PAD supervisors, health and safety representatives and all staff. Provide a copy of the test results to the manager of CFA Fiskville, PAD supervisors, site health and safety representatives and staff noticeboard. Use other sources of water, investigate the cause, determine a course of action and rectify the problem until there are acceptable results.⁵⁷²

⁵⁶⁸ It should be noted that the Committee has not sourced every water test result from the Fiskville site via the document discovery process, therefore this does not present a comprehensive overview of all results for these bacteria that may have exceeded the standards

⁵⁶⁹ Mr Mick Tisbury raises concerns about water results received prior to this - dating back to 2000, (Mick Tisbury, MFB, United Firefighters Union of Australia, *Submission 446*)

⁵⁷⁰ In all three versions of the Water Management Plan this sentence appears under the heading ‘3. Operational Considerations’

⁵⁷¹ This is a quote from point 9 in the 2010 and 2012 Water Management Plan under the heading ‘5. Control Measures’. The 2008 Water Management Plan had slightly different wording: ‘Acceptable test results must be obtained before any tagged out water source can have the tag out removed’

⁵⁷² Mr James Stitz, Executive Manager Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.11

In April 2009, Wynsafe Occupational Health Services found that the 2008 Water Management Plan was not being complied with: 'It should also be noted that the Management Plan has not been adhered as training has continued even though the water quality is unacceptable.'⁵⁷³

Further evidence about the CFA's compliance with the Plan is found in a January 2012 Health and Safety Review by Hazcon:

A review of the previous two test results for Dam 2 was undertaken and it was noted that some of the criteria were exceeded, such as BOD (Biological Oxygen Demand) and occasionally E. coli. The results were discussed with John Myers, PAD Coordinator, and his response that on days where E. coli results are high, he contacts Ecolab for guidance. In the past he has added "pool chlorine" to disinfect the water. Records of these corrective actions and subsequent retesting of treated water should be maintained to ensure the response was effective.⁵⁷⁴

As noted above, Mr Myers provided evidence that he did not keep records of all corrective action taken.⁵⁷⁵

The Committee's considers that there are two possible ways to view this evidence. Either:

- The Water Management Plan did not provide sufficient clarity about the need to stop using water for firefighting training when the test results exceeded the acceptable levels for contaminants set out in the Plan; or
- Those who were required to comply with the Plan did not do so.

The Wynsafe Occupational Health Services 2009 report found that firefighting training was continuing when the water quality was unacceptable and, as such, the Water Management Plan was not being complied with. This supports the second view listed above - that those who were required to comply with the plan did not do so. The 2012 Hazcon report found that documentation of procedures was required, whereas Mr Myers indicated to the Committee that he did not document all procedures.

FINDING 51: That a consultant advised the CFA in 2009 that the 2008 Water Management Plan was not being complied with.

FINDING 52: That the CFA did not follow the advice contained in a consultant's report in 2012 about keeping records of action taken to address water test results outside the parameters set out in the Water Management Plan.

⁵⁷³ Wynsafe Occupational Health Services, *SRS Proposal for Remediation of Sludge from Settling Pond at CFA Fiskville*, (2009), p.4

⁵⁷⁴ Hazcon Health Safety and Environmental Consultants, *Health and Safety Review CFA Fiskville Training College* (2012), p.9

⁵⁷⁵ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.24

This further supports the argument that insufficient attention was being given to the procedures to be followed when water quality was unacceptable. This placed individuals who were exposed to firefighting water that did not meet the standards at risk - something that the Water Management Plan presumably intended to prevent.

FINDING 53: That the CFA's Water Management Plans (dated March 2008, June 2010 and May 2012) were not always complied with, and CFA practice should have been to stop using water for firefighting training when test results exceeded the acceptable levels for contaminants set out in the plans.

5.5.5 Recommendations from Central Highlands Water

A final observation about the CFA's Water Management Plans applies to the 2012 Plan only. The 2012 Plan included a section that was not in the 2008 or 2010 Plans. It states that when there is a need to rectify a problem with the water: 'Water will be treated as per recommendations from Central Highlands Water.'⁵⁷⁶

Contrary to the 2012 Water Management Plan, the Committee heard evidence that Central Highlands Water did not provide advice about action to be taken in response to test results. Rather, Central Highlands Water understood that the CFA engaged consultants to provide it with such advice. This was emphasised by Mr Paul O'Donohue, Managing Director of Central Highlands Water:

I suppose the important point to make there is that we were not providing any consulting or advisory services; we were just providing the sample results in an accredited format ... I think that is an important point of differentiation, where we were not in the position where we were providing advice on any of those outputs.⁵⁷⁷

The Committee sought evidence from CFA witnesses about the role played by Central Highlands Water. Mr Myers confirmed that they provided the tests and he was responsible for assessing compliance with the standards.⁵⁷⁸

It is unclear why the CFA's 2012 Water Management Plan referred to Central Highlands Water providing recommendations about how the water should be treated. Both Central Highlands Water and Mr Myers gave evidence that this was not the role of Central Highlands Water. Further, in their evidence about the receipt of test results at Fiskville, neither Mr Stitz nor Mr Bourke referred to Central Highlands Water performing an advisory role.

This is another example of the CFA creating the impression that an external agency was performing a particular role at Fiskville when it was not. This was the impression that the CFA gave to WorkSafe during an inspection of Fiskville on 10 July 2012. The WorkSafe inspection report records that the inspectors were told by the CFA about recommendations obtained from Central Highlands Water.⁵⁷⁹

⁵⁷⁶ 2012 Water Management Plan under heading '5. Control Measures', Item 3

⁵⁷⁷ Mr Paul O'Donohue, Managing Director, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.4

⁵⁷⁸ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.5

⁵⁷⁹ WorkSafe Entry Report 10 July 2012, Visit Number V00002100486L

5.5.6 Committee's view

The Committee considers that - taken on face value - the CFA's Water Management Plan provided a clear procedure for assessing water test results and action to be taken when the results were not within the accepted parameters. If this policy had been properly implemented, and if firefighting training had ceased when the standards for contaminants were not met, many of the problems stemming from contaminated firefighting water at the Fiskville site may have been avoided.

The procedure to be followed when results outside accepted parameters were recorded was clear - do not use the water until subsequent test results within the parameters are received - yet the Committee heard that this was not followed on every occasion. Instead there was evidence of ad hoc attempts to treat the water using chlorine or other procedures that remained undocumented. This is despite the fact that the CFA was advised about lack of compliance with the Water Management Plan by two consultants: specifically, by Wynsafe Occupational Health Services in 2009 and Hazcon in 2012.

The Committee also observed several problems with the Water Management Plans. For example, the 2010 and 2012 Plans claim to set out standards consistent with Class A recycled water that in fact do not comply with those standards. As well, the 2012 Plan states that Central Highlands Water was performing an advisory role that it was not in fact performing.

These examples have been provided to show broader problems, rather than to be critical of any individual. The failure to follow consultants' advice and ensure policies are complied with rests with CFA executive management.

The Committee is concerned about the selective quoting of the Water Management Plan. In some instances it was used to allay concerns, whereas in other instances it was ignored so that firefighting training could continue.

The Committee is aware that there was a financial incentive to continue running training because it generated a large income for the CFA. For example, Ms Schroder from the MFB provided evidence about the amount the MFB spent on training its staff at Fiskville (without accommodation): "So if you look at a week of training at Fiskville and all the fuels and consumables, we were charged for the last course that was there approximately \$32,000 for those fuels and consumables."⁵⁸⁰

Staff on site may have felt competing pressure between continuing training and complying with the Water Management Plan. The Committee believes this was a false choice: the instruction from executive management should have been to prioritise health and safety above everything else.

580 Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.12

5.5.7 Addressing lack of implementation of policies

Ms Nolan provided the Committee with some examples of how the CFA is improving its governance in response to these problems, including:

- Reviewing staff and training facilities to ensure they follow appropriate standards and policies
- Encouraging training grounds to identify any emerging risks (including developing mitigation strategies) and report monthly
- Having an increased representation of operational and service delivery membership on the executive leadership team
- Contracting Ernst & Young to carry out an external review of the corporate governance framework (with a particular focus on Fiskville)
- Developing an improved business model (focusing on environmental and risk management areas)
- Developing a business intelligence unit.⁵⁸¹

The Committee raised its concern that the good intentions of the CFA Board may not disseminate throughout the whole organisation. In response, Ms Nolan acknowledged that the culture across every component of the CFA will determine if the Board's changes reach ground level: "We can do everything we can from our level, from the managers, but we obviously need our members and our staff to also be involved."⁵⁸²

5.6 Failure to prevent and manage contamination

This section discusses the CFA's response to knowledge about buried drums containing chemical contaminants, which is an illustration of the failure to take action to prevent and manage contamination.

As outlined in Chapter 4, over many years the CFA buried drums at Fiskville that contained chemical residues, or in some cases significant amounts of chemicals. From the late-1980s there is documentation indicating that the buried drums may pose risks to the safety of Fiskville's users.⁵⁸³

The Committee cites two examples of how the CFA dealt with buried drums at two different sites at Fiskville.⁵⁸⁴ The first, which involved commissioning a consultant's report in 1988 and removing the buried drums in 1991, represents a delayed response. However, the drums at this site were in fact dug up and disposed of appropriately in this instance.

⁵⁸¹ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, pp.8-9

⁵⁸² *Ibid.* p.10

⁵⁸³ In particular, the AS James Geotechnical report, which is referred to in more detail in Example 1

⁵⁸⁴ The Joy report suggests that there were four major drum burial sites and two drum extractions – see Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.103-106 for an overview

The second example involved consultants' reports in 1996 and 1997 recommending that the drums at a different site be dug up and removed. However, the CFA failed to follow this advice and knowledge about the location of the drums was lost. In early 2002, a tractor driver was exposed to fumes when the drums were accidentally exposed. It was only after this exposure occurred that the drums were removed from the Fiskville site.

5.6.1 Example 1: Delayed action: 1988 – 1991

Mr Alan Bennett (who became an instructor at Fiskville in 1978) wrote to the CFA in 1987 about the health problems he was experiencing. Mr Bennett's specialist had requested details about the chemicals he had been exposed to when burying drums in 1982 to facilitate his diagnosis and treatment⁵⁸⁵ (further details about how the CFA responded to Mr Bennett's health concerns are provided in Case Study 2). Testing of the contents of these buried drums was carried out by AS James Geotechnical Pty Ltd, which provided a report to the CFA in July 1988.

The laboratory report attached to the AS James report described the contents of the drums as: 'resins or solvents [that] may include benzene, toluene, xylene and phenol.'⁵⁸⁶ The laboratory report further noted: 'materials of this type are only slowly biodegraded and their presence would normally constitute an environmental problem.'⁵⁸⁷ With respect to the risks associated with the buried drums, the consultant warned that, even if an impermeable barrier were placed around the burial site, there was still a risk that over time leachate could reach groundwater. The consultant concluded that best practice would be to remove and dispose of the drums appropriately and recommended a company that could be employed to remove the drums (Cleanaway).⁵⁸⁸

An internal CFA memo concerning material in drums dated 8 September 1988 refers to contact being made with EPA Victoria about disposal of waste material. It states:

Discussions with the E.P.A. indicated that their recommended contractors would not be able to effectively dispose of the materials indicated in the consultant's report because of the following: -

1. All contractors require the material to be stored in sound containers. The integrity of the drums at Fiskville is extremely doubtful.
2. The contractors require the material to be fluid, to allow pumping. The material in the site is now solid and would therefore not be readily pumpable.

The flashpoint and possible toxicity of the materials identified does not allow for land fill disposal.

⁵⁸⁵ Letter to CFA Chairman from Mr Bennett dated 16 September 1987, provided to the Committee by Mr Alan Bennett at public hearing on 27 July 2015

⁵⁸⁶ AS James, *Waste Disposal Site Fiskville Training Centre*, (1988), Appendix 1, Report East Melbourne Laboratories, p.3

⁵⁸⁷ Ibid.

⁵⁸⁸ Ibid. Paragraph 3.02

RECOMMENDATION: Due to the difficulties outlined it is recommended that the site remain undisturbed as this appears to be the only available option.⁵⁸⁹

The reference to the ‘consultant’s report’ is presumably the AS James report from July 1988 (in light of the memo being drafted in September 1988).⁵⁹⁰ The Committee is very concerned about the CFA’s conclusion documented in this memo for three reasons:

- The AS James report had recommended the material should be removed, and noted a risk of groundwater contamination if they remained buried
- EPA Victoria advised that the material was not suitable for landfill, therefore it is difficult to understand why the CFA thought it was suitable to remain buried at Fiskville
- The recommendation in the memo indicated that leaving the material buried was the ‘only available option’. This was inconsistent with the AS James recommendation that a particular waste disposal company (Cleanaway) be used to remove the drums.

The drums involved in this incident were removed from the site in mid-January 1991, two-and-a-half years after the consultant advised that they should be removed.

The Committee’s searches of the CFA Board meeting minutes do not reveal any evidence of a discussion about the removal of the drums at Board level⁵⁹¹ or evidence about the decision-making process that led to the removal of the drums. However, the Joy Report suggests that it was the CFA Chairman (Mr Kevin Shea) who directed that the drums be removed:

In January 1991, at the direction of the CFA Chairman who had been appointed in 1989, some 75 drums and 253 tonnes of contaminated soil were removed from Fiskville by Australian Waste Processors Pty Ltd. There is no record in the CFA Board minutes that the Board was made aware of the original incident, the drum burial or the consultant’s report until the Chairman conveyed his decision to dispose of the drums. According to the Chairman, some members of the Board disagreed with his decision.⁵⁹²

The Committee also heard evidence from Mr Raymond Greenwood, the Chair of the Board from 1 November 1984 to 14 July 1989. Mr Greenwood was Chair when Mr Bennett was seeking information and when the AS James report was received, but was not in the role when the drums were removed. Mr Greenwood provided the following evidence to the Committee:

⁵⁸⁹ CFA memorandum from Deputy Chief Officer (Operations Services), to Acting Chief Officer, 8 September 1988

⁵⁹⁰ From its extensive search of the records, the Committee is unaware of any other report that the memo could be referring to

⁵⁹¹ A search was conducted of all minutes of meetings held in 1990 and meetings held in the first half of 1991

⁵⁹² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.14

In September 1988, and apparently acting on EPA advice, the decision was made to keep the drums buried. At this stage I consider in retrospect that the actions taken were appropriate; however, I would have preferred more prompt action being taken on the receipt of the James report, including seeking a medical opinion on the dangers posed by the drum contents and a response prepared for Mr Bennett.⁵⁹³

Mr Greenwood may have been referring to the decision recorded in the memo dated 8 September 1988. Mr Greenwood's memory of events - admittedly almost 30 years later - is contradicted by the memo. According to the memo, EPA Victoria did not recommend that the drums remain buried. Rather, the memo recorded that EPA Victoria advised the CFA that its contractors could not remove the drums. Following this, the Deputy Chief Officer at the time recommended that the drums be left undisturbed. Mr Greenwood concluded that "more prompt action" should have been taken in response to the AS James report, which the Committee considers to be an under-statement.

The Committee's view is that the CFA should have developed a three-pronged strategy. First, provide Mr Bennett with the results of the analysis of the content of the drums as soon as the results were received in order to facilitate his medical treatment. As outlined in Case Study 2, Mr Bennett first requested information on 16 September 1987, the CFA received the AS James report in July 1988, the CFA provided Mr Bennett with an extract of the report on 24 August 1990 and did not provide him with a section of the report until 29 October 1990. That is, there was a delay of just over two years in between the CFA receiving the AS James report and providing any information about the results contained in the report to Mr Bennett. A further two months passed between when the CFA provided Mr Bennett with some information from the report (August 1990) and when Mr Bennett was provided with an extract of the report (October 1990).

Secondly, arrange for the specific drums that Mr Bennett was involved in burying to be removed as soon as possible.

Thirdly, arrange a further site assessment to identify other buried drums and, upon such identification, remove those drums to prevent further contamination. The events discussed in example 2 (below) would then have been avoided.

FINDING 54: That the CFA's failure to immediately provide Mr Alan Bennett with the results contained in the AS James Geotechnical Pty Ltd report may have been prejudicial to Mr Bennett's medical treatment because he required as much information as possible about the chemicals to which he was exposed.

5.6.2 Example 2: Inaction: 1996 - 2002

The second example is summed up concisely in the Joy Report as follows:

Loss of corporate memory is also revealed in the case of drum burials. In 1997 a consultant's report clearly mapped a historical drum burial site south of the airstrip and recommended it be cleaned up. Not only does this clean up not appear to have

⁵⁹³ Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.7

occurred, the existence of the site appears to have been forgotten until a bulldozer driver ripping the area for plantation establishment was overcome by fumes in 2002.⁵⁹⁴

The Committee's evidence differs from the Joy Report's summation because the Committee has identified two consultants' reports referring to the need to remove the drums, rather than one. The Committee has identified a report by EPA Victoria as also relevant.

Two consultants prepared reports in the mid-1990s that alerted the CFA to the need to remediate the drum burial sites. In November 1996, a report by the consultant CRA ATD recommended that: 'contaminated soils from the drum burial pits be excavated, and subject to the presence of drums, be treated on-site, or otherwise disposed of off-site to appropriate landfill'.⁵⁹⁵

In 1997, a report by consultant Rio Tinto developed a remediation action plan for the PAD [practical area for drills] and the old fire training pits. The report noted that remediation of the drum burial pits would be the subject of a future remediation action plan.⁵⁹⁶ There is no evidence that such a plan was developed.

EPA Victoria conducted a site inspection on 23 July 1996. The report of this inspection, dated 21 August 1996, was addressed to Mr Clancy. The report clearly identified the location of the buried drums. It stated: 'Through investigation of historical records and accounts, areas where drums of liquid waste were buried were identified.'⁵⁹⁷ The report also refers to an excavation plan being developed.⁵⁹⁸ There is no evidence that such a plan was developed.

The evidence from these reports prepared in the mid-1990s suggests that there was an awareness of other buried drums. It is likely that - based on the earlier AS James report - that these drums would also contain dangerous chemicals.

In March 2002, CFA staff at Fiskville contracted a tractor driver to prepare an area of the site for planting of gum trees. While doing the work the driver struck a row of buried drums, releasing unknown chemicals that wafted through the tractor's air conditioning vent and into the cab and also may have splashed onto his clothing. The exact circumstances and the effects on the driver are disputed, and are discussed further in Chapter 7. However, both Mr Mark Glover (Officer in Charge at Fiskville at the time) and Mr Myers confirmed that after striking the drums the driver experienced nausea and light headedness as a result of the fumes permeating his cab.⁵⁹⁹ He reportedly continued to drive the tractor once the nausea subsided.

⁵⁹⁴ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.126

⁵⁹⁵ CRA ATD, *Fiskville Training College Review of Site Assessments and Remediation Options*, (1996), p.31

⁵⁹⁶ Rio Tinto, *Draft Fiskville Training College Remediation Action Plan*, (1997), p.4

⁵⁹⁷ Correspondence from Mr Paul Day, South West Region, EPA, to Mr David Clancy, Fire Officer, CFA Fiskville, 21 August 1996, p.1

⁵⁹⁸ *Ibid.* p.3

⁵⁹⁹ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.12

The important point is that this incident should not have occurred because the CFA had knowledge about the location of the buried drums and failed to take action in the late 1990s. Had appropriate action been taken, the driver would not have been exposed to the chemicals. Furthermore, others present at Fiskville on the day (such as Mr Myers, who washed the tractor after the drums were perforated) would not have been exposed to the chemicals.

As far as the Committee is aware, the health status of the contractor is unknown and no effort appears to have been made by the CFA to contact the driver to check up on him.

RECOMMENDATION 9: That the CFA contact the driver who was exposed to chemicals in the early 2002 drums incident, ascertain his current state of health and offer him the opportunity to participate in its health surveillance program.

Not all buried drums were removed and the sites were not remediated⁶⁰⁰ and a lack of record keeping meant that knowledge about the location of the drums became lost. The response by the relevant regulators (WorkSafe and EPA Victoria) to this incident is discussed in Chapters 7 and 8 respectively. Of interest for this Chapter is the action taken by the CFA in response to the contamination.

There is evidence that the CFA arranged for the drums to be removed after the incident occurred in early 2002. Mr Myers gave evidence that the drums were removed on the Monday following the discovery (which occurred on a Saturday). He told the Committee: “A company came in [...] I am pretty sure they came in on the Monday and they cleaned all the drums up and put them in containers and all that, took them down to, I think it was, Tullamarine”.⁶⁰¹

The Joy Report provides some further details about exactly what was removed and the date of the removal:

Removal of the drums and associated contaminated soil from the area is documented in a tax invoice dated 5 March 2002 from Chemsal (Laverton North) specifying the removal of 56 drums, 136 tonnes of contaminated soil and approximately 2940 litres of product over four days. This also supports the estimate of the date of the incident. Environment Protection Authority transport certificates issued 5 March (no 817000 and 849683), 6th March (no 849684 and 844217), 7 March (no 844218) and 15 March (no 844226, 844228 and 844230) provide further support for this date.⁶⁰²

⁶⁰⁰ In fact the EPA Auditor gave evidence to the Committee that his investigations found “A small number of buried drums were identified within one of the landfills” - Mr Darryl Strudwick, Auditor, AECOM, *Transcript of evidence*, 25 May 2015, p.96

⁶⁰¹ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.13

⁶⁰² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.99. The Committee asked EPA Victoria to provide copies of these waste transport certificates. EPA Victoria advised the Committee in correspondence dated 16 March 2016 that they do not keep certificates longer than 7 years. However, the EPA did confirm that two certificates were issued on 5 March 2002, two certificates were issued on 6 March 2002, one certificate was issued on 7 March 2002 and three certificates were issued on 15 March 2002. All certificates were for transport of material from Fiskville to Chemsal Pty Ltd

According to the Joy Report, Mr Glover authorised the removal of the drums.⁶⁰³ Mr Glover gave evidence to the Committee that the CFA spent \$80,000 to have the drums removed.⁶⁰⁴ This is consistent with the evidence Mr Glover gave about the amount he was authorised to spend. He told the Committee: “In relation to what I could spend, I think I could spend up to about \$100,000 without any issues.”⁶⁰⁵

The Committee believes that this matter clearly should have come to the Board’s attention. However, the Committee’s review of the minutes of the CFA Board meetings and Board subcommittee meetings did not find any record of discussion of the removal of the drums, nor approval of this expenditure.⁶⁰⁶

The Committee’s view is that the CFA should have acted to remove the buried drums following the reports in 1996 and 1997 identifying the presence of the drums (even if they did not act in response to the AS James report in 1988 about drums in a different location on the Fiskville site). The drums were an obvious source of contamination - as well as posing risks to human health - and the CFA’s inaction, combined with the loss of knowledge about where they were located, had serious consequences.

FINDING 55: That if the CFA had removed buried drums before knowledge about the location of the drums was lost, the incident in early 2002 - exposing several people to the chemicals in the drums - would not have occurred.

5.7 Response to external reviews

The CFA has been subject to a large number of external reviews. The following are examples:

- Coronial Inquest into the deaths of five firefighters in a wildfire at Linton in 1998 (2002)
- Victorian Bushfires Royal Commission (2009)
- Report of the Inquiry into the Effect of Arrangements Made by the Country Fire Authority on its Volunteers (2011)
- Professor Joy’s Independent Fiskville Investigation (2012)
- Report of the Victorian Fire Services Review (2015).

Ms Lucinda Nolan, the current CFA CEO, gave the following evidence about these reviews:

⁶⁰³ ‘The then OIC authorised the removal of the drums by Altona based company Chemsal’ - Mr Glover was Officer in Charge from October 2001 until June 2004 - Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.106

⁶⁰⁴ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.7

⁶⁰⁵ *Ibid.* p.3

⁶⁰⁶ A search was conducted of Board meeting minutes for meetings held on 29 January 2002, 25 February 2002, 25 March 2002, 1 May 2002 and 27 May 2002. A search of the Finance subcommittee minutes for meetings held on 13 February 2002 and 6 June 2002 also yielded no results

One of the other issues, which I think you will be more than aware of, is that plethora of external review that the CFA has been subject to over the next x amount years. We are now trying to centralise all recommendations onto one singular recommendations database that would provide a very clear overview in governance so we can record, we can monitor, we can track and we can make sure that all of those recommendations are implemented.⁶⁰⁷

The Committee is particularly concerned that the recommendations database is a recent initiative of the CFA. An organisation that is provided with numerous recommendations across a number of years would have developed a database a long time ago if they took external scrutiny seriously.

The Committee also heard evidence about how external reviews have impacted upon the CFA. Commissioner Lapsley (who spent 25 years at the CFA) expressed the view that the large number of reviews into the CFA over the past several years has resulted in the organisation being “almost inquired out”⁶⁰⁸. This may have resulted in senior management developing what he described as a ‘victim mentality’ that prevents them from admitting their own mistakes:

There is a sense of that, in my opinion, and that is why I talk about the victim mentality - that is, ‘We are being reviewed and have not done anything; why would we need to be reviewed because we have done it all right?’. I think there is a slim tendency of some people in there about that. I do not think it is across the broad sector of the CFA, I think the broad sector of the CFA is a little bit more attuned to what is the right impact for the Victorian community.⁶⁰⁹

The Committee’s view is that the CFA, as a public body, must remain open to valid criticism and suggestions as to how it can continuously improve - however frequent these may seem.

5.7.1 Examples of failure to respond to recommendations

The Committee heard evidence about how the deaths of five firefighters at Linton in 1998, and the subsequent Coronial Inquest which reported in 2002, ushered in a new era in firefighter safety at the CFA. For example, Mr Len Foster (CFA Chairman at the time of the Linton fire and the Coronial Inquest report) referred to Linton as “... that one thing [that] has made the CFA an infinitely better place and safer place that it was in the early 90s and so on”.⁶¹⁰

In his report into the Linton deaths, the Coroner made a number of recommendations to the CFA (and the Department of Natural Resources and Environment (DNRE)) about the need to deploy trained ‘Safety Officers’ to major fires whose sole responsibility would be to assist in the management of firefighter

⁶⁰⁷ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.9

⁶⁰⁸ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.10

⁶⁰⁹ Ibid.

⁶¹⁰ Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.15; See also the quote by Ms Higgins referred to above at 5.5.2

safety.⁶¹¹ Those recommendations were based on an extensive analysis by the Coroner of the poor management of occupational health and safety by the CFA and DNRE at Linton and about the role played by ‘safety officers’ in the USA.⁶¹² Recommendation 9 referred specifically to the need for a ‘Principal Safety Officer’ at each ‘Type 3’ (or major) fire. Recommendation 15 was that the CFA and DNRE should ‘develop standards relating to the number of Safety Officers required at a particular fire’.

The Royal Commission into the February 2009 Black Saturday fires had cause to consider whether the CFA had deployed ‘Safety Officers’ to the numerous Type 3 fires it responded to on that day. The Commission’s report noted that, despite having 200 trained ‘safety advisers’, the CFA and Department of Sustainability and Environment (DSE) only appointed two Incident Management Teams on the day. The Commission recorded that it was ‘disappointed that despite the appointment of safety advisers being mandatory for level 3 incidents, on 7 February [2009] this standard operating procedure was largely ignored’.⁶¹³

The Royal Commission Report noted that ‘the Linton report sought to raise the profile and priority of safety at bushfires and recommended that safety officers (not advisers) be appointed for all fires’.⁶¹⁴ It therefore re-iterated that the CFA (and the DSE) ‘adopt the title ‘safety officer’ (as opposed to ‘safety adviser’) and require without exception that a safety officer be appointed to every level 3 incident management team’.⁶¹⁵

According to the report of the Bushfires Royal Commission Implementation Monitor, recommendation 26 was implemented by the CFA and the DSE in December 2010.⁶¹⁶

Another recommendation of the Linton Inquest in 2002 was:

The CFA (with the assistance of DNRE) develop, as part of its training program, a package of information focusing on general occupational health and safety issues aimed at improving the knowledge and understanding of firefighters (full-time and volunteers) and supervisors of this area.⁶¹⁷

Mr Glover told the Committee that he had completed a number of occupational health and safety exams, however that practice “... eventually died out”.⁶¹⁸ He said the practice now is that every Officer in Charge across the CFA is expected to keep up-to-date with changes in legislation. This is made difficult by the fact that, according to Mr Glover, the CFA does not provide formal training sessions as

⁶¹¹ State Coroner’s Office, *Report of the Investigation and Inquests into a Wildfire and the Deaths of Five Firefighters at Linton on 2 December 1998* (2002), recommendations 9-15 on pp 659-661

⁶¹² Ibid. See generally chapters 20 (and especially 20.9), 21 and 23

⁶¹³ The Hon. Bernard Teague AO, *Victorian Bushfires Royal Commission*, (2010), Summary, p.19

⁶¹⁴ Ibid.

⁶¹⁵ Ibid. Recommendation 26, p. 135

⁶¹⁶ Victorian Government, *Implementing the Government’s Response to the 2009 Victorian Bushfires Royal Commission*, (2011), pp.55-56

⁶¹⁷ The Hon. Bernard Teague AO, *Victorian Bushfires Royal Commission*, (2010), Summary, p.19

⁶¹⁸ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.4

occupational health and safety is “... a pretty boring subject”.⁶¹⁹ (The Committee understood Mr Glover’s comment to be a reference to the technical or ‘dry’ nature of legislation.)

FINDING 56: That the CFA has failed to implement recommendations of external reviews, particularly in the area of occupational health and safety.

The Committee notes Ms Nolan’s evidence that the CFA is centralising the recommendations from external reviews that have dealt with the CFA into one database.⁶²⁰ The Committee does not wish to add to the CFA’s burden unnecessarily, and notes the evidence of Commissioner Lapsley that the CFA feels ‘inquired out’. However, based on its analysis, the Committee has major concerns about the CFA’s commitment to implementing the improvements recommended by external reviews. The Committee is particularly concerned that recommendations relating to occupational health and safety must be addressed as a matter of urgency.

RECOMMENDATION 10: That the Victorian Government conduct an audit of CFA occupational health policies – both those by the CFA Board and those recommended by external reviews – to determine if they have been implemented effectively throughout the organisation.

5.8 CFA management of occupational health and safety

The failures of the CFA to manage occupational health and safety at Fiskville and to implement the recommendations of reviews discussed above, appear to the Committee to be manifestations of a broader failure to manage occupational health and safety generally.

The evidence before the Committee is that the CFA first appointed a Manager of Occupational Health and Safety in 1994.⁶²¹ Mr Jeff Green is the first and only person to perform this role. He explained to the Committee that a lot had changed in the CFA’s management of occupational health and safety since that time:

... in late 1996 we engaged another health and safety person. In about 2008 we engaged six field-based health and safety people to provide support to the districts and regions. In 2013 we engaged one specifically for the training ground ...⁶²²

At the CFA Board meeting on 19 April 1999, the Board was provided with an audit of occupational health and safety due diligence conducted by the National Safety Council of Australia (dated January 1999). The findings of the audit were summarised in the audit report as: ‘a number of OH&S [occupational health

⁶¹⁹ Ibid. p.14

⁶²⁰ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.9

⁶²¹ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.3. Mr Green informed the Committee that when he was appointed in 1994 he was “the first health and safety person within a voluntary fire service in Australia”, Ibid. The Committee has no way of ascertaining if this is correct

⁶²² Ibid.

and safety] System deficiencies and non-compliance with OHS Law'.⁶²³ When referring to the fact that the CFA only had one occupational health and safety manager at the time, the report noted: 'His ability to implement and monitor an OHS Management System ensuring legal compliance is impossible with the resources currently available'.⁶²⁴

Mr Green and the Director of Human Resources, Mr Brent Jones prepared a 'Three Year Occupational Health and Safety Strategic Plan' in response to this audit. The Document was an item for discussion at the Board meeting on 21 June 1999 when it was endorsed by the Board.⁶²⁵ The Strategic Plan committed the CFA to achieving accreditation to WorkSafe's safety management system known at the time as 'SafetyMAP'. The minutes of the Board's discussion of the Strategic Plan note that 'Mr Jones advised that an appropriately skilled person, who had experienced with WorkCover, was being employed to assist with implementing the plan'.⁶²⁶

The Committee was interested in the follow-up action taken by the CFA to achieving SafetyMAP accreditation. The Board minutes show that on 29 May 2000 (that is, more than a year later) a Board member asked for 'a progress report on the implementation of the SafetyMAP recommendations at the next meeting'. However, there was no record of any discussion of the accreditation at the subsequent two Board meetings (held on 26 June 2000 and 31 July 2000).

A later reference to SafetyMAP was found in the minutes of the 23 September 2002 meeting:

The Board noted the Information Paper on OHS Management System (AS 4801). It was noted that WorkSafe has recently released the 4th edition of Safety MAP, which is now aligned with AS 4801. This edition has two levels or stages, being the Initial level and Advanced level. It was agreed that implementation of these levels is required as soon as possible however it is not considered that the awarding of the certification is a high priority.⁶²⁷

It appears to the Committee that this was another commitment by the CFA that was not followed through to implementation. It also seems to demonstrate inadequate flow of information about occupational health and safety matters within the CFA.

Ms Nolan told the Committee that in the past the CFA had relied on one Occupational Health and Safety Manager, Mr Green. Not surprisingly, Ms Nolan considered it unfeasible for one person to manage occupational health and safety across an organisation as large as the CFA. To remedy this, the CFA has recently "... brought in different expertise and capability around occupational health and safety and environmental management, because I think previously the

⁶²³ Board Information Sheet, Agenda Item 5.5.1, 19 April 1999 CFA Board meeting, p.7

⁶²⁴ Ibid. p8

⁶²⁵ CFA Board meeting minutes, 21 June 1999

⁶²⁶ Ibid.

⁶²⁷ CFA Board meeting minutes, 23 September 2002

organisation did not have that expertise embedded within it”.⁶²⁸ The Committee is very concerned, in light of the clear recommendations of the Linton Coronial inquest more than ten years ago, that this is something the CFA has only addressed ‘recently’.

An example of this improved capability is the creation by the CFA in 2015 of a new position: ‘Executive Manager Workplace Health, Wellbeing and Safety’. The Position Description for this role describes the role as leading ‘the organisation’s Workplace Health, Safety & Environment and Organisational Wellbeing functions with the responsibility for managing strategic direction, governance and legal responsibilities affecting CFA in these areas’.⁶²⁹

Prior to the creation of this new position, Mr Green’s role included similar functions. According to Mr Green’s position description, he was responsible for ‘developing and implementing best practice occupational health and safety policies, programs and processes that will deliver compliance and the high performance culture to support the clearly articulated emergency management objectives’.⁶³⁰

The Committee asked Mr Green about how he had fulfilled his role as the CFA’s Manager of occupational health and safety in relation to Fiskville. He was asked who had the responsibility in the CFA of making sure that the CFA complied with occupational health and safety legislation at Fiskville and was it him. He replied that: “The overall responsibility for the training grounds obviously sat with whoever the director was at the time for the training department ...”. He explained that his role was “to provide support”.⁶³¹

A number of the reports about occupational health and safety problems at Fiskville that have been discussed in this Final Report were drawn to Mr Green’s attention and he was asked about his awareness of them. Committee member Mr Tim Richardson asked Mr Green about the 2012 ALS report that identified contamination in Dam 1. He replied that he “was not physically aware of it”.⁶³² When asked if he had been consulted on the report, Mr Green said that he had not. Mr Green was asked about the 1996 report authored by Mr Clancy that named Mr Green in several recommendations.⁶³³ Mr Green said that he had only recently been made aware of the report.⁶³⁴ Mr Green was asked by Committee member Ms Vicki Ward why it would be that he would only have become aware of the Clancy report recently. He replied:

⁶²⁸ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.6

⁶²⁹ Executive Manager Workplace Health, Wellbeing and Safety, Position Description dated 21 April 2015

⁶³⁰ Manager, Occupational Health and Safety, Position Description dated 23 June 2005. The Committee was informed that this is the current position description for Mr Green’s role

⁶³¹ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.7

⁶³² *Ibid.* p.8

⁶³³ For example, ‘Implement safety map at Fiskville as a model for future CFA direction in this area utilising both Mr Jeff Green CFA and Ballarat HSO resources that will be supplied at no cost’ David Clancy, *Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*, (1996), p.4. This report is discussed above. See also Case Study 3

⁶³⁴ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.9. When he was recalled to give further evidence on 28 January 2016, Mr Green provided an unconvincing explanation that he had been referring to a different 1996 report by David Clancy – see Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 28 January 2016, p.3. Only one 1996 report by Mr Clancy has been produced to the Committee

Because other people, by looking at the historical records I have scanned through, were dealing with it. I cannot say why they did not.⁶³⁵

Mr Green's attention was drawn to the minutes of the CFA Board's meeting in April 2000 in which the Chair of the Board is recorded as advising that 'a specialist company would be engaged to assist CFA in developing a strategic overview and a senior OH&S practitioner will be employed to raise the level of activity'.⁶³⁶ He was asked about this by the Committee's Deputy Chair Mr Tim McCurdy:

Mr MCCURDY—Do you recall which company that was?

Mr GREEN—No

Mr MCCURDY—So you do not know who the senior OHS practitioner was either?

Mr GREEN—Not at that time.⁶³⁷

In light of this evidence, Committee member Ms Vicki Ward suggested to Mr Green that he had been "very siloed" to which he responded:

Again, do not forget that at that time I was one person. I am not defending myself; I am just saying that logistically I was one person in CFA since 1994. Prior to that they had no-one providing the support to the organisation.⁶³⁸

The Committee accepts that this may be an explanation for the minimal role apparently played by Mr Green in addressing the many occupational health and safety issues at Fiskville. However, at the latest by 2005 according to his position description, he had seven staff reporting to him.

The Committee finds it difficult to understand how Mr Green remained ignorant of the mounting concerns at Fiskville as documented in a number of internal and external reports between 1996 and 2012. This is particularly in light of the report by Mr Clancy in 1996. As shown in Case Study 3, Mr Clancy went to great lengths to document occupational health and safety, dangerous goods and environmental concerns at Fiskville and recommend improvements. Mr Clancy's proactive approach contrasts starkly with Mr Green's.

The Committee notes that there is, on the evidence before it, one issue in which Mr Green was quite heavily involved. In Chapter 7, the correspondence between the CFA and EPA Victoria concerning the CFA's desire to increase the acceptable level of E. coli in its firefighting water was examined.⁶³⁹ It was there detailed that EPA Victoria advised the CFA to discuss the issue with WorkSafe as the occupational health and safety regulator. Mr Stitz of the CFA, who was overseeing this issue, informed the Committee that he discussed EPA Victoria's advice with Mr Green and was advised by Mr Green that it was not necessary to

⁶³⁵ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.10

⁶³⁶ CFA Board meeting minutes, 3 April 2000

⁶³⁷ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.5

⁶³⁸ *Ibid.* p.11

⁶³⁹ The acceptable level for E. coli bacteria was increased from <10 organisms per 100 ml to <150 organisms per 100 ml

consult with WorkSafe. As a result (as detailed in Chapter 7), WorkSafe remained ignorant of this significant change in the CFA's treatment of firefighting water for several years while the CFA went ahead and increased the acceptable level by 1,400 per cent.

The Committee expects that the incumbent in Mr Green's role would be responsible for oversighting at least:

- Dissemination of occupational health and safety policies and procedures within the CFA
- The provision of training and instruction to CFA personnel about those policies and procedures
- Dissemination of consultant's reports to appropriate people
- Implementation of key recommendations in those reports
- Implementation of key recommendations from external inquiries, and
- Communication about occupational health and safety up to the Board and down to those in the workplace.

This Final Report details the manner in which the CFA failed repeatedly to address all of these functions in relation to the management of occupational health and safety at Fiskville over several decades leading to the closure of the site in 2015. Based on the evidence before it, the Committee has serious reservations about how Mr Green has fulfilled his crucial role at the CFA in relation to Fiskville. There appears to be no corresponding concern on the part of the CFA, which continues to entrust Mr Green with this responsibility.

RECOMMENDATION 11: That the CFA review its occupational health and safety management structure.

5.9 Conclusion

The Committee is concerned by the themes discussed and findings made in this Chapter. It is concerned that:

- Individuals felt they could not raise criticism internally
- The CFA lost the trust of employees and those external to the organisation, in particular by failing to keep them informed about the contamination and health risks
- The CFA also failed to keep organisations using Fiskville to train their staff, neighbouring property owners and members of the community informed
- CFA management had different perceptions about what was occurring at Fiskville to those working 'on the ground'
- CFA policies were not effectively implemented throughout the organisation - particularly important policies governing water quality

- The CFA failed to prevent and manage contamination, as illustrated by how buried drums containing chemical contaminants were handled
- The CFA did not implement recommendations from external reviews - particularly those relating to occupational health and safety
- The CFA did not allocate sufficient priority and resources to the management of occupational health and safety.

RECOMMENDATION 12: That the Emergency Management Victoria Inspectorate be given responsibility for overseeing compliance with occupational health and safety requirements at CFA training facilities.

6 The role of past and present CFA executive management

AT A GLANCE

Background

This Chapter commences with a brief discussion of how the Committee has interpreted Terms of Reference (3). It then outlines the CFA's organisational structure before providing an overview of what CFA senior management and the Board knew about four key themes in this Inquiry: (1) chemical contamination; (2) occupational health and safety; (3) dangerous goods storage and disposal; and (4) concerns surrounding water supply and quality. These four themes cover both historical contamination (for example, buried drums) as well as recent contamination (for example, water contamination and chemicals from firefighting foams).

The discussion of knowledge surrounding these themes is divided into four levels of CFA executive management: (1) the Board; (2) Chief Executive Officers / Chief Officers / Deputy Chief Officers; (3) middle-level management; and (4) Officers in Charge at Fiskville.

The Chapter also compares what CFA executive management witnesses told the Committee at public hearings with the documentary evidence.

This Chapter addresses Terms of Reference (3).

Key findings

- That AirServices Australia alerted the CEO of the CFA to PFOS / PFOA contamination at Fiskville in April 2010. The Board was advised that AirServices Australia would no longer make a \$12 million investment at Fiskville partly due to the presence at Fiskville of 'chemical contaminations'.
- That individuals at all levels of CFA executive management - from those in charge at Fiskville up to the Board - had some knowledge about contamination at Fiskville prior to December 2011 when the *Herald Sun* published its first article.
- That the evidence before the Committee contradicts statements by many members of CFA executive management that they were unaware of problems at Fiskville prior to December 2011.
- That the Committee doubts the assertions of CFA senior executive managers that they did not know about contamination at Fiskville, and therefore could not take action to address contamination. The failure of CFA management to act on the knowledge catalogued by the Committee unnecessarily exposed another generation of Fiskville trainees to risk.

6.1 Interpretation of Terms of Reference (3)

Terms of Reference (3) requires the Committee to provide a study of the role of past and present ‘executive management at Fiskville’. The Committee made two decisions in interpreting this. The first concerns the meaning of ‘executive management’. This expression commonly refers to a team of individuals at the highest level of an organisation who have the day-to-day responsibilities of managing the organisation.

Generally speaking, ‘executive management’ is headed by the Chief Executive Officer (or similar) and exercises powers conferred on it by the Board of Directors but the ‘executive’ excludes the Board itself.⁶⁴⁰ This is because the Board has the management of the executive management part of its functions (among others), as opposed to the day-to-day management of the organisation. For example, the Victorian Public Sector Commission observes that Boards are responsible for governance, which may include ‘establishing performance measures for the chief executive officer and a succession plan’.⁶⁴¹

As noted below, the CFA does not have a Board of Directors. It is an Authority constituted by nine members who are appointed under the *Country Fire Authority Act 1958*.⁶⁴² The Committee heard evidence that one of the responsibilities of the Authority is monitoring the activities of the organisation.⁶⁴³ The Committee has therefore determined that it is appropriate to consider the Authority itself as part of its examination of Terms of Reference (3).

The second decision relates to the first. Terms of Reference (3) requires the Committee to consider the executive management *at* Fiskville rather than, for example, the executive management *of* Fiskville. One of the themes in the evidence heard by the Committee has been the inability of those in charge at Fiskville to convince their superiors in the CFA’s hierarchy to address problems at Fiskville. The remediation of Dam 1 is one such example.⁶⁴⁴ In those circumstances, the Committee has determined that it would be inappropriate for it to confine its examination to the managers at Fiskville.

6.2 The CFA’s organisational structure

The organisational structure of the CFA is important background to this discussion.

⁶⁴⁰ Australian Government, *Corporate Governance Handbook for Company Directors and Committee Members. A Reference Guide for Understanding the Serious Commitment of Being a Company Director or Committee Member* (2nd edition, June 2010), p.5

⁶⁴¹ Victorian Public Sector Commission, *Public Entity Roles and Other Stakeholders*, (vpsc.vic.gov.au/governance/governance-structure-and-roles/public-entity-roles-and-other-stakeholders/), viewed 16 February 2016

⁶⁴² Section 7 of the *Country Fire Authority Act 1958* (Victoria) provides that the Authority is to consist of nine members.

⁶⁴³ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.2

⁶⁴⁴ See Chapter 4

The CFA is a statutory authority appointed pursuant to s. 6(1) of the *Country Fire Authority Act 1958*. It is a body corporate⁶⁴⁵ and consists of nine members appointed by the Governor in Council pursuant to s. 7(1) of the Act. The *Country Fire Authority Act 1958* makes no reference to a 'Board' of the CFA but the CFA's submission to this Inquiry makes numerous references to the CFA's 'Board'. The CFA's Annual Report also refers to the CFA 'Board' in the section on 'Corporate Governance'.⁶⁴⁶ Further, a number of witnesses before the Inquiry have referred to the 'Board' of the CFA. For example, Mr John Peberdy described himself as the acting chairperson of the Board.⁶⁴⁷ The Committee notes that, strictly speaking, Mr Peberdy is the acting chairperson of the Authority appointed under s. 7(3) of the *Country Fire Authority Act 1958*. However, for convenience, this Final Report refers to the CFA's Board when it is referring to the Authority itself.

The main challenge the Committee faced in its analysis of the CFA's organisational structure was that this has changed over the timeframe covered by the Inquiry. The CFA is structured differently in 2016 compared to past decades. These changes are briefly referred to.

This part begins with an overview of the executive management structure of the CFA and the interrelationship between management, the Board and the Minister. It then focuses on the CFA Board - specifically the composition, Board responsibilities and the subcommittee structure.

6.2.1 Overview of executive management of the CFA

The *Country Fire Authority Act 1958* is clear about the role of the Minister – the CFA is 'subject to the general direction and control of the Minister in the performance of its functions and the exercise of its powers'.⁶⁴⁸ This is reflected in the CFA's Board Charter which states: 'The Board is first and foremost accountable to the Minister for Police and Emergency Services and the Government.'⁶⁴⁹

Historically, the day-to-day control of the CFA was in the hands of its Chief Officer who was accountable directly to the Authority. The Chief Officer was in control of all of the brigades. While the operational control of the brigades remains the duty of the Chief Officer,⁶⁵⁰ the Chief Officer - since 2000 - has reported to the CEO of the CFA.⁶⁵¹ The CEO in turn reports to the Authority.⁶⁵²

⁶⁴⁵ *Country Fire Authority Act 1958* (Victoria), s. 6(2)

⁶⁴⁶ CFA, *CFA Annual Report 2014/2015*, (2015), pp.26-27

⁶⁴⁷ Mr Peberdy also referred to joining "the Board" in 2009. Mr John Peberdy, Acting Chairperson, CFA, *Transcript of evidence*, 29 January 2016, p.2

⁶⁴⁸ *Country Fire Authority Act 1958* (Victoria), s. 6(1)

⁶⁴⁹ CFA, *Board Charter*, (2014), p.2

⁶⁵⁰ *Country Fire Authority Act 1958* (Victoria), s. 27

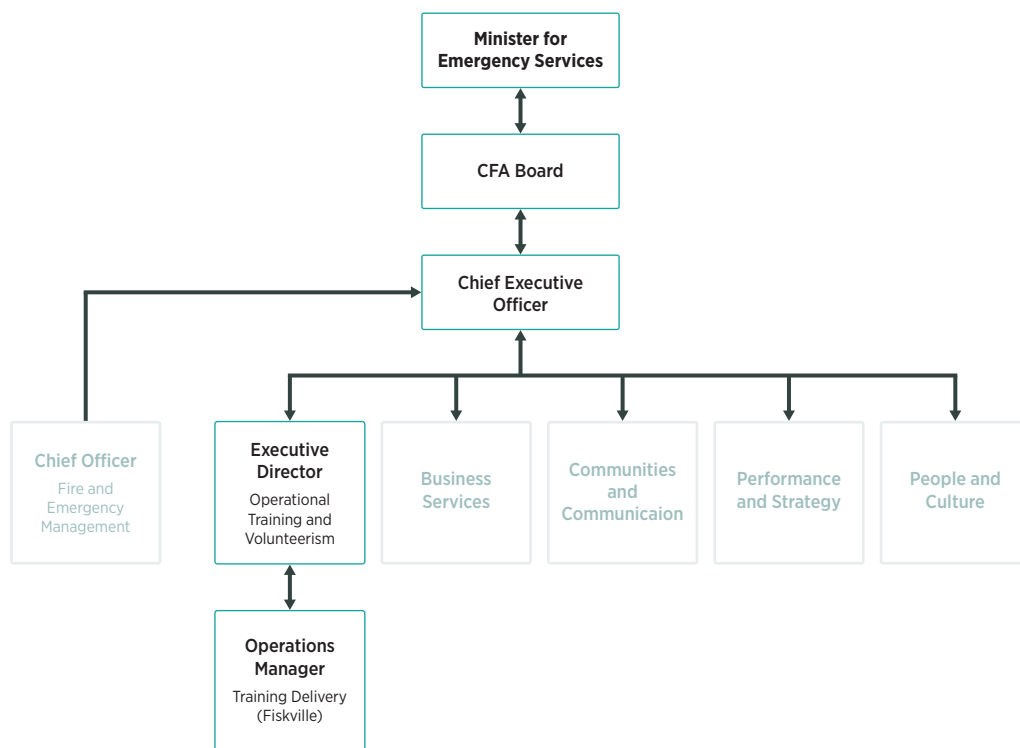
⁶⁵¹ *Country Fire Authority Act 1958* (Victoria), s. 16A (inserted in 2000)

⁶⁵² *Country Fire Authority Act 1958* (Victoria), s. 16A(3) and (4)

The 2015 Fire Services Review was critical of this management structure which it said was out of step with that prevailing interstate and ‘potentially creates confusion’.⁶⁵³ It recommended the reinstatement of the Chief Officer as the head of the CFA. The Chief Officer ‘would be supported by an executive of which one member would be responsible for managing corporate services’.⁶⁵⁴

It may be seen from the chart below that immediately prior to the closure of Fiskville, the Officer in Charge at Fiskville reported to the Executive Manager - Operational Training and Volunteerism, who in turn reported to the CEO who reported to the Chair of the Board.

Figure 6.1 CFA organisational chart – circa 2014 / 2015



Mr Justin Justin, Officer in Charge at Fiskville from 2011 to 2015, stated:

In my role as the officer in charge the chain of command was as follows: we had Mick Bourke as the CEO, Euan Ferguson as the chief officer of CFA and Lex de Man, who was the executive director of operational training and volunteerism. As the operations manager on site, I reported directly to the executive director, who in turn either approved what I needed to be approved or would seek further approval up the chain of command.⁶⁵⁵

653 David O’Byrne, *Victorian Government, Report of the Victorian Fire Services Review - Drawing a line, building stronger services*, (2015), p.25

654 David O’Byrne, *Victorian Government, Report of the Victorian Fire Services Review - Drawing a line, building stronger services*, (2015), recommendation 13

655 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.3

Information provided by the CFA to the Committee shows that this structure changed six times between 1971 and 2015.⁶⁵⁶ Rather than provide organisational charts showing all of these changes, Table 6.1 below summarises the evidence from witnesses about the structure when they were part of executive management. This provides a snapshot of different points in time.

However, some particularly significant changes to highlight are:

- In 1994, the position of Director of Risk Management was created. A Director of Human Resources was also appointed with responsibility for Occupational Health and Safety⁶⁵⁷
- In 2001, the role of CEO was created⁶⁵⁸ and area managers began reporting to the CEO instead of the Chief Officer, thereby opening up a more direct line of reporting to the Board⁶⁵⁹
- Following the recommendations of the Victorian Bushfires Royal Commission, the CEO took on responsibility for training delivery and the Chief Officer had responsibility for operational service delivery⁶⁶⁰
- In March 2011, the position of Executive Director, Operational Training and Volunteerism was created.

Table 6.1 CFA executive management evidence regarding organisational structure

Witness and position	Comments about organisational structure of CFA
<p>Mr Raymond Greenwood Chair of the Board, November 1984 to July 1989.</p>	<p>The CFA was organised very formally between the manager, finance and administration and the chief officer. I was attempting to move most of the responsibility for the non-operational aspects under the deputy chairman as part of the process of improving the organisation.</p> <p>The chief officer was responsible for the conduct and behaviour of all the volunteers, the brigades, the stations, the officers, and that included Fiskville of course.</p> <p>The chief fire officer, from day-to-day activities, would report through me, but he would always present a report to the board. He had certain specific responsibilities—as I said, broadly the control and discipline of all of the brigades and stations, including Fiskville^(a)</p>
<p>Mr Len Foster Chair of the Board, 1991 to 1997 Executive Chair, 1997 to 2001 Chair of the Board, 2001 to 2007</p>	<p>Fiskville remained the responsibility of the chief officer, unlike the regions, until about 1996. Then after that, because it essentially is a training establishment, the human resources department, through the training division, took responsibility for training delivery. And in 1998, probably because of the issues that were emerging around the 1996 period, the board determined that there would be a full-time manager based in charge of the entirety of Fiskville, other than the policy direction and so on—the functional management activity^(b)</p>

⁶⁵⁶ Correspondence from Mr Michael Wootten, Chief Executive Officer, to Chair, Environment, Natural Resources and Regional Development Committee, 17 March 2015

⁶⁵⁷ Ibid. p.17

⁶⁵⁸ Ibid; see also David O'Byrne, *Victorian Government, Report of the Victorian Fire Services Review - Drawing a line, building stronger services* (2015), p.45

⁶⁵⁹ Ibid. p.3

⁶⁶⁰ Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.3

Witness and position	Comments about organisational structure of CFA
Mr Trevor Roche Chief Officer, 1995 to 2001	Originally, when I was appointed to that role, as Mr Foster says, I had responsibility for virtually all of the organisation below my level and the area managers reported to me, along with a number of other departments and personnel. I think at the time when I first started I had 21 direct reports, including the training area. That only prevailed for a short period of time. When the restructure that Mr Foster talked about came into place and the area structure was reinforced, then those area managers and all of their subordinates no longer reported to me but reported to the chief executive officer, I think, at the time, who was the same as the chairman—but for all intents and purposes, the CEO ^(c)
Mr Mark Glover Officer in Charge at Fiskville, October 2001 to June 2004	My responsibility as officer in charge was to basically run Fiskville. So anything to do with Fiskville essentially came through me in regards to, say, budgets and all that kind of stuff, I had to handle. ^(d) I reported to Graham Fountain, who was the executive manager, I think, at that stage and ended up being a deputy chief officer of the CFA ^(e)
Mr Euan Ferguson Chief Officer, November 2010 to November 2015	The CFA Act is quite clear on the role and responsibility of the chief officer as distinct from the CEO and the board. If I could perhaps be overly simplistic, the role of a CEO is to implement the responsibilities and the directions of the board. The chief officer, by comparison, has got some explicit responsibilities for the management of resources, particularly operational resources; for the control of incidents; for the issuing of warnings and so on. They are responsibilities which are explicit to the chief officer. The chief officer is assisted by a number of deputy chief officers ^(f)
Mr Lex De Man Executive Director, Operational Training and Volunteerism, March 2011 to March 2015	I was then appointed to the role of executive director, so I was responsible for the overall strategic direction of operational training for the organisation and also for volunteerism. It was the first time that the organisation had established a dedicated directorate to support both volunteerism and operational training. In essence, my understanding is that that came out of the royal commission into the bushfires ^(g)

(a) Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.2

(b) Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.3

(c) Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.3

(d) Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.2

(e) *Ibid.* p.3

(f) Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.3

(g) Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.2

6.2.2 Composition of the CFA Board

Currently, the CFA Board includes five members appointed by the Minister and four selected from a panel nominated by Volunteer Fire Brigades Victoria.⁶⁶¹ The United Firefighters Union, which represents the industrial interests of CFA ‘firefighters employed on a permanent full time basis, permanent part time basis and on a casual basis’,⁶⁶² has no representation on the Board.

Mr Andrew Ford, CEO of Volunteer Fire Brigades Victoria, explained to the Committee the process by which that organisation nominates members for the CFA Board:

This issue was reviewed several years ago by Ernst & Young and there was a recognition that the CFA needed to go to a skills-based Board but also a recognition that in a predominantly volunteer-based organisation one of the many core skills sets

⁶⁶¹ *Country Fire Authority Act 1958* (Victoria), s. 27

⁶⁶² United Firefighters Union of Australia, *Submission 449*, p.2

is a knowledge of volunteerism and volunteer culture. For that reason there needed to be a strong volunteer knowledge and expertise cohort on the Board. The nominees that we put up also need to possess and demonstrate our core corporate governance skill sets. They are nominated through the process that we support through the CFA Act. They are appointed by the minister, and once a Board member is appointed to the CFA Board, they comply with fiduciary responsibilities and rules and code.⁶⁶³

Section 7 (2) of the *Country Fire Authority Act 1958* states:

The members of the Authority are to be appointed having regard to any of the following—

- knowledge of, or experience in, commercial, technical, operational, legal or financial matters;
- expertise in fire services, emergency management, land management or any other field relevant to the performance of the functions of the Authority.

The composition of the CFA Board has changed over time. Mr John Peberdy, the CFA's Acting Chairperson, told the Committee that whereas in the past the Board was dominated by people with practical firefighting skills, it now has a greater mix of "operational people" and members with expertise in governance issues:

I think over time we have had a move away from the Board being very operational to much more of a focus on the Board providing governance. So I think that just reflects the change that has taken place across Board tables everywhere. I mean, the Board had a lot of very operational people on the Board, whereas today we would have our four VFBV representatives, who are operational volunteer firefighters, who are there, but then we are trying to get a broader skill base as well across the board.⁶⁶⁴

Murray and White echo Mr Peberdy's evidence above in arguing that management began to be more professional under the chairmanship of Mr Len Foster in the mid-1990s, by recruiting from outside the organisation.⁶⁶⁵ This included restructuring the Board from a representative model to a business model.⁶⁶⁶

The change of the CFA to having a skills-based Board did not occur until September 2014.⁶⁶⁷

Throughout this Inquiry the Committee was struck by how often improvements in governance at the CFA were instigated by appointees from outside the organisation, as Mr Peberdy stated above in reference to a shift in the balance of Board members away from solely 'operational people' to professionals skilled in governance issues.

⁶⁶³ Mr Andrew Ford, Chief Executive Officer, Volunteer Fire Brigades Victoria, *Transcript of evidence*, 15 June 2015, p.230

⁶⁶⁴ Mr John Peberdy, Acting Chairperson, CFA, *Transcript of evidence*, 29 January 2016, p.14

⁶⁶⁵ Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, pp.309-311

⁶⁶⁶ CFA Board minutes 16 August 1999. The minutes record that proposed changes to the CFA Act 'would also include a change to the composition of the Authority, including changing from the representative type board to a business board, and a reduction in the number of positions'

⁶⁶⁷ CFA, *CFA Annual Report 2014/2015*, (2015), p.2

6.2.3 CFA Board responsibilities

In the Victorian public sector, Directors / Board Members have a responsibility to act, exercise and comply with the Directors' Code of Conduct issued by the Public Sector Standards Commissioner. The code is based on ss. 7 and 79 of the *Public Administration Act 2004*. Directors / Board Members must do the following:

- Act with honesty and integrity
- Act in good faith in the best interests of the public entity
- Demonstrate leadership and stewardship.⁶⁶⁸

The CFA's Board Charter states that the Board '... conducts its duties consistent with the Victorian Public Sector values'⁶⁶⁹ and that the Victorian Public Sector Directors' Code of Conduct '... is binding on CFA Board members'.⁶⁷⁰

The CFA Board is responsible for:

- The recruitment and appointment of the CEO and Chief Officer
- The establishment of strategy
- The establishment of key performance indicators for the CEO
- Monitoring the activities of the organisation
- Giving guidance under delegation to the organisation.⁶⁷¹

The CFA provides the following instruction to its Board members regarding the level of knowledge they are expected to have:

So that members can operate effectively, they need access to current, adequate and reliable information. Members should ensure that sufficient information is provided to them to allow proper consideration before meetings of the Board. A member who is not satisfied with the information that is being provided should take positive action to bring the matter to the attention of the Chair or the CEO. Sometimes it may be appropriate that the matter is raised at Board level to determine if there is a general problem with the information being provided.⁶⁷²

6.2.4 Board subcommittees

Throughout the operation of the Board there have been various subcommittees established to advise the Board on specific issues. Committees are smaller groups of Board members (they may include staff members as well). Examples of CFA Board subcommittees that have existed at various times include: People Strategy

⁶⁶⁸ Victorian Public Sector Commission, *Directors' Code of Conduct*, (www.vpsc.vic.gov.au/governance/board-directors/directors-code-of-conduct/), viewed 12 December 2015

⁶⁶⁹ CFA, *Board Charter*, (2014), p.2

⁶⁷⁰ *Ibid.* p.5

⁶⁷¹ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.2

⁶⁷² CFA, *Board Member Responsibilities and Code of Conduct*, p.5

Committee, Bushfire Preparedness Committee, Strategic Governance Committee and Industrial Relations Committee. (The minutes of several subcommittees are referred to in 6.3 below.)

Ms Claire Higgins, CFA Chair from 2012-2015, made reference to two recently established CFA committees that she believed were examples of the Board taking a more proactive role in relation to Fiskville. The first committee Ms Higgins referred to was the Fiskville Committee, which was established in December 2011 following the *Herald Sun* story. The second was the Health, Safety and Environment Committee, established in late 2012 following a recommendation from the Joy Report.⁶⁷³

The Health, Safety and Environment Committee Charter states that its objectives are to:

Assist the Board in discharging its responsibilities by oversight and review of:

- Health, Safety and Environment (HS&E) risk matters arising out of the activities of CFA and the impact of these activities on employees, volunteers, contractors, suppliers and the communities and environments in which CFA operate.
- Undertake functions delegated by the Board including the review of HS&E policies.
- The promotion of CFA's HS&E practices to manage related risks.

Provide a formal forum for communication between the Board and management on HS&E issues.⁶⁷⁴

The CFA's Annual Report for 2014-15 refers to the following subcommittees, in addition to the Health, Safety and Environment Committee:

- People, Remuneration and Culture Committee
- Service Delivery Committee
- Finance, Risk and Audit Committee.⁶⁷⁵

6.3 CFA executive management knowledge prior to December 2011

Having provided an overview of the CFA organisational structure, the Chapter now considers the knowledge of CFA executive management prior to December 2011. This date has been chosen because the Committee received a lot of evidence suggesting CFA executive management lacked knowledge about contamination at Fiskville prior to the *Herald Sun*'s December 2011 exposé.

Some examples are provided in Table 6.2 below.

⁶⁷³ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, pp.5-6

⁶⁷⁴ CFA, *Health, Safety and Environment Committee Charter*

⁶⁷⁵ CFA, *CFA Annual Report 2014/2015*, (2015), pp.26-27

Table 6.2 Executive management knowledge of contamination at Fiskville

Witness and position	Evidence
Ms Claire Higgins Board Chair, October 2012 to August 2015 Board Deputy Chair, October 2007 to October 2012	Between 2007 and 2011, I do not believe that water contamination was raised at Board level. We had papers on recycling of water, we had papers on redevelopment of Fiskville. I do not have a recollection of water contamination coming to the Board until December 2011 ^(a)
Mr Euan Ferguson Chief Officer, November 2010 to November 2015	The CHAIR —Were you aware of anything prior to the newspaper articles, both in December 2011? Prior to that, had you heard anything about contamination of the site? Mr FERGUSON —No. The CHAIR —No rumours or whispers or anything? Mr FERGUSON —No. ^(b)
Mr Mick Bourke Chief Executive Officer, September 2009 to February 2015	When the story broke in 2011 it was like a bombshell in CFA, and people initially did not seem to want to put up their hand and say that there were things that could have been wrong at Fiskville ^(c)
Mr Peter Rau Officer in Charge at Fiskville, April 2005 to July 2008	On 6 December 2011 it was the first time I became aware of any concerns at Fiskville, and that was the <i>Herald Sun</i> article that came out, and Brian Potter went public on a number of matters ^(d)

(a) Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.19

(b) Mr Euan Ferguson, *Transcript of evidence*, 28 January 2016, p.4

(c) Mr Mick Bourke, *Transcript of evidence*, 21 December 2015, p.3

(d) Mr Peter Rau, Chief Officer, Metropolitan Fire and Emergency Services Board, *Transcript of evidence*, 23 November 2015, p.2

The focus of this section is what four different levels of executive management did know about Fiskville's problems prior to December 2011. The discussion commences with Board-level knowledge. It then moves on to discuss knowledge among Chief Executive Officers / Chief Officers / Deputy Chief Officers; middle-level management and finally the Officers in Charge at Fiskville.

The discussion centres around four themes central to this Inquiry:

1. Chemical contamination⁶⁷⁶
2. Occupational health and safety⁶⁷⁷
3. Dangerous goods storage and disposal⁶⁷⁸
4. Concerns surrounding water supply and quality.⁶⁷⁹

⁶⁷⁶ Relevant to Terms of Reference paragraph (1)

⁶⁷⁷ Relevant to Terms of Reference paragraphs (1) and (2)

⁶⁷⁸ Relevant to Terms of Reference paragraph (1)

⁶⁷⁹ Relevant to Terms of Reference paragraphs (1) and (2)

In some instances the same example is used to show knowledge at multiple levels of executive management. There are also instances where a particular example relates to more than one theme, in which case the discussion has been included under the most appropriate theme.

6.3.1 Board-level knowledge

The discussion of Board-level knowledge draws on the Committee's analysis of minutes of CFA Board and Board subcommittee meetings that were obtained via the document discovery process (as outlined in Chapter 2).⁶⁸⁰

As the Committee is predominantly relying on minutes of meetings, in many cases there is a lack of context supplied about the discussions and resolutions (this is particularly the case for topics 2-4).⁶⁸¹ That is, the minutes may record a decision, or provide only a brief summation of the discussion. The Committee was not able to obtain evidence from witnesses from all relevant eras to elaborate on the discussions at Board level recorded in the minutes. Even when the Committee did receive evidence during public hearings, many witnesses were understandably unable to recall events and discussions from meetings that occurred many years ago.

Despite the absence of context, or verification surrounding the text in the minutes, the extracts from minutes demonstrate that there was Board-level knowledge about contamination at Fiskville prior to December 2011. This knowledge spans the decades since 1970 that are encompassed by the Committee's Terms of Reference.

Chemical contamination

There is evidence that the Chairman of the Board in 1997 – Mr Len Foster – was made aware of potential environmental contamination caused by fire retardants and foam. Mr Foster wrote a letter to EPA Victoria on 17 February 1997 seeking advice about how to handle the potential contamination. This is discussed in Chapter 8.

In 2008, the CFA reached an agreement with AirServices Australia⁶⁸² for it to use the Fiskville site for training AirServices Australia personnel. AirServices Australia withdrew from the agreement in 2010 due to 'contamination' at Fiskville. Prior to its withdrawal, AirServices Australia was planning to make a significant investment towards infrastructure at the Fiskville site, including building a water treatment plant that the CFA could also make use of.

⁶⁸⁰ Section 12(2) of the *Country Fire Authority Act 1958* (Victoria), provides that a copy of the Authority's minutes signed by the chairperson is to be taken in any court to be prima facie evidence of the 'decisions or resolutions and of the other matters recorded therein'. The Committee is of course not a Court. However, it notes that it has not been informed by the CFA, the Victorian Government Solicitor's Office or anyone else that any of the minutes that have been provided to it are inaccurate in any way. It has proceeded accordingly to assume the accuracy of those minutes

⁶⁸¹ Occupational health and safety, dangerous goods storage and disposal and concerns surrounding water quality

⁶⁸² AirServices Australia is a Commonwealth statutory agency that provides 'Aviation rescue fire fighting' services at airports around Australia, including Avalon and Tullamarine airports in Victoria - see (www.airservicesaustralia.com/about/our-facilities/aviation-rescue-fire-fighting/)

The Minutes of the CFA Board meeting held on 24 November 2008 record that the CFA CEO (Mr Neil Bibby) advised the Board that there was a 'Proposal from AirServices Australia to undertake a \$12m development at Fiskville for private training for emergency services staff at airports'.⁶⁸³

A 'Memorandum of Understanding (MoU), Use of Aviation Rescue and Firefighting (ARFF)', was signed by CFA and AirServices Australia on 22 December 2008 and applied for a period of three years. Mr James Stitz, A/g Manager, Learning and Development, is listed as the CFA contact person in the MoU. The MoU makes the following reference to a water treatment plant: 'an Environment Management System will be installed at *AirServices* cost to decontaminate liquids used on the FTG [fire training ground⁶⁸⁴]. The Environment Management System will have sufficient spare capacity to treat existing *CFA* FTG contaminants.'⁶⁸⁵

This agreement was reported in the CFA Annual Report 2009 as follows: 'An agreement was reached with Aviation Fire Fighting Division of AirServices Australia for the use of the Fiskville training facilities.'⁶⁸⁶

An information paper was prepared for the Board on 25 May 2009 titled 'AirServices Australia Fiskville Proposal'. The paper notes that AirServices Australia initially approached the CFA in late 2007. The information paper noted that the next steps included establishing a Project Management Structure that meets the requirements of both organisations. Further: 'In accordance with the MOU: Commencement of environmental testing at Fiskville to determine the suitability of the site for the housing and operation of a Category 10 large mock-up.'

A further information paper prepared for the Board on 22 February 2010 notes that the facilities AirServices Australia would have developed included a separate fire training ground to house an aircraft simulator, a training centre with components available for joint use and a waste water treatment plant potentially available for joint use.⁶⁸⁷

On 29 April 2010, the CEO of AirServices Australia - Mr Greg Russell - wrote to the CEO of the CFA - Mr Mick Bourke. The letter referred to the work that had been done following the completion of the MoU between the two organisations in December 2008. It also referred to the proposal including an 'environmental management system' to treat existing contaminants at the Fiskville site. It noted that:

⁶⁸³ CEO Report No. 3353/CEO Minutes of CFA Board Meeting 24 November 2008, p.2

⁶⁸⁴ This acronym is spelt out in Clause 10 of the MoU relating to Interpretation

⁶⁸⁵ *Memorandum of Understanding between Air Services Australia and the CFA*, (2008), p.4

⁶⁸⁶ The text appears under the heading 'Other Organisations', and subheading 'Agreements and Support' - CFA, *CFA Annual Report 2009* (2009), p.43

⁶⁸⁷ Board information paper 22 February 2010, 'Attachment 1: Country Fire Authority/AirServices Australia Key Principles Governing the Construction and Operation of an ARFF Facility at CFA Fiskville Training College'

We have recently been advised that the CFA will require this system to have sufficient spare capacity to be capable of expansion to treat additional volumes associated with your projected growth at the site, as well as those of third party users such as the Metropolitan Fire Brigade.⁶⁸⁸

The letter goes on to state: ‘Also of concern is that PFOS and PFOA have been detected in the soils at Fiskville’ and ‘With a shared water treatment system, this contamination will likely spread quickly through AirServices’ assets’.⁶⁸⁹

The letter concludes: ‘The ongoing delays and new environmental concerns have led me to re-evaluate the suitability of the Fiskville site for our requirements and I have come to the conclusion that the development does not meet Airservices’ long term needs.’⁶⁹⁰

Mr Bourke provided a report to the CFA Board about AirServices Australia’s withdrawal on 31 May 2010. The report stated:

As you would recall Airservices Australia (ASA) had been in discussions with the CFA with a view to co-habiting (sic) with us at our Fiskville Training Facility. They have confirmed that they are no longer interested in this option due to the time delays **and issues of potential chemical contaminations** at Fiskville.⁶⁹¹

The Committee notes that although Mr Bourke’s report did not specify the type of contaminants that AirServices Australia was concerned about in his report to the Board, he did alert the Board to contamination at Fiskville. Of concern to the Committee, the minutes of the Board meeting held on 31 May 2010 do not record any discussion of this matter.⁶⁹² The Committee would expect that a reference to ‘chemical contaminations’ at the CFA’s principal flagship training facility might be expected to have prompted some discussion by its Board.

The Committee heard evidence from two CFA witnesses about the AirServices Australia withdrawal. Mr James Stitz, Acting Manager, Learning and Development from 2008 until late 2010 said:

At the time we had AirServices Australia, as I mentioned earlier,⁶⁹³ building a prop at Fiskville and they commenced that process in about 2007 ... We were a fair way through it and then they wrote us a letter saying they no longer wanted to continue with the building of the prop. They cited one of the reasons was PFOS⁶⁹⁴ and there was another element that was almost the same but I cannot quite remember what it was.

Ms WARD—PFOA.

Mr STITZ—PFOA.⁶⁹⁵ Yes.

⁶⁸⁸ Correspondence from Mr Greg Russell to Mr Mick Bourke, 29 April 2010

⁶⁸⁹ Ibid.

⁶⁹⁰ Ibid.

⁶⁹¹ CEO report to Board 31 May 2010 (emphasis added)

⁶⁹² The CEO report is referenced in ‘Section 4 Reports’ under the subheading ‘CEO’s report - incl. Dashboard (4.05pm) Report No: 3597/CEO’

⁶⁹³ The earlier reference is Mr James Stitz, Executive Manager Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.6

⁶⁹⁴ Perfluorooctane sulfonate

⁶⁹⁵ Perfluorooctanoic acid

Ms WARD—So AirServices Australia decided to no longer continue a relationship with the Fiskville site and physically be on the Fiskville site because of the PFOS and the PFOA levels.

Mr STITZ—Yes, they closed down the project.⁶⁹⁶

Therefore, in addition to the CEO, Mr Stitz was clearly aware that the withdrawal of AirServices Australia was due to PFOS / PFOA contamination.

Ms Claire Higgins, who was Deputy Chair of the CFA Board at the time,⁶⁹⁷ told the Committee: “I know that there were discussions with AirServices Australia about their presence on the site, but I do not understand that they withdrew due to PFOS. I have no information that supports that.”⁶⁹⁸

Ms Higgins’ evidence accords with the documentation indicating that Mr Bourke informed the Board that AirServices Australia would not be proceeding due to ‘potential chemical contaminations’, without referring specifically to PFOS or PFOA.

The Committee is concerned that the Board was not advised that the reason the arrangement with AirServices Australia did not proceed was due to a specific type of contamination - that is, PFOS / PFOA contamination. The Board should have been advised of this. However, despite the fact that the Board did not know the exact nature of the contamination, Board members were advised that the reason was chemical contamination. The Committee’s view is that this should have lead the Board members to make inquiries about the type of contamination - especially in light of the significant investment AirServices Australia had been willing to make at the Fiskville site (\$12 million).

The Committee notes that the role of a Board member at an organisation such as the CFA is not passive. A Board member who is informed of ‘chemical contaminations’ might be expected to ask questions including ‘What chemicals?’ and ‘How contaminated?’ and ‘Are our members at risk?’. As noted above, the CFA’s ‘Board members’ Responsibilities and Code of Conduct’ provides that:

So that members can operate effectively, they need access to current, adequate and reliable information. Members should ensure that sufficient information is provided to them to allow proper consideration before meetings of the Board.⁶⁹⁹

This discussion demonstrates that the CFA Board was informed about chemical contamination at the Fiskville site well prior to the December 2011 *Herald Sun* story being published. This calls into question the evidence from a significant number of CFA witnesses who told the Committee that they were not aware of any contamination at Fiskville prior to December 2011. Alternatively, it supports the conclusion that critical information was not shared between all relevant levels of executive management.

⁶⁹⁶ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, pp.34-35

⁶⁹⁷ Ms Higgins was Deputy Chair from 2 October 2007 until becoming Chair on 1 October 2012

⁶⁹⁸ Ms Claire Higgins, *Transcript of evidence*, 28 January 2016, p.26

⁶⁹⁹ CFA, *Board Member Responsibilities and Code of Conduct*, (2008), p.5

The Committee is also concerned to learn that the CFA missed out on an opportunity to have a waste water treatment plant installed at Fiskville that it did not have to pay for but could have used. If a treatment plant had been installed, many of the subsequent problems experienced with the quality of firefighting training water could well have been avoided.

FINDING 57: That AirServices Australia alerted the CEO of the CFA to PFOS / PFOA contamination at Fiskville in April 2010. The Board was advised that AirServices Australia would no longer make a \$12 million investment at Fiskville partly due to the presence at Fiskville of ‘chemical contaminations’.

Occupational health and safety

Occupational health and safety concerns at Fiskville were a recurring theme in the Board and Board subcommittee minutes. Some examples of discussions are provided below.

The minutes of the Board meeting held on 28 August 1978 note:

The Authority Solicitors [...⁷⁰⁰] had advised that it appears that the Authority would require to comply with the Workers Compensation Act to provide Injury Books to be kept in a place readily accessible at all reasonable times for any injured worker employed by the Authority.

Resolved: That the Notice of Injury Books be acquired and provided at all employment centres as required by the Workers Compensation Act.⁷⁰¹

The minutes of the Board Meeting held on 17 June 1996 note that:

... aspects of occupational health and safety at the Training Wing, Fiskville, and other field training grounds, were discussed in detail, with the Chief Officer outlining the actions being taken to address the issues. He indicated that it was too early to put a figure on the cost of rectifying the problems, but indicated that it would be significant. The role of Risk Managers in monitoring OH&S [occupational health and safety] in the future was raised.

At the Board meeting on 19 April 1999 the Board was provided with an audit of occupational health and safety due diligence conducted by the National Safety Council of Australia (dated January 1999). The findings of the audit were summarised in the audit report as: ‘a number of OH&S System deficiencies and non-compliance with OHS Law’.⁷⁰² Specific observations included that the CFA needed to develop ‘a systematic approach to OHS risk management’,⁷⁰³ and that insufficient resources were allocated to ensuring compliance with occupational health and safety laws. (This report is also discussed in Chapter 5.)

⁷⁰⁰ The names of the solicitors have been removed because they are not relevant to the discussion

⁷⁰¹ The current requirement to maintain an injury book is in s. 17 of the *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria)

⁷⁰² Board Information Sheet agenda item 5.5.1, 19 April 1999 Board meeting, p.7

⁷⁰³ Ibid. p.7

The minutes of the meeting record: ‘The Authority stressed the need for assurance that statutory obligations are being met. An action plan as to how this can be done, with priorities and financial implications, is to be prepared’ and that the Board resolved:

- 1 That the Authority notes the consultants findings and recommendations, and endorses the proposed actions to implement the recommendations.
- 2 That the Authority requires, by June 1999, a detailed implementation plan which includes a prioritisation of the issues.
- 3 That a quarterly progress report be submitted to the Authority, commencing in June 1999.⁷⁰⁴

At the June 1999 meeting the Board was presented with a Health and Safety Strategic Plan, which is discussed in Chapter 5.

The Board discussed such a ‘quarterly progress report’ at the meeting on 20 December 1999 and the following was recorded in the minutes:

The Authority discussed the need for a more comprehensive summary on occupational health and safety, including any special issues or incidents, in future Executive Management Reports. It was acknowledged that it was necessary to raise the profile of OH&S [occupational health and safety], to prepare managers for being aware of, and accepting, their responsibilities and putting appropriate systems in place to meet local objectives.⁷⁰⁵

At the 28 May 2001 Board meeting there is reference to a ‘flashover incident’ at Fiskville.⁷⁰⁶ It is resolved that ‘immediate audits be undertaken on all CFA training sites to ensure safety and compliance’.⁷⁰⁷ Following, at the 23 July 2001 meeting, the Board was shown a video of the incident and resolved that: ‘The People Strategy Committee further examine the Fiskville incident to determine if further action is required. The potential of a senior secondee from WorkSafe will be explored.’⁷⁰⁸

At the 15 August 2001 meeting of the ‘People Strategy Committee’, under the heading ‘Fiskville - CONFIDENTIAL’, the following update was recorded in the minutes:

- WorkCover have issued a series of provisional improvement notices [sic.]⁷⁰⁹ and agreed with CFA on an action plan.

⁷⁰⁴ CFA Board Minutes, 19 April 1999, p.5

⁷⁰⁵ Board minutes 20 December 1999, p.3. There were a range of occupational health and safety reports provided to the Board at subsequent meetings, which were referred to using different terminology (such as ‘Occupational Health and Safety Action Plan’ briefing 20 October 2001 and ‘Safety First Update’ 29 January 2002 and 26 August 2002 and ‘OH&S Report’ 20 December 2002). It is difficult to ascertain whether this was the quarterly reporting that followed from the Board’s resolution in April 1999

⁷⁰⁶ The Committee has not heard any other evidence about this incident

⁷⁰⁷ CFA Board Minutes, 28 May 2001, p.3

⁷⁰⁸ CFA Board Minutes, 23 July 2001, p.6

⁷⁰⁹ In 2001, a ‘provisional improvement notice’ was only able to be issued by an elected health and safety representative under s. 33 of the *Occupational Health and Safety Act 1985* (Victoria). WorkCover had no power to issue such a notice. The distinction is an important one and should have been well understood by the CFA

- WorkCover will re-audit CFA every 2 months to ensure progress is occurring in implementing the action plan.
- Their concerns have been picked up as action items in the annual plan.
- The Chair asked if we will be fined, and CEO confirmed we probably will be fined.⁷¹⁰

The Committee's view is that this is a further example where the Board should have taken steps to investigate further upon hearing that the CFA 'probably will be fined'. This alerted the Board to the fact that not only were there occupational health and safety concerns at Fiskville, but they were serious enough that the regulatory agency had used its enforcement powers. There was no evidence before the Committee that further investigation occurred.

An information paper was prepared for the Board on 28 August 2006 titled 'Evaluation of Alternative Class B Foam for Use in Firefighting'. The paper refers to a 'Class B Foam Working Group' as having been established in July 2005. The Working Group was tasked with commissioning research about the health and safety and environmental aspects of current and alternative class B foams. The information paper reported that both protective equipment and clothing options for use with Class B foam were being evaluated by the Working Group.⁷¹¹ Furthermore, the information paper notes that the Working Group had developed:

... a three part specification detailing the functional and technical requirements for the supply of class B foam for use by CFA (including OH&S and environmental requirements), collection and recycling of empty class B foam containers and pick up and disposal of existing class B foam.⁷¹²

The Committee concludes that there were Board and Board subcommittee level discussions concerning occupational health and safety at Fiskville dating back as far as 1978. Those discussions included a recognition in 1999 that a single occupational health and safety manager was inadequate to ensure that the CFA met its statutory responsibilities. Despite that recognition, the Committee has heard that the CFA's Manager of Workplace Health and Safety (Mr Jeff Green) was not provided with additional resources until many years later (as noted in Chapter 5, from 2005 Mr Green had seven staff reporting to him).

Dangerous goods storage and disposal

'Dangerous goods'⁷¹³ storage and disposal were discussed at Board level, as evidenced by the following extracts from Board and Board subcommittee minutes.

⁷¹⁰ CFA People Strategy Committee Minutes, 15 August 2001

⁷¹¹ Information paper provided to CFA Board, *Evaluation of Alternative Class B Foam for use in Firefighting*, (2006), p.119

⁷¹² Ibid. p.120

⁷¹³ The legislative regime governing hazardous chemicals designated under the *Dangerous Goods Act 1985* (Victoria) as 'dangerous goods' is summarised in Chapter 7

Under the heading ‘Up-grading of the L.P.G.⁷¹⁴ Training Area - Training Wing Fiskville’ in the minutes of the Board meeting held on 3 March 1986, the following was reported:

Report No. 7286 submitted by the Chief Officer detailed work required to be carried out on the L.P.G. Training Area which provided insufficient storage and did not comply with regulations. The alterations were agreed to following a joint inspection in late 1985, comprising representatives from the Department of Minerals and Energy, the Gas and Fuel Corporation and the Country Fire Authority.⁷¹⁵

The minutes of the Board meeting held on 26 October 1987 note that a Board member:

... questioned what was being done by the Authority to ensure that stored chemicals and other hazardous materials are properly labelled, as a result of a recent “7.30 report” on Hazardous Materials. The Chief Officer responded that whilst various State Departments have gone a long way towards addressing this problem, it was impossible to eliminate the risk entirely.⁷¹⁶

At the 19 August 1991 Board meeting, a Board member requested ‘information as to whether the chemicals involved in a recent incident at Fiskville had been disposed of. The matter was referred to the Chief Officer for a report back to the Authority.’⁷¹⁷

An information paper prepared for the Board meeting on 21 June 1999 described the CFA as having ‘partial compliance’ with the following aspects of dangerous goods:

- There are systems to ensure the safe storage, handling, transport and disposal of hazardous substances
- Systems for the identification and clear labelling of substances
- Comprehensive health and safety information on all hazardous substances is readily accessible.⁷¹⁸

The Committee concludes that, as with occupational health and safety generally, there were Board and Board subcommittee level discussions about the need for legislative compliance concerning dangerous goods storage and handling at Fiskville for many years before 2011.

714 Liquefied Petroleum Gas

715 CFA Board Minutes, 3 March 1986, p.6

716 CFA Board Minutes, 26 October 1987, p.5. The Chair of the Board at the time - Mr Raymond Greenwood - was asked what follow-up action was taken in response to this and he informed the Committee that he could not “recall” the discussion - Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.9

717 CFA Board Minutes, 19 August 1991, p.11. The Committee could not find a record of a subsequent report by the Chief Officer in the minutes of Board meetings held on 16 September, 21 October, 18 November or 16 December 1991

718 Submission to Authority Summary Sheet Item for Discussion Agenda Item 5.5.1 Authority Meeting 21 June 1999, p.12

Concerns surrounding water supply and quality

Discussions about water supply and quality at Fiskville also date back to early in the history of Fiskville. Under the heading ‘Provision of services and equipment’ in the minutes of the meeting held on 27 April 1981 was an entry stating: ‘Fiskville - Extend Water Supply \$1,736’.

At the Board meeting on 24 January 1983 there was a discussion about cleaning and increasing capacity of the dams at Fiskville. During the discussion it was reported: ‘The Chief Officer had submitted a requisition for an amount of \$3,750 to enable the cleaning and enlarging the capacity of dams at Fiskville.’⁷¹⁹

The Board meeting on 12 November 1984 reported: ‘Water Supply Quality Fiskville discussed. The Acting Chief Officer submitted Report No. 6729 when he recommended that a feasibility study be undertaken on installing a water treatment plant at Fiskville with a view to overcoming the continuing problem of poor water quality.’⁷²⁰

An information paper was prepared for the Board on 25 February 2008 titled ‘Firefighting with Recycled Water’. The paper informed the Board that the CFA, MFB and EPA Victoria had agreed to a Class A Recycled Water Management Plan.⁷²¹ The signing of the plan was accompanied by an awareness package and a factsheet about ‘Firefighting with Recycled Water’. The Board was provided with a copy of a PowerPoint presentation and the factsheet. The factsheet has the CFA and MFB logos and states: ‘This fact sheet has been developed in consultation with EPA Victoria, DHS Victoria and water authorities’.

6.3.2 Knowledge of respective Chief Executive Officers, Chief Officers and Deputy Chief Officers

Chemical contamination

A clear example of a CEO being advised about contamination at the Fiskville site was when Mr Bourke received the letter from AirServices Australia referred to above (dated 29 April 2010). That letter made it clear that PFOS and PFOA had been detected in the soil at Fiskville in sufficient quantities to deter AirServices Australia from making use of the site and investing in Fiskville’s infrastructure.

An earlier example is a memo dated 8 September 1988 concerning material in drums that were buried at Fiskville (for a discussion about the practice of burying drums that contained chemicals at Fiskville see Chapter 4). The memo was written by the Deputy Chief Officer and addressed to the Acting Chief Officer, and had the subject ‘Waste Disposal Site - Fiskville’. The memo refers to discussions with EPA Victoria and recommends leaving the drums undisturbed. This is discussed in more detail in Chapters 5 and 8.

⁷¹⁹ CFA Board Minutes, 24 January 1983, p.3

⁷²⁰ CFA Board Minutes, 12 November 1984, p.6

⁷²¹ The plan was signed by the CFA on 12 September 2007, the MFB on 10 October 2007 and EPA Victoria on 24 January 2008. Class A Water is defined in Chapter 4 and this plan is discussed in more detail in that Chapter

An even earlier example is this discussion that appeared in the minutes of the Board meeting held on 31 March 1980:

From House of Representatives Standing Committee Inquiry into Management Chemicals potentially hazardous to Health and the Environment: The Chief Officer had recommended that Regional Officer prepare a submission to be presented by the Authority to the Inquiry.

Resolved: That Regional Officer prepare a submission for consideration by the Chairman and Deputy Chairman who would arrange transmission to the Inquiry through the Minister.⁷²²

This demonstrates that the Chief Officer at the time was aware of broader discussions at the national level about how best to manage chemicals that may contaminate the environment. What is less clear is whether this awareness was translated into action at Fiskville.

Occupational health and safety

Mr Trevor Roche, Chief Officer from 1995 to 2001, provided a lengthy report to the CFA Board on 20 October 1997 that raised occupational health and safety concerns with Class A foam.

The quote has been included in full here because it demonstrates the extent of the Chief Officer's knowledge about the matter. The report includes a number of key points:

- That an occupational health and safety notice had been served
- That the United Firefighters Union claimed some people had experienced health problems
- That expert advice had been sought
- That consideration was being given to further training, use of protective clothing and a meeting between fire services to reach an agreement.

The following is an extract from the minutes:

Mr T Roche, Chief Officer, joined the meeting to brief the Authority on action taken by the United Firefighters' Union. He advised that the union had publicly expressed concern that Class A Foam may affect the health and safety of CFA personnel. Occupational Health and Safety representatives went to the Corio Fire Station and a notice was then served against using Class A foam, including removal of the product. It was claimed that some personnel had developed health problems, but no formal reports had been submitted to CFA by members of staff or volunteers.

The Chief Officer advised that both prior to and during the progressive introduction of Class A foam into the CFA over the last two years, an enormous amount of research into environmental safety and health issues had been undertaken. Class A foam had been used in the USA since 1985 and CFA had a wealth of information. Nevertheless,

722 The name of the Regional Officer has been removed because it is not relevant to the discussion. CFA Board minutes 31 March 1980, p.5

additional expert advice was subsequently sought from Amcosh, who advised there was no significant risk. However, CFA would need to undertake further training of individuals who use this type of foam and issue protective clothing.

The actions currently being undertaken included writing to the UFU requesting details of the affected personnel, assessing the availability and specifications of appropriate protective clothing, assessing all aspects of training, reinforcing the need to follow product/manufacture's instructions and determining what and how additional advice should be circulated to personnel. An urgent meeting was also being arranged for representatives of all Australian fire services to reach agreement on the use of Class A foam.⁷²³

In his evidence to the Inquiry, Mr Roche provided the following information about this issue:

I know there had been some questions raised about the suitability of the A-class foam that we were using and from memory I think we had had a report from Mr Robert Golec which had indicated that there perhaps was not a level of concern with A-class foam, that I think the industrial body had originally arranged in the first place. That is my limited recollection of that given that the foam was being used quite universally around the world.⁷²⁴

Dangerous goods storage and disposal

On 31 May 1996, a report was addressed to Mr Trevor Roche as Chief Officer. The report was by Mr David Clancy (CFA Fire Officer) and it was titled, *Report. Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit.*

The audit report covered a range of areas and applied to a number of topic headings in this discussion. It has been included here because it described some particularly serious concerns relating to the storage of dangerous goods. Two examples of these are:

It was found that storage of explosives were not stored in compliance with the *Dangerous Goods (Explosives) Regulations 1988*. A proper explosives store at Fiskville required the construction of a separate building on the property, this was felt to be inappropriate due to security and the high risk of this being breached. The storage of the explosives were subject to two directions from HSO [Health and Safety Organisation].⁷²⁵

If flammable liquids Pad is upgraded and the use of flammable liquids continues and bunding system for the aboveground bulk fuel storage must be constructed to meet all fuel lines up to compliance with AS1940-1993 Storage and Handling of Flammable and Combustible Liquids, Dangerous Goods (storage and handling) Regulations and *Environment Protection Act 1970*.⁷²⁶

723 CFA Board Minutes, 20 October 1997, pp.5-6

724 Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.6

725 David Clancy, *Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*, (1996), p.26. The Health and Safety Organisation was WorkSafe's predecessor

726 *Ibid.* p.40

Mr David Clancy provided his perspective about the background to the audit report in an interview conducted as part of the Joy Report,⁷²⁷ which suggests that his concerns about lack of compliance with a range of regulations were not of interest to senior management in the CFA.

INTERVIEWER—So was there any engagement at that level? In other words, did you hear that from the chief officer or the deputy- any of the deputy chief: any interest expressed? Or their staff?

Mr CLANCY—Ah, they certainly spoke to me, but they, at the time, probably weren't 100 per cent interested, and they weren't interested until they saw the final report and saw the ramifications.⁷²⁸

Mr Clancy also discussed the reaction of Mr Roche when provided with the report:

INTERVIEWER—So he didn't speak to you about it personally?

Mr CLANCY—I don't recall ... the only feedback- I do know he read it on a plane going somewhere, and the only feedback I got was that his comment was it would probably a good time for the plane to crash now. So, you know, that was really the only feedback I got.⁷²⁹

Evidence received by the Committee from Mr Len Foster, Chair of the CFA Board at the time, at the public hearing paints a different picture. Mr Foster indicated that the report had been initiated by Mr Roche, stating:

I have a clear recollection that it [the Clancy report] was at the request of the chief officer who had concerns And it was a very, very important decision that he made because the knowledge of what was going on up there did not come up to the degree that it should have to the Board through the system. I recall Mr Roche briefing the executive management team on the issue, at which we were somewhat shocked ... Trevor indicated the Clancy report, and as a result of that two weeks later I took it to the Board ...⁷³⁰

Mr Roche's response to questioning from Committee Deputy Chair Mr Tim McCurdy supports Mr Foster's evidence that he [Mr Roche] briefed the Board about the content of the Clancy report:

Mr McCURDY—Mr Roche, in 1996 you would have been deputy chief officer for the last four or five years and then became chief officer. In your first 12 months there was a report prepared called 'CFA Training College and Safety Environmental Audit'. That was addressed to you as the chief officer. Do you recall getting that report?

Mr ROCHE—Vaguely, yes. I assume that is the report that was prepared by Mr Clancy, is it?

Mr McCURDY—I think so, yes.

Mr ROCHE—I vaguely recall Mr Clancy delivering that report to me, yes.

727 The interview took place on 13 March 2012

728 Mr David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.127

729 *Ibid.* p.129

730 Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.13

Mr McCURDY—Okay. Then there were some recommendations made in this report.

Mr ROCHE—That is correct.

Mr McCURDY—And some of those recommendations were around some of the priority areas: safety line water quality, plant safety, type 3 pumper and PAD personnel protective clothing. Do you recall what action was taken out of those recommendations?

Mr ROCHE—As I recall it, I briefed the executive management team and subsequently was asked to and went on to brief the Board. If my memory serves me correctly, all of the recommendations in that report I recommended the Board adopt, and as far as I recall, I believe they did. What happened after that I do not recall.⁷³¹

The Committee’s review of minutes of CFA Board meetings did not find reference to a report canvassing dangerous goods, occupational health and safety and environmental concerns being provided to the Chief Officer. However, under the heading ‘Executive Management Report’ in the minutes for the Board Meeting held on 17 June 1996 (that is, about two weeks after Mr Clancy provided his report to Mr Roche) it is recorded that:

... aspects of occupational health and safety at the Training Wing, Fiskville, and other field training grounds, were discussed in detail, with the Chief Officer outlining the actions being taken to address the issues. He indicated that it was too early to put a figure on the cost of rectifying the problems, but indicated that it would be significant. The role of Risk Managers in monitoring OH&S in the future was raised.⁷³²

This may have been the Board-level discussion of Mr Clancy’s audit report referred to by both Mr Foster and Mr Roche.

Regardless of who initiated the report, this evidence demonstrates that there was knowledge about significant problems associated with dangerous goods storage and disposal including compliance with regulatory requirements at the Chief Officer level in 1996. As noted in Chapter 7, these concerns were against a background of CFA officers having received delegations from WorkSafe to police the requirements of the *Dangerous Goods Act 1985*. As Professor Joy colourfully put it, the CFA was “... preaching the gospel elsewhere to industry about safe storage and handling, but it was not happening back at Fiskville”.⁷³³

The importance of Mr Clancy’s audit report is also discussed in Chapter 4 and in Case Study 3.

Concerns surrounding water supply and quality

As discussed in Chapter 4, in 2009 the CFA changed the standard for E. coli bacteria from 10 organisms per 100 ml to 150 organisms per 100 ml. Mr James Stitz was the Acting Manager, Learning and Development at the time, and the person responsible for consultations about the change.

⁷³¹ Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.5

⁷³² CFA Board Minutes, 17 June 1996

⁷³³ Professor Robert Joy, Chair, Independent Fiskville Investigation, *Transcript of evidence*, 3 June 2015, p.4

Mr Stitz gave evidence to the Committee at a public hearing on 27 January 2016 that he consulted the Deputy Chief Officer⁷³⁴ about this change:

I then went to the deputy chief officer who was responsible for those SOPs [Standard Operating Procedures], I suppose, to do with firefighting water, and provided him with the evidence that we had plus the letters and asked: did he have any objections to us changing the letter? He had no objections.⁷³⁵

6.3.3 Knowledge of middle-level management

Chemical contamination

As discussed above, Mr Stitz, in his role as Acting Manager, Learning and Development from 2008 until late 2010, was aware that PFOS and PFOA contamination of the soil at Fiskville was the reason AirServices Australia withdrew from its agreement with the CFA in April 2010.

Mr Stitz also gave evidence to the Committee about follow-up action taken in response to the AirServices Australia discovery of PFOS and PFOA contamination at the Fiskville site:

As a result of that letter, we got Wynsafe back in to do another assessment for us across the site. They went across the site and indicated that the PFOS levels were extremely low and that there was no risk to health. I have got that report too. But it also said that we should test, as I remember, and so we tested six-monthly I think I asked for the tests, and then the six-monthly tests began from there. But the readings were so low, which I think a number of other experts have indicated too. However, we did do the testing.⁷³⁶

Therefore, Mr Stitz was aware of the initial findings about PFOS and PFOA contamination and of a consultant being commissioned to do further testing,⁷³⁷ as well as the results of the subsequent testing.

Occupational health and safety

Mr Jeff Green, Manager of Workplace Health and Safety, informed the Committee at a public hearing on 21 December 2015 that he would often attend Fiskville to accompany WorkSafe inspectors in their inspections. He also noted: “We would work with WorkSafe to make sure we knew when they were coming so we could actually have someone available and a program to make sure staff were there, or if there was an activity they wanted to see.”⁷³⁸

⁷³⁴ The Deputy Chief Officer at the relevant time was Mr Peter Baker. Mr Baker was Deputy Chief Officer from 26 January 2009 to 1 October 2009

⁷³⁵ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.28; See further Chapter 8

⁷³⁶ *Ibid.* p.35

⁷³⁷ Wynsafe Occupational Health Services, *Perfluorochemicals in Firefighting Water at CFA Fiskville*, (2010), p.5

⁷³⁸ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.7

Mr Green was aware of a prohibition notice issued by WorkSafe in relation to activities at Fiskville: “That was after an incident where one of the props was probably inappropriately set up and it resulted in an injury and a prohibition notice was issued.”⁷³⁹

Mr Green could also recall “five to six” improvement notices being issued at Fiskville.⁷⁴⁰

Dangerous goods storage and disposal

Mr Green provided the Committee with the following information processes the CFA had in place for dealing with hazardous chemicals:

I think it was in early 2000 we introduced an online chemical register process so all brigades can access chemicals that have been endorsed for use by CFA, building our chemical register and having those on board. We have introduced over a period of time an external hygienist who will go around specific sites to make sure their chemicals registers are up the track, MSDSs [Material Safety Data Sheets] are available and risk assessments are available. That is an online process. He will provide reports to the relevant OIC [Officer in Charge] to say, ‘You need to do A, B, C and D’, or whatever it may be. Then it is the OIC’s responsibility to address those issues.⁷⁴¹

Concerns surrounding water supply and quality

On 27 May 2011, the consultant Wynsafe Occupational Health Services wrote to Mr Green with advice about the testing of firefighting water at Fiskville. When Mr Green was asked at a public hearing who requested the advice he responded:

It was myself on behalf of one of our areas, because what we were seeking, as I said before, was a person had indicated they had suffered some stomach issues from ingesting firefighting foam. The doctors who were assessing this person needed background information in regard to the typical training activities that occurred, and part of that was to go out and try to find as openly as we could the water that was used and also the foam that was used, which I think was Tridol, because obviously when you are firefighting you would not necessarily intentionally ingest the foam. As part of that process, I think the training activity, the person either inadvertently lost the branch, but they ingested a quantity of foam. When the doctor required that information, this was provided, in addition to the information on the foam.⁷⁴²

The report covered a range of aspects about the water quality at Fiskville, and contained this advice:

Dam 1 contains sludge contaminated with hydrocarbons and heavy metals from past practices, and firefighting foam from the flammable PAD. Options for the remediation or removal of this sludge were assessed by SRS Australia Pty Ltd and a proposal and cost estimate was provided to CFA on 17 March 2009.

⁷³⁹ Ibid. p.7

⁷⁴⁰ Ibid. p.8

⁷⁴¹ Ibid. p.4

⁷⁴² Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 28 January 2016, pp.7-8

The report noted that the BOD [Biological Oxygen Demand] and suspended solids in the water were ‘above the criteria for firefighting water’ and that ‘this is almost certainly due to the presence of the foam’.⁷⁴³

Another example of middle-level management’s knowledge about water quality is Mr Stitz’s involvement in changing the standards for E. coli bacteria from 10 organisms per 100 ml to 150 organisms per 100 ml in 2009. This is discussed in Chapter 7.

6.3.4 Knowledge of Officers in Charge at Fiskville

Chemical contamination

Mr Mark Glover, Officer in Charge of Fiskville from October 2001 to June 2004, gave evidence that he had been aware of the existence of buried drums containing chemicals and chemical residues at Fiskville prior to their discovery in early 2002 by a contractor who was preparing the soil for the planting of trees. The discovery of these drums is dealt with in detail in Chapters 5 and 7.

Mr Glover informed the Committee: “... when I was at Fiskville from 1989 to 2005 there were reports that there were drums buried somewhere on the site. Little did I know that eventually I would find them.”⁷⁴⁴

That is, he may have known that there were buried drums as early as 1989, which is 12 years before he became Officer in Charge in 2001. Regardless of any earlier knowledge Mr Glover may have had about this source of contamination, he certainly became aware when the drums were accidentally discovered. At this time he had to deal with the contaminated soil - that is, soil that had come into contact with the chemicals contained in the drums that had been ripped open by the tractor.

Occupational health and safety

During a public hearing on 23 November 2015, Mr Peter Rau, Officer in Charge at Fiskville from April 2005 to July 2008, referred to the role of the health and safety representative (Mr John Myers) at Fiskville. Mr Rau was asked if he knew of any improvement notices having being issued, to which he replied:

Look, I think there were a number of PINs [Provisional Improvement Notices] issued. John certainly would have; he was a very active HSR [Health and Safety Representative]. He would quite regularly close down parts of the PAD that were not, in his view, in a safe environment - and rightly so. John would have been across that. As I said, he was a very active HSR.⁷⁴⁵

Mr Glover gave evidence of his knowledge about occupational health and safety concerns raised by WorkSafe during his time as Officer in Charge.

⁷⁴³ Correspondence from Wynsafe Occupational Health Services, to Mr Jeff Green, 27 May 2011

⁷⁴⁴ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.8

⁷⁴⁵ Mr Peter Rau, Chief Officer, Metropolitan Fire and Emergency Services Board, *Transcript of evidence*, 23 November 2015, p.8

WorkSafe came to our place on a regular basis and looked around and did their bits and pieces, and whatever they recommended we did. We followed through. In relation to reports on all that kind of stuff, yes, there were probably reports. Whatever they suggested we do, we did.⁷⁴⁶

Dangerous goods storage and disposal

On 20 November 2001, WorkSafe conducted an inspection and prepared a report that was served to Mr Glover (Officer in Charge at the time). The WorkSafe officer raised the following concerns about storage of LPG⁷⁴⁷ cylinders: ‘I observed LPG cylinders that were stored in an unsecured manner in several locations throughout the workplace.’⁷⁴⁸

Concerns surrounding water supply and quality

Three Officers in Charge at Fiskville were aware of concerns surrounding water supply and quality:

- Mr Mark Glover - Officer in Charge from October 2001 to June 2004
- Mr Peter Rau - Officer in Charge from April 2005 to July 2008
- Mr Justin Justin - Officer in Charge from August 2011 to January 2015.

Mr Glover gave evidence about dam aeration and cleaning of the Pit during his time at Fiskville.⁷⁴⁹ In relation to aeration, he told the Committee at a public hearing on 27 January 2016:

I do not think it gets rid of all the pollution that is in the water, because the heavy materials sink, which is why we did not use Dam 1. But all the stuff - the surfactants, if you like, that go in the water, if you aerated the water, we were told, then that water was not safe to use. But when it was ‘cleansed’ - and I will use the term in inverted commas - that went on to Dam 2, which we could actually use. Dam 2 was tested on a regular basis, so we could actually use that water.⁷⁵⁰

In relation to the cleaning of the pit, he informed the Committee that this was done annually and that no sediment remained.⁷⁵¹

Mr Glover also gave evidence that water tests were conducted every two months, and that he saw water test results in instances when there were problems. Mr Myers would show the results to Mr Glover. When asked whether he knew how to read the results, Mr Glover said: “With my basic chemical knowledge, yes.”⁷⁵²

⁷⁴⁶ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.12

⁷⁴⁷ Liquefied Petroleum Gas

⁷⁴⁸ Visit Report Number V00045500289L

⁷⁴⁹ See Chapter 4 for a discussion about the Pit and other infrastructure at Fiskville

⁷⁵⁰ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, pp.4-5

⁷⁵¹ *Ibid.* p.5

⁷⁵² *Ibid.* p.6

Mr Rau referred the Committee to a report by Wynsafe Occupational Health Services that concerned the quality of water used for firefighting. The report was titled *Management of the Quality of Firefighting Water at CFA Field Training Grounds* and was dated October 2007.

Mr Rau made the following comments about the content of the report:

There is a comment on the bottom which is really important, and which has been missed a lot throughout these discussions. The sample taken from the point of delivery, which is the flam PAD, met the recommended standards with the exception of BOD [Biological Oxygen Demand], being just above the standard.⁷⁵³

Mr Rau also referred to written guidelines that were provided to instructors from other organisations in 2007. The guidelines included a directive not to use water from Dam 1. Mr Rau said:

When blue-helmeted people come on - so people who are not Fiskville instructors but they are instructors from other organisations, which included the MFB - a level of training is provided to them. They are given a blue helmet, which determines that they can do certain things on the PAD area at Fiskville, and they have an orange-helmeted person who sits across the top, who has oversight of a whole range of activities that are occurring. Those blue helmets are given quite a large amount of documentation, and I have the 2007 one here, and it says quite clearly, 'Do not use the water from Dam 1'.⁷⁵⁴

Mr Justin gave evidence about becoming aware of the need to remediate the sludge in Dam 1 early in his tenure as Officer in Charge. This is discussed in detail in Chapter 4, but the key points are:

- In November 2011, Mr Justin Justin and Mr Martyn Bona requested that some of the 'Project 2016' funding be spent on removing the sludge from Dam 1 (this was prior to the story being published in the *Herald Sun* in December 2011)
- This request was made against a background of consultants' reports recommending remediation dating back as far as 1996,⁷⁵⁵ as well as closer to Mr Justin's tenure - specifically, two reports in 2009⁷⁵⁶ and one in 2011.⁷⁵⁷

Mr Justin also gave the following evidence about his knowledge of the water quality standards in place at Fiskville when he was Officer in Charge:

There was a document of CFA standard water at training grounds, but that was handled by the PAD supervisor at the time. I know there was a document. I know the parameters were related to class A water to the extent of my knowledge.⁷⁵⁸

753 Mr Peter Rau, Chief Officer, Metropolitan Fire and Emergency Services Board, *Transcript of evidence*, 23 November 2015, p.5. The 'flam PAD' refers to the practical area for drills. See Chapter 4 for further explanation

754 *Ibid.* p.6

755 CRA ATD, *Fiskville Training College Review of Site Assessments and Remediation Options*, (1996)

756 Letter from Wynsafe Occupational Services addressed to Mr Stitz dated 17 April 2009 and Wynsafe Occupational Health Services report 'SRS Proposal for Remediation of Sludge from Settling Pond at CFA Fiskville', 17 April 2009

757 Correspondence from Wynsafe Occupational Health Services, to Mr Jeff Green, 27 May 2011

758 Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.11

Furthermore, Mr Justin gave the following evidence about problems with water supply prior to the installation of the storage tanks in 2012 (discussed further in Chapter 4):

The pit often ran dry during the day because of the number of drills that were happening each day. Mains water was slow to refill due to the size of the town's mains pipe, so recycled water from Dam 2 was a necessary secondary supply to supplement the supply drawn from the mains water. Simply using mains water was impractical but we could do it. The inflow of water to the pit from the mains was too slow to replace the water that was being used and that made high training loads very difficult to organise.⁷⁵⁹

It is unsurprising that the most detailed knowledge of water supply and quality was at the Officer in Charge level, given that they were overseeing the daily operations at Fiskville and that water was being used on a daily basis for firefighting training.

6.3.5 Knowledge prior to December 2011

The Committee has evidence that the four relevant levels of executive management (the Board, Chief Executive Officers / Chief Officers / Deputy Chief Officers, middle-level management and Officers in Charge at Fiskville) had knowledge about four areas that have been central to the Inquiry:

- Chemical contamination
- Occupational health and safety
- Dangerous goods storage and disposal
- Concerns surrounding water supply and quality.

Importantly, all of the evidence in this section pre-dates December 2011 and demonstrates that the CFA's executive management, at various levels, was aware of the significant contamination and safety concerns with Fiskville well prior to the publication of the *Herald Sun* story. Many people who held executive management positions in the CFA told the Inquiry that publication of this story was the first time they heard about contamination at Fiskville. This should not have been the case. In fact it is a fallacy that - at senior levels of the organisation - no one knew there were problems at Fiskville.

Clearly, individuals at all levels of executive management knew about various problems at Fiskville. If particular individuals at different levels were not informed, then there were problems with the flow of information among executive management of the CFA, rather than a lack of information per se.

FINDING 58: That individuals at all levels of CFA executive management - from those in charge at Fiskville up to the Board - had some knowledge about contamination at Fiskville prior to December 2011 when the *Herald Sun* published its first article.

⁷⁵⁹ Ibid. p.6

6.4 Comparison of witness evidence and documentary evidence

The picture painted by the documentary evidence examined in this section is very different to the evidence the Committee heard at its public hearings. Specifically, the documentary evidence shows an awareness of significant problems at Fiskville at all levels of executive management from the 1970s to December 2011. However, witnesses that appeared before the Committee at public hearings consistently claimed that they had a lack of knowledge. In particular, witnesses tried to lead the Committee to believe that Fiskville operated autonomously without oversight from CFA management or the Board - a point reiterated in the Joy Report.⁷⁶⁰

This part provides examples of witness evidence that is contradicted by the documentary evidence.

At the outset the Committee notes that it did not expect that witnesses recall the details of discussions that were held a long time ago. However, the Committee was consistently told that there was no knowledge or discussion about Fiskville's mounting problems amongst executive management, which is contradicted by the documentary evidence. This discussion is aimed at illustrating this.

Mr Raymond Greenwood - CFA Board Chair from November 1984 to July 1989 – told the Committee:

I am surprised and disappointed when I read some of the comments about the failure to meet the various acts - health and safety and the *Dangerous Goods Act* ... Fiskville, of all places, would have been one of the places I would have thought would be right up to date with it. They took pride in the reputation Fiskville had and I think they would have acted immediately had they known.⁷⁶¹

The minutes of Board meetings from 3 March 1986 and 26 October 1987 (discussed above) referred to storage of hazardous goods not complying with regulations and chemicals not being properly labelled.

Mr Len Foster - CFA Board Chair from 1991 to 1997, Executive Chair from 1997 to 2001 and then Chairman from 2001 until 2007 - was asked about discussions of occupational health and safety by Committee member Mr Tim Richardson:

Mr RICHARDSON—Just broadly, as a broad question of OH&S, we were advised under evidence from WorkSafe that they had, between 1991 and 2011, visited Fiskville on 117 occasions and there were some notices issued. We are still waiting advice from WorkSafe on what the nature of those notices were. Was it discussed at the Board level some of those visits or some of those attendances by WorkSafe? Do you recall any of those instances?

⁷⁶⁰ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.46

⁷⁶¹ Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.12

Mr FOSTER—If we go back to the 90s, I have no recollection of those particular issues coming to the Board. It goes to the point that I raised with the Chair: that these areas were autonomous. They had a high level of autonomous activity and I suspect, nothing more than suspect, that those matters would have been handled by the Fiskville personnel.⁷⁶²

The discussion above shows that there was Board-level discussion of occupational health and safety matters on 17 June 1996, 19 April 1999, 29 May 2001 and 15 August 2001. The minutes of the meeting held on 15 August 2001 show that there was specific discussion about WorkCover’s involvement and refer to several improvement notices being issued.

Mr Roche made the following comment:

... Fiskville tended to be semi-autonomous. It was senior officers running it, and there was not necessarily the oversight that should have been in place by people at the corporate level. Issues that arose were primarily dealt with in-house, at that level. Corporately and from my perspective as Chief Officer issues were not necessarily brought to our attention.⁷⁶³

The documentary evidence discussed above demonstrates that Mr Roche was provided with an extensive report by Mr Clancy on 31 May 1996 that dealt with storage of dangerous goods, occupational health and safety and environmental contamination at Fiskville. It appears likely that Mr Roche briefed the Board about this report. The documents also demonstrate that Mr Roche briefed the Board about occupational health and safety concerns with Class A foam on 20 October 1997.

Mr Bourke made the following comment:

Mr BOURKE—Part of what others may have told you is that often at that field training ground management took control and managed things at a local level without bringing as much forward as they possibly could have. That is my feeling for it.

Ms WARD—But we understand that there were attempts made to go up the chain, if you like, beyond Fiskville to get changes made at Fiskville that were not actioned.

Mr BOURKE—I am not aware of those at this point in time. I am happy to look at them if you have them.⁷⁶⁴

The documentary evidence discussed above shows that Mr Bourke became aware of significant chemical contamination at Fiskville in April 2010 when AirServices Australia wrote to him, and that he briefed the Board about this contamination in May 2010.

This comparison is also reflected in Table 6.3 below. The problems that are discussed throughout this Final Report show that the CFA did not act on the knowledge catalogued in this Chapter.

⁷⁶² Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.6

⁷⁶³ Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.14

⁷⁶⁴ Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.12

FINDING 59: That the evidence before the Committee contradicts statements by many members of CFA executive management that they were unaware of problems at Fiskville prior to December 2011.

FINDING 60: That the Committee doubts the assertions of CFA senior executive managers that they did not know about contamination at Fiskville, and therefore could not take action to address contamination. The failure of CFA management to act on the knowledge catalogued by the Committee unnecessarily exposed another generation of Fiskville trainees to risk.

Table 6.3 Comparison of evidence provided to the Committee and documentary evidence viewed by the Committee

Witness and position	Evidence provided to the Committee	Documentary evidence
<p>Mr Raymond Greenwood CFA Board Chair, November 1984 to July 1989</p>	<p>"I am surprised and disappointed when I read some of the comments about the failure to meet the various acts—health and safety and the <i>Dangerous Goods Act</i>. Fiskville, of all places, would have been one of the places I would have thought would be right up to date with it. They took pride in the reputation Fiskville had and I think they would have acted immediately had they known.⁽⁶⁾"</p>	<p>Minutes of Board meeting 3 March 1986: "Report No. 7286 submitted by the Chief Officer detailed work required to be carried out on the L.P.G. Training Area which provided insufficient storage and did not comply with regulations. The alterations were agreed to following a joint inspection in late 1985, comprising representatives from the Department of Minerals and Energy, the Gas and Fuel Corporation and the Country Fire Authority" Minutes of Board meeting 26 October 1987: "... questioned what was being done by the Authority to ensure that stored chemicals and other hazardous materials are properly labelled, as a result of a recent "7,30 report" on Hazardous Materials. The Chief Officer responded that whilst various State Departments have gone a long way towards addressing this problem, it was impossible to eliminate the risk entirely"</p>
<p>Mr Len Foster CFA Board Chair, 1991 to 1997 Executive Chair, 1997 to 2001 Chairman, 2001 to 2007</p>	<p>"Mr RICHARDSON—Just broadly, as a broad question of OH&S, we were advised under evidence from WorkSafe that they had, between 1991 and 2011, visited Fiskville on 117 occasions and there were some notices issued. We are still waiting advice from WorkSafe on what the nature of those notices were. Was it discussed at the Board level some of those visits or some of those attendances by WorkSafe? Do you recall any of those instances? Mr FOSTER—If we go back to the 90s, I have no recollection of those particular issues coming to the Board. It goes to the point that I raised with the Chair: that these areas were autonomous. They had a high level of autonomous activity and I suspect, nothing more than suspect, that those matters would have been handled by the Fiskville personnel"⁽⁶⁾</p>	<p>Minutes of Board meeting 17 June 1996 "... aspects of occupational health and safety at the Training Wing, Fiskville, and other field training grounds, were discussed in detail, with the Chief Officer outlining the actions being taken to address the issues. He indicated that it was too early to put a figure on the cost of rectifying the problems, but indicated that it would be significant. The role of Risk Managers in monitoring OH&S in the future was raised" Minutes of Board meeting 19 April 1999 The Board was provided with an audit of occupational health and safety due diligence conducted by the National Safety Council of Australia (dated January 1999). The findings of the audit were summarised in the audit report as: 'a number of OH&S System deficiencies and non-compliance with OHS Law' Minutes of Board meeting 29 May 2001 Reference to a 'flashover incident' at Fiskville. It is resolved that 'immediate audits be undertaken on all CFA training sites to ensure safety and compliance' Minutes of Board meeting 15 August 2001 "Fiskville - CONFIDENTIAL" <ul style="list-style-type: none"> • WorkCover have issued a series of provisional improvement notices [sic.] and agreed with CFA on an action plan • WorkCover will re-audit CFA every 2 months to ensure progress is occurring in implementing the action plan • Their concerns have been picked up as action items in the annual plan • The Chair asked if we will be fined, and CEO confirmed we probably will be fined" </p>

Witness and position	Evidence provided to the Committee	Documentary evidence
<p>Mr Trevor Roche Chief Officer, 1995 to 2001</p>	<p>“Fiskville tended to be semi-autonomous. It was senior officers running it, and there was not necessarily the oversight that should have been in place by people at the corporate level. Issues that arose were primarily dealt with in-house, at that level. Corporately and from my perspective as chief officer issues were not necessarily brought to our attention”^(c)</p>	<p>Mr Roche was provided with the ‘Report: Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit’ by David Clancy on 31 May 1996</p> <p>Minutes of Board meeting 20 October 1997:</p> <p>“Mr T Roche, Chief Officer, joined the meeting to brief the Authority on action taken by the United Firefighters’ Union. He advised that the union had publicly expressed concern that Class A Foam may affect the health and safety of CFA personnel. Occupational Health and Safety representatives went to the Corio Fire Station and a notice was then served against using Class A foam, including removal of the product. It was claimed that some personnel had developed health problems, but no formal reports had been submitted to CFA by members of staff or volunteers.</p> <p>The Chief Officer advised that both prior to and during the progressive introduction of Class A foam into the CFA over the last two years, an enormous amount of research into environmental safety and health issues had been undertaken. Class A foam had been used in the USA since 1985 and CFA had a wealth of information. Nevertheless, additional expert advice was subsequently sought from Amcosh, who advised there was no significant risk. However, CFA would need to undertake further training of individuals who use this type of foam and issue protective clothing.</p> <p>The actions currently being undertaken included writing to the UFU requesting details of the affected personnel, assessing the availability and specifications of appropriate protective clothing, assessing all aspects of training, reinforcing the need to follow product/manufacture’s instructions and determining what and how additional advice should be circulated to personnel. An urgent meeting was also being arranged for representatives of all Australian fire services to reach agreement on the use of Class A foam”</p>
<p>Mr Mick Bourke CEO, September 2009 to February 2015</p>	<p>“Part of what others may have told you is that often at that field training ground management took control and managed things at a local level without bringing as much forward as they possibly could have. That is my feeling for it”^(d)</p>	<p>Letter from the CEO of AirServices Australia (Mr Greg Russell) to Mr Bourke on 29 April 2010:</p> <p>“Also of concern is that PFOS and PFOA have been detected in the soils at Fiskville”.</p> <p>“The ongoing delays and new environmental concerns have led me to re-evaluate the suitability of the Fiskville site for our requirements and I have come to the conclusion that the development does not meet Airservices’ long term needs”</p> <p>Mr Bourke’s CEO report to the CFA Board on 31 May 2010:</p> <p>“As you would recall Airservices Australia (ASA) had been in discussions with the CFA with a view to co-habiting (sic) with us at our Fiskville Training Facility. They have confirmed that they are no longer interested in this option due to the time delays and issues of potential chemical contaminations at Fiskville”</p>

- (a) Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.12
- (b) Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.6
- (c) Mr Trevor Roche, *Transcript of evidence*, 14 December 2015, p.14
- (d) Mr Mick Bourke, *Transcript of evidence*, 21 December 2015, p.12

7

Regulation of Fiskville by WorkSafe

AT A GLANCE

Background

This Chapter focuses on legislation enacted to protect workers and others from dangers to their health and safety caused at workplaces. The Chapter commences with an examination of that legislation and then considers the manner in which the legislation was applied and enforced at Fiskville by the regulator WorkSafe.

This Chapter addresses Terms of Reference (1).

Key findings

- That since 1985, Victoria has had in place comprehensive laws regulating occupational health and safety and the handling, storage and transport of dangerous goods. The laws in relation to occupational health and safety were strengthened in 2004. The laws impose onerous duties on employers, such as the CFA, for the benefit of employees and contractors. The laws confer extensive powers on inspectors to enforce compliance with those duties.
- That although WorkSafe inspectors made 117 visits to Fiskville between 1991 and December 2011 during which they issued compliance notices to the CFA and its contractors, the inspectors failed to address many of the occupational health and safety issues that have been the subject of detailed evidence during this Inquiry, including buried drums, soil contamination and water quality.
- That WorkSafe records do not show any involvement by it in investigating the incident at Fiskville in March 2002 in which buried drums of chemicals were accidentally dug up exposing a CFA contractor to harmful chemicals. It seems likely that WorkSafe was not notified of this incident by the CFA as it should have been under the law. It seems likely that the CFA broke the law both by exposing the contractor to the chemicals and by failing to notify WorkSafe of the incident.
- That based on the number and breadth of the compliance notices issued by WorkSafe between 1991 and 2011, and the absence of evidence that they were all considered at Board level, the CFA displayed a lack of attention to compliance with its important statutory obligations.
- That the United Firefighters Union wrote to WorkSafe in July 2012 requesting an investigation of the water quality at Fiskville. This prompted a WorkSafe investigation which was largely limited to obtaining copies of consultants' reports from the CFA. WorkSafe inspectors did not carry out any independent tests of the water.

- That despite being advised in writing to do so by EPA Victoria, the CFA did not consult WorkSafe before making the decision to increase its acceptable levels of E. coli in its firefighting water at Fiskville in 2009.
- That WorkSafe provided a 'letter of assurance' in October 2012 to the CFA regarding the safety of the firefighting water at Fiskville based on an inadequate understanding of the source of the water and without having tested the water itself.
- That in December 2012, the United Firefighters Union requested WorkSafe investigate the CFA for a possible breach of the *Occupational Health and Safety Act 2004*.
- That section 131 of the *Occupational Health and Safety Act 2004* required WorkSafe to carry out the investigation within three months. In fact, it took WorkSafe 23 months to respond to the request.
- That the lengthy delay associated with the WorkSafe response to the United Firefighters Union request to investigate is entirely unacceptable.
- That WorkSafe did not prosecute the CFA over Fiskville because of concerns over the CFA's system for testing the water and whether the evidence of the tests results could be used in Court as evidence against the CFA.
- That the decision to shut the Fiskville site for safety reasons in March 2015 was made with WorkSafe an interested onlooker.
- That during the operation of Fiskville, WorkSafe was anything but proactive in the performance of its regulatory role. It has been entirely reactive - to the CFA, the United Firefighters Union and the media.
- That firefighters at Fiskville and the Victorian community as a whole have been let down by the safety watchdog.

7.1 Introduction

Terms of Reference (1) requires the Committee to carry out a 'comprehensive historical study of pollution, contamination and unsafe activities at Fiskville between 1970 and the present day' as part of its overall Inquiry into Fiskville.

Victoria has had, for most of that time, legislation designed to prevent pollution, contamination and unsafe activities. Dedicated regulatory authorities have been established by that legislation to administer the provisions of the legislation. The Committee considers that it is necessary to examine what those various regulators did to enforce that legislation. If that enforcement was ineffective, the Committee needs to understand if the legislation was lacking or if the regulators were inactive and, if so, why.

In this Chapter, the focus is on legislation enacted to protect workers and others from dangers to their health and safety at workplaces. The Chapter commences with an examination of that legislation before considering the manner in which the legislation was applied and enforced at Fiskville.

7.2 Regulatory framework

Since 1985, Victoria has had in place comprehensive laws regulating occupational health and safety and the handling, storage and transport of dangerous goods. In that year, the *Occupational Health and Safety Act 1985* and the *Dangerous Goods Act 1985* were enacted.⁷⁶⁵ In 2005, the *Occupational Health and Safety Act 1985* was repealed and replaced by the *Occupational Health and Safety Act 2004*, which remains in force. For the purposes of this Final Report, there are very few significant differences between the 1985 and 2004 occupational health and safety Acts.⁷⁶⁶ Therefore, the following discussion focuses on the *Occupational Health and Safety Act 2004*.

The *Dangerous Goods Act 1985* and the two occupational health and safety Acts have been administered by WorkSafe Victoria, an arm of the Victorian WorkCover Authority, since 1996.⁷⁶⁷ Prior to 1996, the legislation was administered by a number of different government agencies and departments, including the Occupational Health and Safety Authority (1991-1995) and the Health and Safety Organisation (1995-1996). Generally speaking, in this Final Report, the regulator of the two occupational health and safety Acts and the *Dangerous Goods Act 1985* is referred to as 'WorkSafe'.

The objects of the *Occupational Health and Safety Act 2004* are:

- To secure the health, safety and welfare of employees and other persons at work
- To eliminate, at the source, risks to health, safety and welfare of employees and other persons at work
- To ensure that the health and safety of members of the public is not placed at risk by the conduct of undertakings by employers and self-employed persons
- To provide for the involvement of employees, employers, and organisations representing those persons, in the formulation and implementation of health, safety and welfare standards - having regard to the principles of health and safety protection set out in section 4.⁷⁶⁸

Section 4 of the *Occupational Health and Safety Act 2004* sets out a number of 'principles of health and safety protection' that WorkSafe is required to have regard to in its administration of the Act.⁷⁶⁹

Those principles include:

⁷⁶⁵ The *Occupational Health and Safety Act 1985* repealed and replaced the *Industrial Safety Health and Welfare Act 1981* (Victoria) ('the 1981 Act'). See generally, William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraph [123]

⁷⁶⁶ See generally, *Ibid.* paragraphs [39] - [142]

⁷⁶⁷ The Victorian WorkCover Authority (VWA) was established by s. 18 of the *Accident Compensation Act 1985* (Victoria) and is continued in existence by s. 491 of the *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria). WorkSafe Victoria is an administrative arm of the VWA

⁷⁶⁸ These are similar to the objects of the *Occupational Health and Safety Act 1985* (Victoria), s. 6

⁷⁶⁹ *Occupational Health and Safety Act 2004* (Victoria), s. 2(2)

- The importance of health and safety requires that employees, other persons at work and members of the public be given the highest level of protection against risks to their health and safety that is reasonably practicable in the circumstances
- Employers and self-employed persons should be proactive, and take all reasonably practicable measures, to ensure health and safety at workplaces and in conduct of undertakings.⁷⁷⁰

Section 21 of the *Occupational Health and Safety Act 2004* imposes on an employer a duty to do what is reasonably practicable⁷⁷¹ to provide and maintain a 'working environment' for employees that is safe and without risks to health.⁷⁷² An employer fails to meet that duty if, for example, the employer fails to:

- Maintain, so far as is reasonably practicable, each workplace under the employer's control in a condition that is safe and without risks to health⁷⁷³
- Provide such 'information, instruction, training or supervision to employees' as is necessary to enable them to perform their work in way that is safe and without risks to health.⁷⁷⁴

By virtue of s. 21(3), the duties owed by an employer to its employees under ss. 21(1) and (2) are also owed to a contractor engaged by the employer to the extent that the employer controls the work being done by the contractor.⁷⁷⁵ For example, if the employer knows of a hidden danger, it must alert the contractor to it.

Section 22 of the *Occupational Health and Safety Act 2004* also requires an employer to:

- Monitor the health of employees of the employer
- Monitor 'conditions at any workplace under the employer's management and control'
- Provide information to the employees concerning health and safety at the workplace.⁷⁷⁶

The duties owed by an employer under the *Occupational Health and Safety Act 2004* are not limited to its employees and contractors. An employer is also required to do what is reasonably practicable to ensure that people other than its employees are not exposed to risks to their health and safety as a result of the

⁷⁷⁰ There was no equivalent of s. 4 of the *Occupational Health and Safety Act 2004* in the *Occupational Health and Safety Act 1985*

⁷⁷¹ 'Reasonably practicable' is defined in s. 20 of the *Occupational Health and Safety Act 2004* (Victoria). For discussion, see William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [506] - [526]

⁷⁷² The equivalent section in the *Occupational Health and Safety Act 1985* (Victoria) was also s. 21

⁷⁷³ *Occupational Health and Safety Act 2004* (Victoria), s. 21(2)(c)

⁷⁷⁴ The equivalent provision in the *Occupational Health and Safety Act 1985* (Victoria) was also s. 21(2)(e). A similar obligation was imposed on an employer by ss. 11(1) and (2)(c) of the 1981 Act

⁷⁷⁵ William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [601]-[614]

⁷⁷⁶ The equivalent section in the *Occupational Health and Safety Act 1985* (Victoria), was s. 21(4). See generally, William B. Creighton and P Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [645]-[647]

‘conduct of the employer’s undertaking’.⁷⁷⁷ The CFA’s undertaking at Fiskville was primarily the provision of firefighting and other training. As noted in Chapter 1, thousands of employees of other agencies such as the Metropolitan Fire Brigade (MFB) have been trained at Fiskville. The duty under s. 23 applied to them; it also applied (and continues to apply) to residents on adjoining properties.

Section 25 of the *Occupational Health and Safety Act 2004* imposes a duty on employees, while at work, to take ‘reasonable care’ for their own safety and for the safety of others. The Act also imposes duties on others whose conduct may affect health and safety. Of relevance to Fiskville, s. 30 imposes a duty on a supplier of a ‘substance’ in circumstances where the supplier knows, or ought reasonably to know, that the substance is to be used at a ‘workplace’. Among other things, a supplier is required to provide the recipient with ‘adequate information’ about ‘any conditions necessary to ensure that the substance is safe and without risks to health’.⁷⁷⁸

Under s. 38 of the *Occupational Health and Safety Act 2004*, an employer is obliged to report to WorkSafe certain incidents that occur at a workplace under the employer’s management or control. Included in the range of reportable incidents is ‘the escape, spillage or leakage of any dangerous goods (within the meaning of the *Dangerous Goods Act 1985*)’.⁷⁷⁹ There was a very similar obligation on employers between 1997 and 2005 under the *Occupational Health and Safety Act 1985*.⁷⁸⁰ Between 1986 and 1997, there was a duty on an employer to report in writing an ‘accident’ as defined to the occupational health and safety regulator. The class of reportable incidents was more limited at that time than after 1997.⁷⁸¹

In addition to reporting the occurrence of such an incident ‘immediately’, an employer is required, within 48 hours, to give WorkSafe a ‘written record of the incident’, in the approved form.⁷⁸² Such a written record is required to be in the form of a statutory declaration and to include a ‘brief description of the incident’ and ‘action taken / intended, if any, to prevent recurrence of incident’.⁷⁸³

An employer is required to consult with any employee likely to be directly affected by certain acts of the employer including identifying or assessing hazards or risks or making decisions or proposing changes that may affect the

⁷⁷⁷ *Occupational Health and Safety Act 2004* (Victoria), s. 23. The equivalent section in the *Occupational Health and Safety Act 1985* (Victoria) was s. 22. Those provisions are examined in detail in William B. Creighton and P Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [701]-[713]

⁷⁷⁸ A similarly worded duty was imposed by s. 24 of the *Occupational Health and Safety Act 1985* (Victoria)

⁷⁷⁹ *Occupational Health and Safety Act 2004* (Victoria), ss. 38 and 37(2)(e); The meaning of ‘dangerous goods’ is discussed below

⁷⁸⁰ *Occupational Health and Safety (Incident. Notification) Regulations 1997* (Victoria), regulation 8(e)

⁷⁸¹ *Occupational Health and Safety (General Safety) Regulations 1986* (Victoria), regulation 7

⁷⁸² *Occupational Health and Safety Act 2004* (Victoria), s. 38(3)

⁷⁸³ WorkSafe, ‘Incident Notification Form’ (September 2013). Previous forms contained similar requirements

health and safety of employees.⁷⁸⁴ This obligation to consult with employees would be triggered, for example, in circumstances where an employer proposed to alter an exposure standard in force for its employees.

Enforcement of the *Occupational Health and Safety Act 2004* is entrusted to WorkSafe and its inspectors. Inspectors appointed under the *Occupational Health and Safety Act 2004* have extensive powers to enter premises at any time during working hours without notice.⁷⁸⁵ Once they have entered premises, inspectors may exercise any of the inspection and investigation powers conferred under Part 9 of the *Occupational Health and Safety Act 2004*, including:

- Seizing anything that may afford evidence of an offence⁷⁸⁶
- Requiring the production of documents⁷⁸⁷
- Requiring a person to answer questions⁷⁸⁸
- Prohibiting by oral direction an activity that poses an immediate risk⁷⁸⁹
- Taking samples of anything that may be required for analysis (without payment).⁷⁹⁰

It is an indictable offence to fail to comply with a direction of an inspector.⁷⁹¹ Further, the Act imposes a positive duty on occupiers, employers and employees to ‘provide such assistance as an inspector may reasonably require’.⁷⁹² The powers conferred on inspectors by the *Occupational Health and Safety Act 2004* largely mirror those previously conferred by the *Occupational Health and Safety Act 1985*.⁷⁹³

An inspector who exercised powers under the *Occupational Health and Safety Act 1985* was required to provide the employer and employee health and safety representative ‘information with respect to the inspector’s observations and any action the inspector proposes to take in relation to the workplace’.⁷⁹⁴ The corresponding provision in the *Occupational Health and Safety Act 2004* requires a more detailed written report.⁷⁹⁵ As part of this Inquiry’s document discovery

⁷⁸⁴ *Occupational Health and Safety Act 2004* (Victoria), s. 35; The corresponding duty under the *Occupational Health and Safety Act 1985* (Victoria) only required an employer to consult with an employee-elected health and safety representative (see s. 31(2)(c)). See generally William B. Creighton and Peter Rozen, *Occupational Health and Safety in Victoria* (3rd edition, 2007), Federation Press, paragraphs [656]-[665]

⁷⁸⁵ *Occupational Health and Safety Act 2004* (Victoria), s. 98. See generally William B. Creighton and Peter Rozen, *Occupational Health and Safety in Victoria* (3rd edition, 2007), Chapter 8

⁷⁸⁶ *Occupational Health and Safety Act 2004* (Victoria), s. 99(d)

⁷⁸⁷ Section 100(1)(a). However, there is no obligation to provide a document that contains information that is the subject of legal professional privilege— *Occupational Health and Safety Act 2004* (Victoria), s. 155

⁷⁸⁸ *Occupational Health and Safety Act 2004* (Victoria), s. 100(1)(b)

⁷⁸⁹ *Ibid.* s. 120

⁷⁹⁰ *Ibid.* s. 101

⁷⁹¹ *Ibid.* ss. 100(2), 125

⁷⁹² *Ibid.* s. 121. It is an offence to fail to do so under s. 121 of the *Occupational Health and Safety Act 2004* (Victoria).

⁷⁹³ See generally *Occupational Health and Safety Act 1985* (Victoria), s. 39

⁷⁹⁴ *Occupational Health and Safety Act 1985* (Victoria), s. 40(2)

⁷⁹⁵ *Occupational Health and Safety Act 2004* (Victoria), s. 103(2)

process (see Chapter 2) WorkSafe provided the Committee with a large number of inspectors' reports generated under these provisions. This has greatly assisted the Committee.

In addition to the powers conferred on its inspectors, WorkSafe itself may serve a written notice on any person requiring the person to provide WorkSafe with information or documents.⁷⁹⁶

An inspector who reasonably believes that a person is contravening a provision of the *Occupational Health and Safety Act 2004* may issue the person with an improvement notice requiring the contravention to be remedied. It is an offence to fail to comply with such a notice.⁷⁹⁷ If an inspector reasonably believes that an activity at a workplace is exposing any person to an immediate risk to their health or safety, the inspector may prohibit the activity by notice.⁷⁹⁸

WorkSafe, or an inspector authorised by WorkSafe, may commence proceedings for an offence against a person who has contravened a section of the *Occupational Health and Safety Act 2004*.⁷⁹⁹ Proceedings must be commenced within two years of the date the offence was committed or the date on which WorkSafe becomes aware that the offence was committed.⁸⁰⁰ However, the Director of Public Prosecutions may authorise WorkSafe to prosecute outside of this time limit.⁸⁰¹ Further, the DPP may prosecute a case under the *Occupational Health and Safety Act 2004* unrestricted by the time limit in s. 132.⁸⁰²

If a person considers that an offence has been committed against the Act but no prosecution has commenced within six months, the person may request in writing that WorkSafe bring a prosecution.⁸⁰³ Within three months of receiving such a request, WorkSafe 'must' investigate the matter and, following the investigation advise the person in writing whether a prosecution has been or will be brought or give reasons why a prosecution will not be brought.⁸⁰⁴

7.3 *Dangerous Goods Act 1985*

The *Dangerous Goods Act 1985* came into effect as part of the same package of reforms as the *Occupational Health and Safety Act 1985*.⁸⁰⁵ The objects of the *Dangerous Goods Act 1985* include:

⁷⁹⁶ *Occupational Health and Safety Act 2004* (Victoria), s. 9

⁷⁹⁷ *Ibid.* s. 111

⁷⁹⁸ *Ibid.* s. 112

⁷⁹⁹ *Ibid.* s. 130; see generally William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, chapter 9

⁸⁰⁰ *Occupational Health and Safety Act 2004* (Victoria), s. 132(a)

⁸⁰¹ *Ibid.* s. 132(b)

⁸⁰² *Director of Public Prosecutions v Patrick Stevedore Holdings Pty Ltd* (2012) 41 VR 81

⁸⁰³ *Occupational Health and Safety Act 2004* (Victoria), s. 131(1)

⁸⁰⁴ *Ibid.* s. 131(2)

⁸⁰⁵ The background to the passage of the *Dangerous Goods Act 1985* (Victoria), is discussed in the Committee's interim report, Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville Interim Report*, (2015, Report No.1, 58th Parliament), pp.28-32

- The allocation of responsibilities to occupiers and owners of premises to ensure that the health and safety of workers and the general public is protected⁸⁰⁶
- Ensuring that adequate precautions are taken against certain leakages and spillages of dangerous goods and that when they occur they are reported to the emergency services and inspectors without delay.⁸⁰⁷

‘Dangerous goods’ under the *Dangerous Goods Act 1985* is a term defined to mean dangerous goods within the meaning of successive editions of the ‘Australian Code for the Transport of Dangerous Goods by Road and Rail’.⁸⁰⁸

The *Dangerous Goods Act 1985* confers a broad range of enforcement powers on inspectors appointed by WorkSafe under the Act.⁸⁰⁹ These powers are similar to those conferred on inspectors appointed under the occupational health and safety Acts (discussed above). Importantly, WorkSafe is able to delegate its enforcement powers under the *Dangerous Goods Act 1985* to officers and members of the CFA.⁸¹⁰

Since 1989, regulations made pursuant to the *Dangerous Goods Act 1985* have imposed a range of duties on occupiers of premises where dangerous goods are stored or used.⁸¹¹ These duties include:

- Strict procedures to be followed for the storage of dangerous goods such as placarding and the use of safety signs⁸¹²
- Planning for emergencies and the provision of information to fire authorities⁸¹³
- Reporting of accidents.⁸¹⁴

Since 1985, both the occupational health and safety Acts (1985 and 2004) and the *Dangerous Goods Act 1985* have been administered and enforced by WorkSafe and its predecessor organisations.

FINDING 61: That since 1985, Victoria has had in place comprehensive laws regulating occupational health and safety and the handling, storage and transport of dangerous goods. The laws in relation to occupational health and safety were strengthened in 2004. The laws impose onerous duties on employers, such as the CFA, for the benefit of employees and contractors. The laws confer extensive powers on inspectors to enforce compliance with those duties.

⁸⁰⁶ *Dangerous Goods Act 1985* (Victoria), s. 4(d)

⁸⁰⁷ *Ibid.* s. 4(b)

⁸⁰⁸ *Ibid.* s. 3 and s. 10

⁸⁰⁹ *Ibid.* ss. 11, 13-18B

⁸¹⁰ *Ibid.* s. 10B(5)(b). See also Case Study 3 on Mr David Clancy

⁸¹¹ For example, *Dangerous Goods (Storage and Handling) Regulations 1989*, replaced in 2012 by the *Dangerous Goods (Storage and Handling) Regulations 2012*

⁸¹² *Dangerous Goods (Storage and Handling) Regulations 1989*, Part 3, Div. 1

⁸¹³ *Ibid.* Part 3, Div. 2

⁸¹⁴ *Ibid.* Part 3, Div. 4

7.4 WorkSafe activity at Fiskville between 1991 and December 2011

The evidence before the Committee reveals that WorkSafe inspectors made 117 visits to Fiskville between 1991 and December 2011.⁸¹⁵ Importantly, a number of these visits involved the provision of training by WorkSafe personnel to CFA staff about occupational health and safety and dangerous goods legislative requirements.

For example, on 25 May 1994, a WorkSafe Inspector made a ‘presentation’ to a CFA Senior Manager’s Conference at Fiskville on ‘OHS roles and responsibilities’. Mr Jeff Green of the CFA, who had only very recently been appointed as the CFA’s Occupational Health and Safety Manager, is recorded as ‘OHS Contact 1’ and as ‘OHS Professional’.⁸¹⁶ Similar training sessions were conducted at Fiskville by various WorkSafe inspectors on 26 September 1994,⁸¹⁷ 5-7 October 1994,⁸¹⁸ 6 December 1994,⁸¹⁹ 3-5 May 1995⁸²⁰ and 27-29 October 1997.⁸²¹ On each occasion other than 26 September 1994, Mr Green is recorded as the CFA contact person in the inspection record.⁸²²

WorkSafe inspectors conducted statutory inspections of Fiskville to ascertain if the CFA was complying with its statutory obligations under the *Occupational Health and Safety Act 2004* and the *Dangerous Goods Act 1985*. Based on the records provided by WorkSafe to the Committee, the most intense periods of activity were between 1991 and 1996⁸²³ and again in 2005. A number of the early visits resulted in inspectors issuing improvement and prohibition notices under the *Occupational Health and Safety Act 2004* and statutory directions under the *Dangerous Goods Act 1985*. For example, between June 1991 and March 1992, inspectors issued five prohibition notices to CFA contractors working at the Fiskville site.⁸²⁴ The notices related to immediate dangers to safety as a result of working from height, electricity leads and scaffolding.

In July 1993, an inspector issued directions to the CFA concerning Fiskville under s. 17(2) of the *Dangerous Goods Act 1985*.⁸²⁵ The inspection record of the visit contains nine directions to the CFA, including directions about:

- Dangerous goods placarding

⁸¹⁵ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.53

⁸¹⁶ WorkSafe Victoria, Inspection Results for Inspection Number 113622384, 18 January 1996

⁸¹⁷ WorkSafe Victoria, Inspection Results for Inspection Number 11496373, 26 September 1994

⁸¹⁸ WorkSafe Victoria, Inspection Results for Inspection Number 11504760, 6 October 1994

⁸¹⁹ WorkSafe Victoria, Inspection Results for Inspection Number 11587402, 6 December 1994

⁸²⁰ WorkSafe Victoria, Inspection Results for Inspection Number 11688932, 4 May 1995

⁸²¹ WorkSafe Victoria, Inspection Results for Inspection Number 12358494, 27 October 1997

⁸²² Mr Green has been the Workplace Health and Safety Manager at the CFA since 1994. Occupational health and safety is discussed in Chapter 5

⁸²³ The evidence before the Committee calls into question the conclusion in the Joy report that ‘there is little evidence of regulatory bodies’ interests in Fiskville until the mid-1990’s’ (Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.48), at least as far as WorkSafe is concerned

⁸²⁴ WorkSafe inspection numbers 289520, 319255, 319104, 289531 and 306294

⁸²⁵ WorkSafe Victoria, Inspection Results for Inspection Number 794220, 28 July 1993

- The need for proper storage of flammable liquids
- The need to install appropriate firefighting equipment.

Compliance was to be achieved by September 1993. Unfortunately, the Committee was unable to verify if the CFA complied with these directions. This was despite a request to WorkSafe stating that the Committee was particularly interested in the follow-up action taken by WorkSafe following the 1993 Notice.⁸²⁶ In its reply, WorkSafe provided a copy of the inspection summary described above and its file relating to a 1996 inspection of Fiskville. The Committee notes the conclusion in the Joy Report that the 1993 notice ‘... does not appear to have been actioned by CFA or followed up by the HSO [Health and Safety Organisation]’.⁸²⁷ The evidence before the Committee is consistent with this conclusion.

On 18 January 1996, a WorkSafe inspector inspected Fiskville pursuant to the *Dangerous Goods Act 1985*.⁸²⁸ The Inspector’s inspection record includes the following:

I noted a large number of 205 ltr drums when I asked what they was [sic.] contained I was told I did not want to know what was in them. On further questioning I was told it [sic.] contained a mix of petrol, diesel and in some cases kerosine [sic.], the drums were labelled Home kerosine and jet aviation kerosine. These same drums were not stored in a bunded area, they were stacked on pallets on the ground...

As part of that inspection, the Inspector issued a number of directions to the CFA pursuant to the *Dangerous Goods Act 1985* requiring it to remedy various safety deficiencies associated with the storage and handling of dangerous goods. The inspector returned to Fiskville on 15 February 1996 and issued further directions under the *Dangerous Goods Act 1985*.⁸²⁹ Also on that date, another inspector inspected Fiskville and issued directions to the CFA.⁸³⁰ The inspection record notes that the CFA’s occupational health and safety contact on this occasion was ‘David Clancey’ [sic.].⁸³¹

Statutory Notices and Directions were also issued to the CFA by WorkSafe inspectors on 27 May 1997, 16 April 1998, 25 May 2000, 10 January 2005, 11 July 2005 and 22 November 2005.⁸³² The notices address a broad range of non-compliances with the *Occupational Health and Safety Act 1985*, *Occupational Health and Safety Act 2004* and the *Dangerous Goods Act 1985*. The Committee has found evidence that some notices were discussed at Board or Board

⁸²⁶ Correspondence from Chair, Environment Natural Resources and Regional Development Committee, to Ms Clare Amies, CEO, WorkSafe Victoria, 20 October 2015

⁸²⁷ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.48, citing the *Dangerous Goods Occupational Health and Safety Environmental Audit 1996*

⁸²⁸ WorkSafe Victoria, Inspection Results for Inspection Number 3037005, 23 May 1994

⁸²⁹ WorkSafe Victoria, Inspection Results for Inspection Number 3037031, 15 February 1996

⁸³⁰ WorkSafe Victoria, Inspection Results for Inspection Number 3224045, 15 February 1996

⁸³¹ See also Case Study 3 on Mr David Clancy

⁸³² See records of inspections numbered 3571761 (17 May 1997), 4408902 (16 April 1998) and Notices numbered V00016900527L (25 May 2000), V00012101193L (10 January 2005), V00015201369L/111-01B (11 July 2005) and V00048401544L (22 November 2005)

subcommittee level.⁸³³ However, the Committee would expect that all notices would be discussed at the Board level. Based on the number and breadth of the notices and the absence of evidence that they were all considered at Board level, the Committee concludes that the CFA displayed a lack of attention to compliance with these important statutory obligations.

7.4.1 Digging up the past

One matter that is conspicuous by its absence from the WorkSafe records examined by the Committee is any record of involvement by WorkSafe in investigating an incident in March 2002⁸³⁴ in which a CFA contractor was overcome by fumes when he dug up several buried 205 litre drums that contained chemical residues.⁸³⁵

As discussed in detail in Chapter 4, over a period of many years management at Fiskville had buried drums containing flammable liquid residues that had been delivered to Fiskville.⁸³⁶ Their record keeping about the location of buried drums was very poor.

The background to this incident is that in early 2002, the Officer in Charge at Fiskville, Mr Mark Glover,⁸³⁷ began planting blue gum trees on the property with the intention of selling them once they had grown. The income from the trees was intended to supplement Fiskville's income.⁸³⁸

Work to plant the trees commenced on a weekend. An unidentified CFA contractor⁸³⁹ was using his dozer⁸⁴⁰ with a claw attached to dig up the ground when the dozer's claw tore open a number of buried drums releasing liquid and vapours of what was described to the Committee as a type of solvent.⁸⁴¹ Former

⁸³³ For example, in Chapter 6 there is a quote from the minutes of a meeting of the 'People Strategy Committee' held on 15 August 2001 indicating that the subcommittee was aware of some notices having been issued by WorkSafe

⁸³⁴ The evidence before the Committee from Mr Glover, the Officer in Charge at Fiskville at the time, was that the incident occurred 'around 2001' – Mr Mark Glover, Operations Manager, CFA, *Submission 37*, paragraph 11; the Committee also heard from an eye witness to the incident, Mr Myers, that it happened 'around Christmas 2001' – Mr John Myers, *Transcript of evidence*, 27 January 2016, p.12. However, for the reasons explained in Professor Joy's report at pp 98-99 involving the dates of various invoices, the Committee considers that it is likely that the incident occurred in March 2002. Mr Glover told the Committee that the incident he was describing and the one referred to by Professor Joy are the same incident – Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.8

⁸³⁵ See also Chapter 5

⁸³⁶ The Joy report described these as 'major burials' of drums – see Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.102-106

⁸³⁷ Mr Glover was Officer in Charge from October 2001 to June 2004

⁸³⁸ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.7

⁸³⁹ The Joy Report described the driver as an 'unknown machine operator' – Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.99

⁸⁴⁰ Professor Joy described the machine being used as 'a bulldozer (or possibly a back hoe or tractor)' – Ibid. p.106. Mr Myers was very firm in his evidence to the Committee that it was a dozer – Mr John Myers, *Transcript of evidence*, 27 January 2016, p.13. Mr Glover was equally firm that it was a tractor – Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.8

⁸⁴¹ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.12

CFA employee Mr John Myers⁸⁴² told the Committee that “four or five” drums were ripped open.⁸⁴³ The evidence about what happened and the effect of the incident on the driver is unclear.

Mr Myers told the Committee that the driver inhaled some fumes through the air conditioner in his closed cabin.⁸⁴⁴ However, Professor Joy quotes an un-named ‘external CFA Contract Instructor’ as describing the ‘foul liquid’ as being on ‘[the driver’s] skin, his clothing and all over the bulldozer’.⁸⁴⁵ The Committee has a copy of an undated letter about this incident sent to Professor Joy by Mr Graham Smith, who was employed as a CFA contract instructor at Fiskville between 1997 and 2007.⁸⁴⁶ In the letter, Mr Smith states that he was working at Fiskville as ‘co-ordinator and safety officer’ on the day of this incident when he was:

... approached by a gentleman who was dry retching. He was covered in a foul smelling thick liquid, about the consistency of custard. He told me he was driving a bulldozer that was contracted to rip furrows to enable the planting of blue gum trees on the property’. While carrying out this work, the ripper on his bulldozer had dug up 200 litre drums of the foul liquid. This liquid was on his skin, his clothing, all over the bulldozer.⁸⁴⁷

Mr Myers, who saw the driver shortly after the incident, told the Committee that the driver was “pretty nauseous and a bit groggy”.⁸⁴⁸ Mr Glover, who was at home when he received the call, told the Committee that Mr Myers told him that the driver “got a bit woozy”.⁸⁴⁹ In his submission to this Inquiry, Mr Glover said that the driver ‘essentially collapsed’, but Mr Glover was unsure whether the driver went to hospital.⁸⁵⁰ This account is consistent with the interview given by Mr Myers to the investigators conducting the Joy Report in 2012 when he said the driver “nearly passed out”.⁸⁵¹

While the Committee accepts that memories may not be strong about an incident that occurred 14 years ago, it does seem that the witnesses who it has heard from have sought to downplay the severity of the incident in their oral evidence.

Importantly, on any view of the evidence the Committee has heard, the incident most likely involved ‘the escape, spillage or leakage of dangerous goods’ and was thus reportable to WorkSafe under the then applicable regulations.⁸⁵²

842 Mr Myers was PAD supervisor from 2000.

843 Mr John Myers, *Transcript of evidence*, 27 January 2016, p.12

844 Ibid.; see also Mr John Myers, *Independent Fiskville Investigation interview transcript*, 2 April 2012, p.33

845 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.98, footnote 38

846 Undated letter from Graham A. Smith to Professor R. Joy

847 Undated letter from Graham A. Smith to Professor R. Joy, p. 2

848 Mr John Myers, *Transcript of evidence*, 27 January 2016, p.12

849 Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.7

850 Mr Mark Glover, Operations Manager, CFA, *Submission 37*, p.2

851 Mr John Myers, *Independent Fiskville Investigation interview transcript*, 2 April 2012, p.33

852 *Occupational Health and Safety (Incident Notification) Regulations 1997*, regulation 8(e)

The evidence about whether the incident was reported, and if so, to whom, is also unclear. Mr Glover told the Committee that on the Monday after the incident, he contacted WorkCover and EPA Victoria by telephone. He said that "... they did not attend the site at all in any way, shape or form. They just said: 'Okay. Well, you need to rip up the dirt and get rid of the drums'." ⁸⁵³

Mr Glover was asked by Committee Deputy Chair Mr Tim McCurdy whether he thought it was odd that WorkSafe did not investigate an incident such as this. Mr Glover replied: "I was kind of glad they did not [because] it allowed us to get on with the job of fixing up the thingo. In other words the stuff was not hanging around in the air for all that long, so we could actually do something about getting the job fixed."

Mr Glover agreed with the suggestion by Committee member Ms Vicki Ward that WorkSafe or EPA Victoria could be viewed as more of a hindrance than organisations offering help. ⁸⁵⁴

Contrary to his oral evidence, however, in his submission to this Inquiry, Mr Glover made no reference to contacting EPA Victoria. He stated: '... on the following Monday I contacted WorkSafe and they provided guidance as to how to deal with the issue. It should be noted that they did not come to inspect the problem.' ⁸⁵⁵

Confusingly, in his interview with the Joy Report investigator, Mr Glover said that he contacted EPA Victoria but made no mention of contacting WorkSafe. ⁸⁵⁶

Mr Myers said that, when he spoke to Mr Glover on the day of the incident, Mr Glover told him: "I'll ring up EPA or WorkSafe". ⁸⁵⁷

Finally, the Committee discovered:

- Professor Joy concluded that there was '... no evidence a report was made to the relevant statutory authority [WorkSafe] as required under the Victorian *Occupational Health and Safety (Incident Notification) Regulations 1997*' ⁸⁵⁸
- In his interview with the Joy Report investigator, Mr Myers made no reference to the matter having been reported to either regulator

⁸⁵³ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.7

⁸⁵⁴ Ibid. pp.7-8

⁸⁵⁵ Mr Mark Glover, Operations Manager, CFA, *Submission 37*, p.2

⁸⁵⁶ Mr Mark Glover, Operations Manager, CFA, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.34. The Committee notes Mr Glover's evidence to it that he was not asked about this incident by the Joy investigator – see Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.8. However, on p. 99 of Professor Joy's report, reference is made to 'the Officer in Charge of Fiskville', which was Mr Glover at the relevant time. The Committee has a copy of Mr Glover's transcript and notes that the reference on page 99 of Professor Joy's report (footnote 14) is a reference to Mr Glover's transcript of interview by Professor Joy's investigator, Mr Lucio Rovis. The Committee notes that pp.29-37 of Mr Glover's transcript of his interview for Professor Joy's report includes a detailed discussion of this incident.

⁸⁵⁷ Mr John Myers, *Transcript of evidence*, 27 January 2016, p.12

⁸⁵⁸ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.99. Professor Joy makes no reference to the incident having been reported to EPA Victoria

- WorkSafe informed the Committee that it has no record of being notified of the incident.⁸⁵⁹

The Committee notes that the records it has examined reveal that the first WorkSafe visit to Fiskville after this incident was on 25 June 2002. Mr Glover is noted in the inspection record as the CFA contact who was provided with the report from the visit.⁸⁶⁰ The record makes no reference to the above incident. It seems surprising to the Committee that such a serious incident would not have been raised by either Mr Glover or the WorkSafe inspector during this inspection if it had in fact been recently reported to WorkSafe, as claimed by Mr Glover.

The Committee concludes that Mr Glover is mistaken in his recollection that he reported the incident to WorkSafe. He may well have reported it to EPA Victoria.⁸⁶¹ Had the incident been reported to WorkSafe, the Committee considers it likely that an inspector would have attended to follow up the matter. At the very least, WorkSafe would have advised the CFA of the requirement to submit to it a written record of the incident.⁸⁶² The evidence is that WorkSafe has no record of a notification and no written report on the incident was ever completed by the CFA, which Mr Glover honestly accepted was his responsibility.⁸⁶³ He also candidly informed the Committee that the incident was "... brushed under the carpet a little bit".⁸⁶⁴

It is conceivable that WorkSafe would have taken enforcement action against the CFA had the incident been reported to it. The exposure of the driver to risk was likely to have been a serious contravention of either s. 21 or s. 22 of the *Occupational Health and Safety Act 1985*. Those sections imposed a duty on an employer to provide a safe working environment to its employees, contractors and members of the public so far as practicable. Those duties included a duty to provide employees and independent contractors with 'such information ... as is necessary to enable [them] to perform their work in a way that is safe and without risks to health'.⁸⁶⁵ A prosecution of the CFA over this incident would have brought the broader question of how poorly occupational health and safety was being managed at Fiskville to the attention of senior management and the Board of the CFA, thus hopefully leading to improvements.⁸⁶⁶

The Committee considers this matter to be significant. It was a serious incident in which a CFA contractor was exposed to unknown hazardous chemicals with what are presently unknown health consequences for the contractor. On the evidence

⁸⁵⁹ Correspondence from WorkSafe to Chair, Environment, Natural Resources and Regional Development Committee, in response to specific inquiry of whether it has a record of being notified of this incident, 4 March 2016

⁸⁶⁰ WorkSafe Victoria, Field Report, visit number V00000400352L, 25 June 2002

⁸⁶¹ See Chapter 8

⁸⁶² *Occupational Health and Safety (Incident Notification) Regulations 1997*, regulation 9(1) and (3)

⁸⁶³ Mr Mark Glover, Operations Manager, CFA, *Transcript of evidence*, 27 January 2016, p.15. As noted in Chapter 4, this honest acceptance of personal responsibility was unusual in this Inquiry

⁸⁶⁴ *Ibid.*

⁸⁶⁵ *Occupational Health and Safety Act 1985*, (Victoria), s. 21(2)(e) and s. 21(3). The corresponding section in the 2004 Act has been described by the Court of Appeal as imposing 'obligations of the first importance': *R v Commercial Industrial Construction Group Pty Ltd* (2006) 14 VR 321 at [44]

⁸⁶⁶ The awareness of the Board of occupational health and safety matters at Fiskville during this period is examined in Chapter 6

before the Committee, no attempt has been made by the CFA to contact the contractor and enquire about his current health. It is to be recalled that former CFA officer Mr Alan Bennett attributes his present-day serious health problems to exposure to chemicals in drums at Fiskville.⁸⁶⁷ The Officer in Charge at Fiskville was fully aware of the incident. The incident did not occur in the 1970s or 1980s when the legislation was only just in force, but in 2002 when, as witnesses have been keen to inform the Committee, the CFA had apparently implemented its 'safety first' policy in response to the Linton tragedy of 1998 in which five firefighters lost their lives.⁸⁶⁸ As Professor Joy noted, the failure to report the matter to WorkSafe was even inconsistent with CFA policy.⁸⁶⁹

However, on the evidence before the Committee, the failure to report this serious incident is consistent with the CFA's treatment of occupational health and safety issues generally, and its dealings with WorkSafe specifically, at Fiskville.

The failure to report this matter to WorkSafe represents a missed opportunity for the CFA and the occupational health and safety regulator to address the 'legacy issue' of buried drums. It is not possible to know with any certainty what effect a report to WorkSafe of this incident may have had, but the Committee believes that, at the very least, it could have triggered a greater involvement by the regulator in the broader issues of buried drums and the pollution of the Fiskville site. As noted above, it may well have led to the prosecution of the CFA and a corresponding raising of the awareness at Board level of what was going on at Fiskville.

The Committee believes it is striking that, at no point during the 20-year period after 1991, did WorkSafe inspectors address the fundamental safety issues that have occupied so much time at this Inquiry, including historical soil and water contamination, water quality in the dams and Lake Fiskville, and the burial of drums containing pollutants. While this is partly explained by the CFA's lack of openness with WorkSafe,⁸⁷⁰ the health and safety regulator must accept a significant portion of responsibility because its extensive statutory powers (discussed above) meant that it was in no sense dependent on the CFA for information about events at Fiskville. WorkSafe did not use its powers to investigate the serious occupational health and safety problems at Fiskville until many years after it should have.

Despite the many visits by WorkSafe inspectors to Fiskville between 1991 and 2011, the issue of buried drums had never been raised with WorkSafe inspectors. Nor had WorkSafe been made aware by the CFA of the existence of the May 1988 AS James report referred to in the December 2011 *Herald Sun* article. It is to be recalled that this CFA-commissioned report into the buried drums informed the CFA that the drums may have contained known carcinogens such as benzene.⁸⁷¹

⁸⁶⁷ See the Case Study 2 on Mr Alan Bennett; see also Chapter 5

⁸⁶⁸ Discussed also in Chapter 4. See also the transcript of evidence of former Chairman Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.53

⁸⁶⁹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.99

⁸⁷⁰ See 7.6 below

⁸⁷¹ See Chapters 5 and 9

WorkSafe’s inspections at Fiskville had been carried out in ignorance of this major occupational health and safety issue. It took the publication of a single newspaper article in December 2011 to put this and other vital safety issues on the WorkSafe (and CFA) agendas.

FINDING 62: That although WorkSafe inspectors made 117 visits to Fiskville between 1991 and December 2011 during which they issued compliance notices to the CFA and its contractors, the inspectors failed to address many of the occupational health and safety issues that have been the subject of detailed evidence during this Inquiry, including buried drums, soil contamination and water quality.

FINDING 63: That WorkSafe records do not show any involvement by it in investigating the incident at Fiskville in March 2002 in which buried drums of chemicals were accidentally dug up exposing a CFA contractor to harmful chemicals. It seems likely that WorkSafe was not notified of this incident by the CFA as it should have been under the law. It seems likely that the CFA broke the law both by exposing the contractor to the chemicals and by failing to notify WorkSafe of the incident.

FINDING 64: That based on the number and breadth of the compliance notices issued by WorkSafe between 1991 and 2011, and the absence of evidence that they were all considered at Board level, the CFA displayed a lack of attention to compliance with its important statutory obligations.

7.4.2 The WorkSafe response to the *Herald Sun* article in December 2011

WorkSafe responded immediately to the publication of the *Herald Sun* article of 6 December 2011, with WorkSafe inspectors visiting Fiskville on the same day to follow up on the matters raised in the article. The CFA representatives who dealt with WorkSafe that day were:

- Mr Lex De Man (Executive Director, Operational Training and Volunteerism)
- Mr Justin Justin (Officer in Charge at Fiskville)
- Mr Martyn Bona (Facilities Manager at Fiskville).⁸⁷²

Representatives of Wynsafe Occupational Health Services, the CFA’s safety consultants, were also present.⁸⁷³ The inspectors asked about matters referred to in the newspaper article including a report ‘... identifying that staff were exposed to carcinogenic chemicals’.⁸⁷⁴ This was an apparent reference to the 1988 AS James report (discussed above).

The WorkSafe report of the inspection records that CFA management ‘... advised that [the CFA is] not aware of any such report but are currently making inquiries to find the document if it exists’. The WorkSafe report further notes that ‘... management advised that they are not aware of any reported cases of chemical

⁸⁷² These were the position titles of the CFA employees at that time

⁸⁷³ WorkSafe Victoria, Field Report, visit number V00002100455L, 6 December 2011

⁸⁷⁴ Ibid. p.2

related health issues as a result of work practices at the CFA Fiskville site'.⁸⁷⁵ The report also records that the inspectors were told that '... a CFA team is being assembled that will involve an independent expert to review and investigate the allegations made in the newspaper article'.⁸⁷⁶

In its submission to this Inquiry, WorkSafe informed the Committee that its inspections at this time '... focused on ensuring that the CFA was currently complying with its obligations under the *Occupational Health and Safety Act 2004* (rather than on whether it had breached those obligations in the past, which would be covered by the Joy investigation)'.⁸⁷⁷

On 16 December 2011, inspectors visited the CFA head office in Melbourne.⁸⁷⁸ They met with Mr Green and Mr Trevor Griffett, CFA Legal Counsel, and raised the following issues:

- The whereabouts of the '1990' CFA report referred to in the *Herald Sun* article
- The correspondence between CFA Human Resources Director Mr J Kilpatrick and Mr Alan Bennett from October 1990
- Other consultant reports about pollution of the Fiskville site
- The Wynsafe Occupational Health Services reports from 2009 concerning dam remediation.

The Committee notes that, contrary to the claim in the WorkSafe submission that the inspections were only concerned with present-day compliance, the inspectors' requests seem to have been entirely concerned with issues in the (distant) past. The Committee concludes that this was a result of the investigation being completely prompted by the article in the *Herald Sun*.

On 22 December 2011, the CFA provided WorkSafe with a copy of a 1988 geotechnical report entitled 'Country Fire Authority. Waste Disposal Facility. Fiskville Training Facility' prepared by AS James Pty Ltd.⁸⁷⁹ The contents of this report are discussed in Chapter 5.

As part of its ongoing investigation into the matters revealed in the *Herald Sun* article from December 2011, a further WorkSafe inspection took place on 20 March 2012.

During the course of these various inspections, the CFA provided WorkSafe with a number of consultants' reports it had obtained in previous years, many of which concerned water quality in the dams at Fiskville. The evidence before the Committee suggests that none of these reports had previously been provided

⁸⁷⁵ Ibid. The knowledge about Fiskville of the CFA's executive management is addressed in Chapter 6

⁸⁷⁶ Ibid. p.2. The 'independent review' was the Joy Report

⁸⁷⁷ WorkSafe submission dated 27 April 2015, para. 28

⁸⁷⁸ WorkSafe Victoria, Field Report, visit number V00002100455L, 6 December 2011

⁸⁷⁹ WorkSafe Victoria, Field Report, visit number V00002100459L, 22 December 2011, p.2

to, or even discussed with, WorkSafe.⁸⁸⁰ During this investigation, WorkSafe did little apart from collecting copies of reports. Crucially, its inspectors at no point exercised their powers to take water samples.⁸⁸¹

7.4.3 The request by the United Firefighters Union (UFU) for a WorkSafe investigation

A further article about Fiskville was published by the *Herald Sun* on 25 June 2012. This article addressed allegations about unsafe water being used for firefighting training at Fiskville.

On 6 July 2012, the United Firefighters Union (UFU) wrote to the Chief Executive of WorkSafe drawing attention to ‘... recent publicity that has highlighted serious allegations concerning the quality of water used for firefighting training at the CFA Fiskville training ground’.⁸⁸² The UFU expressed its concern that the CFA’s use of ‘contaminated water’ was a breach of its obligations under the *Occupational Health and Safety Act 2004*. It requested that WorkSafe conduct an ‘immediate and thorough investigation’ of the water quality at all CFA training grounds and proposed that the investigation also analyse all water testing for the previous ten years.⁸⁸³

On 10 July 2012, two WorkSafe inspectors attended the CFA’s head office in Melbourne. They met with CFA officers Mr De Man, Mr Justin and Mr Bona. The inspection report completed by the inspectors records: ‘CFA Management advised that only mains (town) water is currently being used in firefighting exercises at Fiskville.’⁸⁸⁴

In its submission to this Inquiry, WorkSafe confirmed that it was informed by the CFA in ‘mid-2012’ that ‘... only mains water was being used [at Fiskville] for firefighting exercises pending the publication of Professor Joy’s report’.⁸⁸⁵

On this basis, and despite being advised by the CFA in August 2012 that there had been ‘... further reports of persons suffering gastroenteritis and skin rashes as a result of exposure to firefighting water’,⁸⁸⁶ WorkSafe considered that ‘... there was no issue with current compliance with the *Occupational Health and Safety Act 2004*, and [it] did not therefore serve any statutory notices at this point in time’.⁸⁸⁷ Once again, WorkSafe’s inspectors did not take any water samples for analysis.⁸⁸⁸

⁸⁸⁰ The CFA’s selective provision to WorkSafe of consultants’ reports about occupational health and safety is discussed below

⁸⁸¹ The powers available to the inspectors in this regard are discussed in 7.2 above

⁸⁸² This was an apparent reference to the article published in the *Herald Sun* on 25 June 2012

⁸⁸³ Correspondence from Davies Lawyers (acting for UFU), to WorkSafe Victoria, 6 July 2012

⁸⁸⁴ WorkSafe Entry Report V00002100486L, 10 July 2012

⁸⁸⁵ WorkSafe Victoria, *WorkSafe Background Paper*, (2015), paragraph 30(d) ; see also at paras 32 and 33(c)

⁸⁸⁶ *Ibid.* paragraph 33(d)

⁸⁸⁷ *Ibid.* paragraph 32

⁸⁸⁸ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.40

The Committee notes evidence before it that in May 2015, WorkSafe inspectors were investigating an ‘... allegation that in 2012, after Tank 1 was installed, PAD operators continued to use dam water for training purposes when main water in Tank 1 was low’.⁸⁸⁹ The Committee is unaware of the outcome of this investigation, or if this is the ongoing investigation referred to in the evidence of WorkSafe CEO Ms Clare Amies about “... whether an offence may have been committed in relation to water stored in tanks at Fiskville and used for firefighting exercises”.⁸⁹⁰

In her evidence to the Committee on 20 November 2015, Ms Amies informed the Committee on more than one occasion that she had spoken to the inspectors involved in this investigation in 2012 before giving evidence to the Committee to ascertain what they had been told and what they had done.⁸⁹¹ Ms Amies informed the Committee that the inspectors had been informed by the CFA on 6 December 2011 that the CFA was only using mains water, and not dam water, for firefighting training at Fiskville.⁸⁹²

On this basis, Ms Amies explained, WorkSafe was not concerned with any health and safety risks associated with use of the dam water at Fiskville.⁸⁹³ This evidence contrasted with other evidence before the Committee that the switch to using solely mains water occurred in October 2012 (as discussed in Chapter 4), and this prompted the Committee to ask Ms Amies whether the CFA may have misled WorkSafe about this important issue. Ms Amies’ response to this question was: “I cannot comment on that, because that is about collecting evidence and ensuring that the information that we receive is correct at the time we receive it.”⁸⁹⁴

On 29 December 2015 (more than five weeks after Ms Amies’ evidence), WorkSafe wrote to the Committee providing a ‘Formal Submission’ and corrected the evidence given by Ms Amies.⁸⁹⁵ In the submission, after referring to the evidence by Ms Amies that WorkSafe had been told by the CFA in December 2011 that only mains water was being used at Fiskville, WorkSafe informed the Committee that ‘regrettably, this information is incorrect’.⁸⁹⁶ The submission clarified that it was actually on 10 July 2012 that a WorkSafe inspector was informed by the CFA that the CFA was only using mains water for firefighting exercises at Fiskville.⁸⁹⁷

The Committee notes that the evidence in the Formal Submission dated 29 December 2015 from WorkSafe is consistent with the position described in WorkSafe’s submission to the Inquiry dated 27 April 2015.⁸⁹⁸ The Committee

⁸⁸⁹ WorkSafe Victoria, Field Report, visit number, V0003200198L, 5 May 2015

⁸⁹⁰ WorkSafe, Background Paper, 27 April 2015, para 42; see also Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.56, where Ms Amies, referred to a “second [WorkSafe] investigation”

⁸⁹¹ *Ibid.* pp.46-48

⁸⁹² *Ibid.* p. 42 and 48

⁸⁹³ *Ibid.* p.47

⁸⁹⁴ *Ibid.* p.62

⁸⁹⁵ Correspondence from Ms Danielle Taske, Acting General Counsel, WorkSafe, to the Chair attaching ‘WorkSafe Formal Submission’, received 29 December 2015

⁸⁹⁶ WorkSafe Victoria, *Submission 464*, p.4

⁸⁹⁷ *Ibid.*

⁸⁹⁸ *Ibid.* p.7

therefore accepts that Ms Amies made an honest mistake in her evidence to the Committee on 20 November 2015. However, her evidence had the unfortunate effect that CFA witnesses who gave evidence to the Committee after Ms Amies, but before the correction to her evidence was provided to the Committee by WorkSafe on 29 December 2015, being questioned on the basis of her earlier testimony.⁸⁹⁹

FINDING 65: That the United Firefighters Union wrote to WorkSafe in July 2012 requesting an investigation of the water quality at Fiskville. This prompted a WorkSafe investigation which was largely limited to obtaining copies of consultants' reports from the CFA. WorkSafe inspectors did not carry out any independent tests of the water.

7.4.4 WorkSafe and the CFA's change to its water quality standards

In Chapter 4, it was noted that the CFA wrote to EPA Victoria and the Department of Health and Human Services (DHHS) in 2009 seeking their respective consents to a significant increase in the acceptable levels of E. coli in the firefighting water at Fiskville from < 10 organisms per 100 ml to < 150 organisms per 100 ml. Mr James Stitz, who was at the time the Acting Manager, Learning and Development at the CFA, told the Committee he believed that, before he wrote to DHHS and EPA Victoria, he had spoken to Mr Green, who had advised him to speak to occupational health and safety consultants Wynsafe Occupational Health Services. Mr Stitz told the Committee that Wynsafe Occupational Health Services in turn advised him to speak to the "appropriate authority".⁹⁰⁰

The CFA's request to increase the acceptable levels was made because the CFA had found it 'difficult to maintain' the levels in its Water Management Plans.⁹⁰¹ These plans are discussed in Chapters 4 and 5. Mr Stitz told the Committee that Fiskville, and other CFA training facilities, had found it "quite difficult" to "beat the 10 E. coli".⁹⁰²

EPA Victoria's response was as follows:

As discussed over the phone recently, the use of rainwater / stormwater is not regulated. From an environmental perspective, we encourage the use of stormwater and do not have an issue with this practice *as no water actually leaves the site*. However, from a public health and worker safety point of view, we would advise you discuss appropriate E.Coli levels and management practices for its use with DHS and WorkSafe'.⁹⁰³

⁸⁹⁹ For example: Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.14; Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.7

⁹⁰⁰ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.28

⁹⁰¹ Correspondence from Mr James Stitz, Executive Manager, Learning and Development, CFA, to Mr Rodney Dedman, Manager, Water Policy, Department of Health and Human Services, 2 July 2009

⁹⁰² Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.28

⁹⁰³ Email from Stephen Lansell, Environmental Strategies, EPA to John Holloway, Manager, Field Training, CFA (emphasis added), 17 July 2009; see also Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.10

In his evidence to the Committee, Mr Stitz characterised this response as EPA Victoria having “no objection to the proposed amendment”.⁹⁰⁴ The Committee reads the response quite differently. EPA Victoria’s response concerning environmental impact is based on two misunderstandings:

- First, that the water being used was ‘stormwater’
- Second, that no water left the site.

As to the first issue, the dams did collect a small amount of rainwater but were mostly filled with recycled firefighting water including water sourced from the polluted Dam 1 (see Chapter 4). As to the second issue, subsequent events have clearly established that water was leaving the site.⁹⁰⁵ This was well known by the CFA at the time because, when it rained heavily, the water passed through the various dams to Lake Fiskville, which then drained into Beremboke Creek and flowed off-site.

DHHS replied to the letter from Mr Stitz that it did not regulate ‘the use of on-site dam water’ for firefighting training. Despite this, it stated that ‘it has no objections to the proposed amendment’.⁹⁰⁶ The evidence before the Committee is that neither the DHHS nor EPA Victoria contacted WorkSafe to discuss the matter either before or after replying to the CFA.⁹⁰⁷

After receiving these responses, and without any reference to WorkSafe, the CFA increased the acceptable levels of E. coli in its dams from < 10 organisms per 100 ml to < 150 organisms per 100 ml with effect from August 2009.⁹⁰⁸ Mr Stitz explained why the CFA did not discuss the matter with WorkSafe after receiving the replies from EPA Victoria and DHHS and before changing the standard:

That was not the end of it. I got those two responses, I then asked whether I needed to speak to WorkSafe about that and I got a response and I went to Jeff Green in regard to that one. I got a response back from Jeff Green saying there was no need to go to WorkSafe. That was good. I then went to the deputy chief officer who was responsible for those [Standard Operating Procedures], I suppose, to do with firefighting water, and provided him with the evidence that we had plus the letters and asked: did he have any objections to us changing the [levels]? He had no objections. From then on I issued a new criteria, which indicated 150 E. coli. That is the story of how it got changed.⁹⁰⁹

WorkSafe remained in the dark about this important change to the standards of water quality at Fiskville until three years later. On 10 July 2012, WorkSafe inspectors visited the CFA⁹¹⁰ in order to ‘understand’ recent media coverage

⁹⁰⁴ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.29

⁹⁰⁵ See the discussion of downstream PFC readings in Chapter 9

⁹⁰⁶ Correspondence (undated) from Rodney Dedman, Manager, Water Policy, Department of Health and Human Services to Mr James Stitz, Executive Manager Learning and Development, CFA

⁹⁰⁷ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.59

⁹⁰⁸ CFA memorandum from James Stitz Executive Manager Learning and Development, to Managers of Training and Development, North East, Gippsland, North West, South West, Midlands Wimmera, Facilities Manager Fiskville and Business Manager Bangholme, 28 August 2009

⁹⁰⁹ Mr James Stitz, Executive Manager, Frontline Learning and Development, CFA, *Transcript of evidence*, 27 January 2016, p.28

⁹¹⁰ WorkSafe Victoria, Field Report, visit number V00002100486L, 10 July 2012

regarding the quality of firefighting water at Fiskville'.⁹¹¹ In the report of the inspection, it was noted that '... the water quality standard applied for E. coli is < 150 org/100 ml'. There is a reference in the inspection record of 10 July 2012 to the interaction in 2009 between the CFA, its consultant and DHHS, and it is noted that CFA advised WorkSafe that the CFA '... obtained assurance that <150 orgs/100 ml is an acceptable standard to apply in this case'.

Other than requiring the CFA to provide WorkSafe with copies of the relevant correspondence, WorkSafe took no further action on this issue at that time. In her evidence to the Committee, Ms Amies said that the CFA was operating according to "... standards that were agreed to by the EPA and the Department of Health".⁹¹² In spite of the clear indication from EPA Victoria about the need for WorkSafe to be involved, Ms Amies said: "It is not [WorkSafe's] role to regulate in terms of the standards".⁹¹³

The Committee considers that this issue should clearly have been discussed by the CFA with WorkSafe in 2009 well before such a significant change to the water standard was made. It should also have been the subject of consultation with affected employees as required by s. 35 of the *Occupational Health and Safety Act 2004*.⁹¹⁴ There is no evidence that either occurred. The advice the CFA received from EPA Victoria could not have been clearer: discuss the matter with WorkSafe. The Committee fails to understand how Mr Green could have advised those responsible for Fiskville, such as Mr De Man, that there was no need to contact WorkSafe in light of that advice. The Committee notes that this approach of ignoring parts of EPA Victoria's advice while relying on other parts was endorsed by the CFA at Deputy Chief Officer level. The CFA should have contacted WorkSafe before implementing any changes to water safety levels.

In addition, the Committee is most concerned with the responses of EPA Victoria, DHHS and WorkSafe to this issue. Both EPA Victoria and DHHS quite properly informed the CFA that they did not regulate the issue of worker safety. EPA Victoria expressly stated that the CFA should consider the occupational health and safety aspects of the issue. Despite this, neither the DHHS nor EPA Victoria referred the matter to WorkSafe. Yet again, the regulators operated in silos in circumstances when they should have cooperated.⁹¹⁵

As a result, WorkSafe '... did not look at the water in terms of [its] inspections [at Fiskville] until December 2011'.⁹¹⁶ Given the evidence the Committee has heard about serious water quality concerns at Fiskville, including in expert consultant reports commissioned by the CFA dating back to at least 2005,⁹¹⁷ this represents a further example of WorkSafe's failure to perform its statutory role in relation to the protection of the health and safety of firefighters at Fiskville. The Committee

911 Ibid.

912 Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.45

913 Ibid. p.59

914 See 7.2 above

915 See the discussion in Chapter 8 about the Memorandum of Understanding that was in effect between WorkSafe and EPA Victoria at this time encouraging the two agencies to discuss issues, such as this, of mutual concern

916 Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, pp.45-46

917 This evidence is examined in Chapter 4

once again accepts that WorkSafe’s failures in this regard are partly the result of a lack of information being provided to it by the CFA, EPA Victoria and DHHS. However, the powers available to WorkSafe under the legislation it administered were such that it should not have been so reliant on being told about potential health and safety risks by others. It should have been alive to the issues independently of the CFA and other regulators.

The Committee notes the evidence of Ms Amies that WorkSafe has “... put in place a better relationship with the EPA ... and strengthened our [Memorandum of Understanding]”.⁹¹⁸ However, the Committee also notes that pursuant to the terms of the Memorandum of Understanding between EPA Victoria and WorkSafe extant in 2009, EPA Victoria should have referred the issue of changed water standards to WorkSafe as a matter of shared concern.⁹¹⁹

The real problem seems to the Committee to be the siloed approach of the regulators. In this regard, the Committee notes with concern the findings of the Hazelwood Mine Fire Inquiry in 2014 that WorkSafe and the Mining Regulator had not co-operated adequately in regulating the risk of mine fires at open cut coal mines despite the existence of a Memorandum of Understanding between the agencies.⁹²⁰ Having a Memorandum of Understanding is one thing; regulating according to its terms is clearly another.

FINDING 66: That despite being advised in writing to do so by EPA Victoria, the CFA did not consult WorkSafe before making the decision to increase its acceptable levels of E. coli in its firefighting water at Fiskville in 2009.

7.4.5 A ‘letter of assurance’ from WorkSafe

On 28 September 2012, the Acting Chief Executive Officer of the CFA, Mr Euan Ferguson, wrote to the Acting CEO of the MFB, Mr Shane Wright, noting concerns that had been raised by the MFB about the safety of the water used for firefighting training at Fiskville. The letter referred to WorkSafe’s involvement at Fiskville and included the following:

WorkSafe have not identified any further issues regarding risks at Fiskville that would preclude the ongoing use of the facility for firefighting training. As you would be aware, it is not a matter of normal business practice for WorkSafe to issue assurances attesting to the safety of sites. However, we have been in contact with their representatives and today they confirmed that they have prepared a *letter of assurance* which is in the final stages of review. I expect to receive that letter late today and I will forward it to you upon receipt.⁹²¹

⁹¹⁸ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.56

⁹¹⁹ See Chapter 8

⁹²⁰ The Hon. Bernard Teague AO, *Hazelwood Mine Fire Inquiry Report (part 3)*, (2014), pp.169-172

⁹²¹ Correspondence from Euan Ferguson, Acting Chief Executive Officer, CFA to Mr Shane Wright, Acting Chief Executive Officer, MFB, 28 September 2012

On 3 October 2012, Mr Jarrod Edwards, Director of Workplace Hazards and Hazardous Industries Group, WorkSafe, wrote to Ms Sherry Herman of the CFA.⁹²² In the letter, Mr Edwards indicated his understanding that the CFA ‘... seek the advice of WorkSafe regarding recent interventions at the Fiskville Training Facility’. He referred to various interventions by WorkSafe inspectors in response to media reports about Fiskville and noted that WorkSafe had been advised that ‘... control of risk to health and safety from the use of recycled water is being achieved by the exclusive use of mains / town water for firefighting training at Fiskville’.⁹²³ The letter concluded: ‘WorkSafe acknowledges the continued operation of the Fiskville Training Facility in accordance with the risk controls associated with dangerous goods and firefighting water prescribed during inspector visits conducted since 6 December 2011.’

A copy of this letter was provided by the CFA to the MFB by 5 October 2012.⁹²⁴

Based in part on this letter, the MFB decided on 8 October 2012 to resume training its employees at Fiskville with effect from 15 October 2012.⁹²⁵ On 8 October 2012, Mr Nick Easy, CEO of the MFB, wrote to all MFB staff advising of this decision and referred to the ‘assurances’ the MFB had received from the CFA and WorkSafe about the safety of the firefighting water at Fiskville.⁹²⁶

A copy of the WorkSafe letter of 3 October 2012 was also provided by the MFB to the UFU under cover of a letter dated 9 October 2012. In the covering letter, Mr Shane Wright, Chief Officer, then Executive Director Emergency Management, MFB, noted that the UFU had requested that the MFB obtain a letter from WorkSafe ‘... in regards to the site safety at the CFA [Fiskville] facility’.⁹²⁷

In her evidence to the Committee, Ms Amies strongly disputed that the WorkSafe letter to the CFA dated 3 October 2012 was a ‘letter of assurance’. After her attention was drawn to the wording in the letter, Ms Amies said: “... that is not a letter of assurance and it is not our practice to provide letters of assurance”.⁹²⁸ When pressed on the issue by Committee member Mr Tim Richardson, Ms Amies said that the letter merely “acknowledged compliance”.⁹²⁹

The Committee notes that the WorkSafe letter of 3 October 2012 had been the subject of discussions with the CFA for some time. Its wording was clearly considered. As the letter dated 28 September 2012 from Mr Ferguson of the CFA to Mr Wright of the MFB makes clear, ‘a letter of assurance’ about the safety of

⁹²² Ms Herman was at the time the Program Manager of the ‘Informing the Future’ program

⁹²³ Correspondence from Mr Jarrod Edwards, Director, Workplace Hazards and Hazardous Industries Group to Ms Sherry Herman, Project Manager, Office of the CEO, CFA, 3 October 2012

⁹²⁴ The MFB submission states that it had been received by the MFB ‘by 5 October 2012’: MFB, *Submission 416*, p.13

⁹²⁵ It had ceased training its staff at Fiskville in June 2012. As discussed in Chapter 4, the decision to return was ultimately overturned and the MFB did not return to Fiskville. See also Appendix 7

⁹²⁶ Email from Mr Nick Easy, CEO, MFB, To all MFB employees, 8 October 2012

⁹²⁷ Correspondence from Mr Shane Wright, Metropolitan Fire and Emergency Services Board to Mr Peter Marshall, United Firefighters Union, 9 October 2012

⁹²⁸ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, pp.57-58

⁹²⁹ *Ibid.* p.58

Fiskville was specifically sought from WorkSafe by the CFA. This was in large part so that it could be provided to the MFB (and the UFU) to reassure them about the safety of the site.

In these circumstances, it is of concern to the Committee that WorkSafe now apparently seeks to distance itself from the assurances it gave in the letter. As far as the Committee is concerned, the question of whether the letter is a 'letter of assurance' is not really the point. Whatever one calls the letter of 3 October 2012, it clearly assured the CFA, the MFB and the UFU about the safety of the Fiskville site. It did so on the basis that mains water was being solely used at Fiskville. As discussed in Chapter 4, the precise source of the water being used at that time is unclear.

Ms Amies told the Committee that WorkSafe had not tested the water itself. It relied on the CFA's testing, which it ultimately determined was so flawed as to render evidence it produced inadmissible in court.⁹³⁰ The real issue is whether WorkSafe was in a position to give the assurances it gave in the letter without properly ascertaining the facts and testing the water itself.

FINDING 67: That WorkSafe provided a 'letter of assurance' in October 2012 to the CFA regarding the safety of the firefighting water at Fiskville based on an inadequate understanding of the source of the water and without having tested the water itself.

7.4.6

The UFU request under section 131 of the *Occupational Health and Safety Act 2004*

On 15 November 2012, Davies Lawyers, solicitors for the UFU, requested WorkSafe to 'commence a full and proper investigation' of the CFA concerning Fiskville. The request was made pursuant to s. 131 of the *Occupational Health and Safety Act 2004*.

In an apparent reference to its earlier letter of 6 July 2012 which asked WorkSafe to investigate Fiskville (see 7.4.3 above), the UFU's request was made '... as WorkSafe have failed to undertake a prosecution [of the CFA]'

In the letter of 15 November 2011, the UFU identified its 17 'principal concerns' alleging a failure by the CFA to comply with the *Occupational Health and Safety Act 2004*. Most of these concerns related to the safety of water that was being used for firefighting training. The UFU expressed its concerns that the Fiskville site '... may have been unsafe for many years including prior to 2000'.

As noted above, under s. 131(2) of the *Occupational Health and Safety Act 2004*, WorkSafe was required to investigate the matter and advise the UFU whether a prosecution will be brought or give reasons why no prosecution will be brought within three months.

⁹³⁰ See section 7.4.8 below

On 20 February 2013 (more than three months after the request was made), Mr Peter Anderson, Manager Investigations, WorkSafe, wrote to the UFU's solicitors advising that WorkSafe had '... commenced a comprehensive investigation ... but due to the potential breadth and complexity of the matter, [it] will not be in a position to complete its inquiries in the three-month period'.⁹³¹ Mr Anderson offered to meet with the UFU to provide an update on 'the progress of [the] investigation'.

A meeting between the UFU and WorkSafe was held on 22 February 2013. On 25 March 2013, the UFU's solicitors wrote to Mr Anderson and pointed out that WorkSafe '... is currently in breach of its statutory obligations concerning its requirement to respond to our client within a 3 month deadline'.⁹³² The letter concluded: 'Despite the assurance given by you in the meeting of 22 February [2013] we are not satisfied that this matter is being progressed in a timely manner and in accordance with WorkSafe's statutory obligations.'⁹³³

On 26 July 2013, WorkSafe wrote to the UFU advising that it anticipated '... that this investigation will likely be finalised by the end of 2013'.⁹³⁴ In fact, it was more than two years before WorkSafe completed its investigation and informed the UFU by letter dated 17 December 2014 that there would be no prosecution of the CFA.

Ms Amies was asked by the Committee about WorkSafe's failure to comply with s. 131(2) of the *Occupational Health and Safety Act 2004*. The mandatory language in the section ('must') was drawn to her attention and the Committee noted that WorkSafe quite properly insisted on strict compliance by employers and others with their identically worded obligations under other sections of the same Act (such as s. 21).⁹³⁵

Ms Amies explained that the practice at WorkSafe in such cases is to consult with the party who made the request "... and agree that it [is] going to take longer than the three months".⁹³⁶ When pressed by the Chair about whether her evidence was that, in this case, the UFU had agreed to an extension of time, Ms Amies said that she would need to look at the correspondence. When the Davies Lawyers letter dated 25 March 2013 complaining about WorkSafe's failure to comply with the statute (referred to above) was read to her, Ms Amies acknowledged there was no agreement in this case adding: "... that was not my understanding".⁹³⁷

⁹³¹ Correspondence from Mr Peter Anderson, Manager Investigations Enforcement Group, WorkSafe, to Ms Tracey Davies, Principal, Davies Lawyers, 20 February 2013

⁹³² Correspondence from Ms Tracey Davies, Principal, Davies Lawyers to Mr Peter Anderson Manager Investigations Enforcement Group, WorkSafe, 25 March 2013

⁹³³ Ibid.

⁹³⁴ WorkSafe had updated the United Firefighters Union on the progress of its investigation on 5 April 2013, 14 May 2013 and 31 May 2013

⁹³⁵ Question by Committee member, Mr Tim Richardson - Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.39

⁹³⁶ Ibid.

⁹³⁷ Ibid. p.40

As part of this Inquiry’s document discovery process (see Chapter 2), WorkSafe provided the Committee with a document entitled ‘Draft Investigation Plan’ dated 18 April 2013.⁹³⁸ The Committee concludes based on this document that, as at that date, WorkSafe was only in the earliest stages of the “complex and detailed investigation” to which Ms Amies referred.⁹³⁹ This was despite more than five months having already passed since the initial s. 131 request.⁹⁴⁰ The Draft Plan includes various ‘statutory time limitations’ but makes no reference to the three-month time limitation imposed by s. 131(2) of the *Occupational Health and Safety Act 2004*. It also includes a timeline for the conduct of the investigation and a series of ‘milestones’.⁹⁴¹ It describes a ‘target date’ of 1 August 2013 for the milestone of providing the brief of evidence to ‘Enforcement Group Legal’.⁹⁴²

In circumstances where the Parliament has prescribed a three-month time limit for responding to requests under s. 131 of the *Occupational Health and Safety Act 2004*, the Committee finds the delay associated with the WorkSafe response to the UFU request unacceptable. The Committee accepts that the investigation was complex and notes that a great deal of evidence was obtained by investigators.⁹⁴³ However, the documents before the Committee do not suggest that there was sufficient urgency associated with the conduct of the investigation. On the contrary, on the evidence before the Committee, all that seems to have occurred within the first five months by way of an investigation was preparatory work on a ‘Draft Investigation Plan’.⁹⁴⁴

The Committee notes that, given the delay in investigating this matter, had WorkSafe ultimately wanted to prosecute the CFA, the Director of Public Prosecutions may have had to approve the prosecution being commenced outside the two-year limitation period in s. 132 of the *Occupational Health and Safety Act 2004*.⁹⁴⁵

FINDING 68: That in December 2012, the United Firefighters Union requested WorkSafe investigate the CFA for a possible breach of the *Occupational Health and Safety Act 2004*.

FINDING 69: That section 131 of the *Occupational Health and Safety Act 2004* required WorkSafe to carry out the investigation within three months. In fact, it took WorkSafe 23 months to respond to the request.

FINDING 70: That the lengthy delay associated with the WorkSafe response to the United Firefighters Union request to investigate is entirely unacceptable.

⁹³⁸ WorkSafe, ‘Draft Investigation Plan’, 18 April 2013 (approved by Adam Watson). WorkSafe has advised the Committee that no final plan was produced: Correspondence from Leanne Hughson, General Counsel, WorkSafe to the Chair, Environment, Natural Resources and Regional Development Committee, 4 March 2016, p. 3

⁹³⁹ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.40

⁹⁴⁰ In a letter to the Committee, WorkSafe informed it that it had also sought the opinions of external legal counsel about the investigation by this time: letter dated 4 March 2016 from Leanne Hughson, General Counsel, WorkSafe to the Chair, p. 2

⁹⁴¹ WorkSafe, Draft Investigation Plan, 18 April 2013, pp.2-4 (approved by Adam Watson)

⁹⁴² *Ibid.* p.4

⁹⁴³ WorkSafe informed the Committee that a ‘66 volume brief of evidence’ was compiled – WorkSafe, Background Paper, 27 April 2015, para 37(f)

⁹⁴⁴ The Committee notes with concern that the three-month time limit is not even mentioned in this draft plan

⁹⁴⁵ A concern that had been expressly raised in the UFU correspondence – Correspondence from Davies Lawyers to WorkSafe dated 14 August 2013 and 13 September 2013

7.4.7 WorkSafe broke the law

Section 131 of the *Occupational Health and Safety Act 2004* is cast in mandatory language. When WorkSafe receives a request to investigate under s. 131(1), it ‘must’ investigate the matter. The Committee considers the obligation imposed on WorkSafe to be the equivalent of the duty imposed on an employer by s. 21 of the same Act. No doubt acknowledging that ‘justice delayed is justice denied’, Parliament has prescribed a strict time limit. The three-month limit has been in place since 1985.⁹⁴⁶

It is therefore of concern that the CEO of WorkSafe was not prepared to acknowledge in her evidence that WorkSafe had broken the law in this case by exceeding the time limit by nearly two years. Ms Amies explained that WorkSafe is limited in its ability to investigate “very complex cases” such as Fiskville within three months.⁹⁴⁷

The matter would not be of such concern to the Committee if WorkSafe exceeded the statutory time limit by a short period or if it could point to a good reason for its failure to comply - for example, a key witness not cooperating or the need to obtain evidence from an overseas expert. No such reasons were advanced in this case and, as noted above, the evidence suggests a lack of urgency in conducting the investigation.

The Committee’s concern is that there is little that an applicant such as the UFU can do in such circumstances beyond making its displeasure known to WorkSafe (as it did in the clearest terms). Its one legal avenue of redress is to apply to the Supreme Court of Victoria for an order directed to WorkSafe requiring it to comply with its statutory duty.⁹⁴⁸ However, such an avenue is expensive and time-consuming and there is a possible argument that, once the time limit has expired, it will be pointless for a court to direct that WorkSafe comply with s.131 of the *Occupational Health and Safety Act 2004*. Ultimately, the grant of any such remedy by the Court is discretionary.⁹⁴⁹

The Committee believes that legislative reform is needed here and has considered a number of options. One option is that a failure by WorkSafe to meet the time limit would trigger a right in an applicant to commence a private prosecution. Another option is for WorkSafe to have to report publicly on any failure to meet the deadline.

The Committee is not attracted to the first option. Providing a right to prosecute privately for breaches of the *Occupational Health and Safety Act 2004* was firmly rejected by the Maxwell Review of 2004 that led to the enactment of

⁹⁴⁶ See *Occupational Health and Safety Act 1985* (Victoria), s. 49; see further William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [917]-[921]. An ‘Administrative Review’ of the *Occupational Health and Safety Act 1985* by Stensholt in 2007 concluded that the three-month time limit ‘represents an appropriate balance’ between the interests of WorkSafe and those of an applicant under what is now s. 131 of the *Occupational Health and Safety Act 2004* - see Bob Stensholt MP, *A report on the Occupational Health and Safety Act 2004 Administrative Review*, 2007, pp 86-87. The Review rejected the suggestion that the time limit should be increased

⁹⁴⁷ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.61

⁹⁴⁸ Such an order is known as a *mandamus*, Latin for ‘we command’

⁹⁴⁹ Aronson, et al., *Judicial Review of Administrative Action*, (4th edition, 2009) Thomson Reuters Australia, (13.10)

the *Occupational Health and Safety Act 2004*.⁹⁵⁰ Maxwell considered that, as a matter of principle, prosecuting indictable offences is a matter for the State. The Committee endorses this view. The National Occupational Health and Safety Review, which laid the ground work for the model *Work Health and Safety Act*, reached the same conclusion.⁹⁵¹ In the absence of a corresponding power to investigate, a power to prosecute is useless. Further, the Director of Public Prosecutions would retain the power to take over and discontinue any privately commenced prosecution.⁹⁵²

However, the Committee supports the second option. At present, WorkSafe is required to report on its activity under s. 131 of the *Occupational Health and Safety Act 2004* in its annual report and on its website.⁹⁵³ To the list of matters upon which WorkSafe is required to report, the Committee recommends the addition of the following:

- The number of cases in which WorkSafe fails to meet the three-month time limit in s. 131(2)
- In each such case, the time the investigation has taken and the reason why WorkSafe was unable to meet the deadline.

The Committee considers that such an amendment would send a clear message about the importance of the time limit in s. 131 of the *Occupational Health and Safety Act 2004*. WorkSafe has advised that it receives a number of requests under s. 131 of the *Occupational Health and Safety Act 2004* each year.⁹⁵⁴ It is important that they be accorded the priority that Parliament clearly intended.

The Committee is concerned that it may be at least one year before any WorkSafe failure to comply with s. 131(2) is made public. This is too long. It therefore considers that there should be a requirement on WorkSafe to report to the responsible Minister as soon as it exceeds the time limit in a given case. The report should include the reasons for the exceedance and an estimate of how much longer WorkSafe will take to meet the statutory requirement. A copy should be provided to the applicant.

⁹⁵⁰ Chris Maxwell, *Occupational Health and Safety Act Review*, (2004), paragraphs [1731]-[1742]; William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraph [920]

⁹⁵¹ Australian Government, *National Review into Model Occupational Health and Safety Laws* (Second Report, 2009): [46.72]-[46.96]; Johnstone, Bluff and Clayton, *Work Health and Safety Law and Policy* (3rd ed., 2012), [8.370]-[8.375]

⁹⁵² *Public Prosecutions Act 1994* (Victoria), s. 22(1)(b)(ii)

⁹⁵³ Section 131(6). Section 49 of the *Occupational Health and Safety Act 1985* contained no such duty; the Maxwell Review of 2004 recommended the inclusion of the reporting requirement to strengthen this 'strong accountability mechanism' – Chris Maxwell, *Occupational Health and Safety Act Review*, (2004), paragraph [1940]

⁹⁵⁴ According to WorkSafe annual reports, between 2006 and 2015, 117 requests pursuant to s. 131 of the *Occupational Health and Safety Act 2004* were made to WorkSafe

RECOMMENDATION 13: That the Victorian Government amend the *Occupational Health and Safety Act 2004* to require WorkSafe to include in its annual report under section 131(6):

- (a) The number of cases in which WorkSafe fails to meet the three-month time limit in section 131(2)
- (b) In each such case, the time the investigation has taken and the reason why WorkSafe was unable to meet the deadline.

In addition, WorkSafe should be required to report to the responsible Minister in each case it fails to meet the deadline imposed by section 131(2). A copy of the report should be provided to the applicant.

7.4.8 Why the CFA was not prosecuted over Fiskville

Twenty-three months after it wrote to WorkSafe under s. 131 of the *Occupational Health and Safety Act 2004*, the UFU received a formal response. In a letter dated 17 December 2014 to the UFU's solicitors, WorkSafe advised that '... the VWA has determined that there is insufficient evidence to establish any offences by the CFA under the OHS Act'.⁹⁵⁵ The Committee considers this letter to barely comply with the duty imposed on WorkSafe by s. 131(2)(b) of the *Occupational Health and Safety Act 2004* to inform the UFU of 'the reasons why a prosecution will not be brought'. Quite simply, the letter contained no reasons why WorkSafe had determined there was 'insufficient evidence'. In light of the evidence presented to this Committee about Fiskville, the UFU clearly deserved some explanation.

In its submission to this Committee, WorkSafe was more fulsome about its reasons for not prosecuting the CFA over Fiskville:

The evidence gathered by WorkSafe (including the Joy report) revealed a plethora of issues in relation to which the CFA could conceivably be prosecuted. However, much of the conduct occurred a considerable time ago, which inevitably makes proof more difficult (if not impossible, to the criminal standard); it was difficult to obtain reliable and admissible evidence in relation to many of those issues; and there were problems with the continuity and reliability of the historical testing records.

WorkSafe therefore focussed its investigation on a more narrowly framed, but what was considered more likely to be a provable breach, namely the CFA's system for testing the water used for firefighting at Fiskville in the period 2002 to 2012. Despite this narrower focus, when senior and junior counsel reviewed the evidence, including issues as to the reliability, admissibility and weight of the available evidence. These deficiencies were not readily capable of being remedied.⁹⁵⁶

In light of all of the evidence about sub-standard occupational health and safety management at Fiskville by the CFA in this Final Report, it is unclear why WorkSafe narrowed its focus to the 'CFA's system for testing the water' rather than, at the very least, the quality of the water itself. It is also unclear

⁹⁵⁵ Correspondence from Ms Leanne Hughson, General Counsel, Victorian Work Cover Authority, to Mr Peter Marshall, Branch Secretary, United Firefighters Union, 17 December 2014

⁹⁵⁶ WorkSafe, Background Paper, 27 April 2015, paras 38-39

why WorkSafe did not investigate the issue of the buried drums.⁹⁵⁷ As noted above, the Committee has been able to reach a number of conclusions about apparent breaches of the *Occupational Health and Safety Act 1985* in relation to the ‘accidental drum location’ incident of 2002. The Joy Report made similar findings in 2012.⁹⁵⁸ There do not appear to be any particular questions about the reliability of evidence concerning that incident. The witnesses are available and some have already made detailed statements. The Committee cannot understand why this incident has not been the subject of investigation and, if considered appropriate, prosecution.

The narrowing of the focus of the WorkSafe investigation is particularly troubling as the UFU request was principally concerned with the quality of the water itself and not just the systems for testing the water.

The evidence before the Committee about water quality is discussed in detail in Chapter 4 of this Final Report. That evidence is that until July 2012 at the earliest (and possibly until October 2012), the CFA was using a mixture of dam and mains water for firefighting with the dam water being sourced from Dam 2 (which was in turn supplied by the contaminated Dam 1). Concerns about the safety of the water in Dam 1 were raised as early as 2007 when MFB personnel were advised: ‘do not use Dam 1’.⁹⁵⁹ Very high levels of *Pseudomonas aeruginosa* had been detected in Dam 2 in April 2011.⁹⁶⁰

Concerns about the polluted state of Dam 1 and the risk of that pollution finding its way into Dam 2 date back, at least, to a Wynsafe Occupational Health Services report in 2005.⁹⁶¹ The ALS report of February 2012 had identified serious concerns with the safety of the water in Dam 1 describing it as ‘category A industrial waste’ and noting that arsenic, copper, lead, mercury, nickel, zinc, benzene, toluene and xylene ‘were above safe exposure limits in Dam 1’.⁹⁶² Mr Justin wrote to his superior, Mr De Man, about the contents of this report in February 2012 and the ‘urgency’ with which Dam 1 needed to be remediated.⁹⁶³ He had tried in vain to have Dam 1 remediated for some time, but his concerns fell on what he described as “deaf ears” among his CFA superiors.⁹⁶⁴

In fact, a WorkSafe Inspector was so concerned about the safety of the water in the Fiskville dams in August 2012 that he issued an improvement notice to the CFA requiring it to ‘provide a system of work that would prevent unauthorised access to the dams’ and for the ‘emergency rescue of persons who might fall into

⁹⁵⁷ See section 7.4.1 above. The Committee notes the evidence of Ms Amies that there is an ‘ongoing’ investigation about these issues that may result in a future prosecution – Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, pp.55-56

⁹⁵⁸ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.98-99

⁹⁵⁹ Mr Peter Rau, Chief Officer, Metropolitan Fire and Emergency Services Board, *Transcript of evidence*, 23 November 2015, p.6

⁹⁶⁰ See Chapter 4

⁹⁶¹ See Chapter 4

⁹⁶² Mr Justin Justin, *Transcript of evidence*, 21 December 2015, pp.8-9

⁹⁶³ Email from Mr Justin Justin, Officer in Charge, Fiskville, to Mr Lex De Man, Executive Director Operational Training and Volunteerism, 22 February 2012

⁹⁶⁴ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.11

dams'.⁹⁶⁵ It was not until 19 October 2012 that WorkSafe was advised by Mr Green of the CFA that, as a further above ground tank had been commissioned at Fiskville on 15 October 2012, the CFA had '... decided to cease the water quality testing of the dams at Fiskville'.⁹⁶⁶

Ms Amies expanded on the reasons for WorkSafe not commencing a prosecution of the CFA despite the enormous amount of work that went in to the investigation: "The issue for us in terms of our investigation is absolutely to prove beyond reasonable doubt that there has been a breach and that we have evidence that will support that prosecution".⁹⁶⁷

The Committee notes that this is somewhat inconsistent with WorkSafe's published prosecution policy which states that '... where sufficient admissible evidence exists of a breach of OHS laws and prosecution would be in the public interest, the Authority will commence proceedings'.⁹⁶⁸

The Committee also notes with concern the evidence of Ms Amies that the particular evidentiary concern held by WorkSafe in the investigation was that the manner in which the CFA had tested the water was such that the results produced by the tests (which demonstrated that certain pollutants were exceeding acceptable levels) would be inadmissible in evidence. As Ms Amies explained:

The issue with the evidence is not just the terms of the test itself. It is how it is collected, how it is transferred and how it is transported for it to be tested. So we can look at the entire chain of events in terms of being able to test water in terms of evidence.⁹⁶⁹

The Committee is very concerned about this evidence. As was pointed out to Ms Amies by Committee Chair, Ms Bronwyn Halfpenny, it seems to provide an incentive to an employer not to test correctly because they then may not be prosecuted if the evidence will not stand up in court. Ms Amies conceded that "... in hindsight there is no doubt that that could be a conclusion drawn [and] is something for [WorkSafe] to consider in the future". The Committee agrees with the observation by the Committee Chair that this issue is "urgent and immediate".⁹⁷⁰

Ms Amies was asked by the Committee if she thought it was regrettable that the investigation was driven by the actions of the UFU rather than by WorkSafe itself. Ms Amies responded that there are several ways in which issues worthy of investigation come to WorkSafe's attention but conceded that "... it took the UFU letter for us to investigate".⁹⁷¹

⁹⁶⁵ WorkSafe, Background Paper, 27 April 2015, paras 34-35

⁹⁶⁶ Email from Mr Jeff Green, Manager, Occupational Health and Safety, CFA, Halil Ahmet, Senior Occupational Hygienist, Workplace Hazards and Hazardous Industries Group, WorkSafe Victoria, 19 October 2012

⁹⁶⁷ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.50

⁹⁶⁸ *WorkSafe Compliance and Enforcement Policy* (2005), section 18.1

⁹⁶⁹ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.51

⁹⁷⁰ *Ibid.* p.52

⁹⁷¹ *Ibid.* p.61

FINDING 71: That WorkSafe did not prosecute the CFA over Fiskville because of concerns over the CFA’s system for testing the water and whether the evidence of the tests results could be used in Court as evidence against the CFA.

RECOMMENDATION 14: That whenever feasible, WorkSafe should reduce its reliance on reports by consultants engaged by employers it is investigating and should utilise its statutory powers to conduct its own tests where relevant.

7.5 The closure of Fiskville

The decision by the CFA Board to close the Fiskville facility in March 2015 is discussed in Chapter 1. As noted, the decision was based on safety concerns but not on the basis of advice from WorkSafe about those concerns.

WorkSafe had the statutory power to prohibit any activity at Fiskville that an inspector believed gave rise to an immediate risk to health and safety. In fact, assurances by WorkSafe about the site being safe were identified by the Minister at the time of the closure announcement as the basis for the loss of confidence in the WorkSafe Chief Executive and Chairperson.⁹⁷² In March 2015, the Victorian Government asked for the resignation of then WorkSafe Chief Executive Denise Cosgrove and Chairman David Krasnostein. Premier Daniel Andrews said that he had “lost confidence” in Ms Cosgrove and Mr Krasnostein.⁹⁷³

Ms Amies was asked by the Committee if it was of concern that, although WorkSafe has responsibility for ensuring safe workplaces, Fiskville was closed but through no action by WorkSafe. Ms Amies responded that she did not know “... whether we had a role in that or not”. She added: “Hindsight is a wonderful thing; there is no doubt that post that [December 2011] more information came out and more information was provided”.⁹⁷⁴

Based on the discussion in this Chapter about WorkSafe’s involvement at Fiskville, the Committee concludes that one does not need the benefit of hindsight to conclude that WorkSafe has not properly carried out its statutory role concerning Fiskville.

FINDING 72: That the decision to shut the Fiskville site for safety reasons in March 2015 was made with WorkSafe an interested onlooker.

⁹⁷² Robin Scott MP, Minister for Finance; Minister for Multicultural Affairs, *Labor Government acts to Restore Public Confidence* (media release, 3 March 2015)

⁹⁷³ Richard Willingham and Nick Toscano, ‘WorkSafe heads sacked over Fiskville CFA centre contamination’, *The Age*, (www.theage.com.au/victoria/worksafe-heads-sacked-over-fiskville-cfa-centre-contamination-20150303-13tp4i.html), March 3, 2015

⁹⁷⁴ Ms Clare Amies, Chief Executive Officer, WorkSafe Victoria, *Transcript of evidence*, 20 November 2015, p.5

7.6 The CFA was selective in what it told WorkSafe about Fiskville

As noted throughout this Final Report, and particularly this Chapter, the CFA was selective in what it told WorkSafe about occupational health and safety issues at Fiskville. For example:

- It did not report the 2002 buried drums incident
- It failed to contact WorkSafe when considering whether to increase its standards for E. coli exposure.

The large number of consultants' reports obtained by the CFA concerning water quality at Fiskville, including a series of reports about the polluted condition of Dam 1 dating back to 2005, were only provided to WorkSafe during the major investigation in 2012-2013 triggered by the request from the UFU.⁹⁷⁵ Clearly, by the time they were obtained by WorkSafe, many of the reports were of little practical regulatory relevance. This was because, in many instances, events had 'moved on'.

Consultants' reports about occupational health and safety are important to a regulator like WorkSafe for a number of reasons. They provide evidence that is relevant to the assessment of what is 'reasonably practicable' under s. 20(2) of the *Occupational Health and Safety Act 2004*. A report provided to the CFA describing contamination in Fiskville's Dam 1 is clearly relevant to:

- What the CFA knows about the hazards and risks associated with exposure of firefighters to the water in Dam 1⁹⁷⁶
- The availability and suitability of ways to eliminate or reduce those hazards and risks.⁹⁷⁷

An evidence-based understanding of such matters was crucial to enable WorkSafe to make informed and practical decisions to enforce the duties of the CFA under ss. 21 and 23 of the *Occupational Health and Safety Act 2004*. WorkSafe will never be able to employ inspectors with the subject-matter knowledge to cover all industries.⁹⁷⁸ It is therefore vital that its inspectors have available to them all relevant information that an employer has about hazards and risks at a workplace under the employer's control. This Inquiry has demonstrated the extent to which WorkSafe was hamstrung in carrying out its vital regulatory role over the CFA by a lack of information, and sometimes misleading and contradictory information, provided by the CFA.

⁹⁷⁵ This was how many of the reports came to the attention of this Committee as part of the discovery documents provided by WorkSafe.

⁹⁷⁶ *Occupational Health and Safety Act 2004* (Victoria), s. 20(2)(c)

⁹⁷⁷ *Ibid.* s. 20(2)(d)

⁹⁷⁸ On the difficulties of performing the role of an Inspector, see Chris Maxwell, *Occupational Health and Safety Act Review*, (2004), paragraph [1335]

Under the current law, a WorkSafe inspector who enters a workplace under s. 98 of the *Occupational Health and Safety Act 2004* may request a ‘person’ to provide the inspector with ‘... a document ... located at the place that is in the person’s possession or control’.⁹⁷⁹ It is an offence to fail to comply with such a request in the absence of a ‘reasonable excuse’.⁹⁸⁰ For example, a document containing information which is the subject of legal professional privilege need not be disclosed.⁹⁸¹ However, it is no excuse that a document may incriminate the person.⁹⁸² In addition, WorkSafe itself can require an employer to produce a document to it.⁹⁸³

A request under s. 100 of the *Occupational Health and Safety Act 2004* must identify the document sought at least by reference to a class of documents. This may present a practical problem to an inspector who is unaware of the existence of documents. The 1988 AS James report about buried drums, discussed in Chapter 5, is an example. It was obtained by the CFA before any of the 117 WorkSafe inspector visits to Fiskville described above and yet was never drawn to the attention of the inspectors. Even when an Inspector asked the CFA for a copy of the report in December 2011 (having become aware of its existence from the *Herald Sun* article), the Inspector was told by three senior officers that they were not aware of the report.⁹⁸⁴

The Committee is firmly of the view that the CFA should have provided WorkSafe with copies of all of the consultants’ reports that the CFA obtained concerning occupational health and safety at Fiskville unless the reports contained information that was (genuinely) the subject of legal professional privilege. The timely provision of such reports to WorkSafe would have enabled WorkSafe to perform its regulatory role in relation to Fiskville properly and this would, in turn, have assisted the CFA to meet its statutory obligations to its employees, volunteers and others. The Committee assumes that WorkSafe would have based any enforcement decisions it made at least partly on the reports but also partly on its own investigations (as discussed above).

An employer already has a positive duty under the Act to ‘provide such assistance as an inspector may reasonably require’.⁹⁸⁵ Further, an employer will, in many cases, be required to provide its employees with consultants’ reports in compliance with its duty to consult with its employees under s. 35 of the *Occupational Health and Safety Act 2004*.⁹⁸⁶ The Committee is of the view that it is not such a significant extension of those obligations to require an employer to provide WorkSafe with copies of all reports it commissions concerning the

⁹⁷⁹ *Occupational Health and Safety Act 2004*, (Victoria), s. 100(1)(a)

⁹⁸⁰ *Ibid.* s. 100(2); see generally William B. Creighton and Peter Rozen, *Occupational Health and Safety Law in Victoria*, (3rd edition, 2007) Federation Press, paragraphs [823]-[825]

⁹⁸¹ *Ibid.* s. 155

⁹⁸² *Ibid.* s. 154

⁹⁸³ *Ibid.* s. 9

⁹⁸⁴ WorkSafe Victoria, Field Report, visit number V00002100455L, 6 December 2011

⁹⁸⁵ *Occupational Health and Safety Act 2004*, (Victoria) s. 121. It is an offence to fail to do so – s. 121

⁹⁸⁶ Section 36(1)(a) of the *Occupational Health and Safety Act 2004* requires an employer to share information about the matter over which it is consulting its employees and s. 36(1)(b) requires that the employees be given a ‘reasonable opportunity to express their views about the matter’

management of occupational health and safety at workplaces it controls. After all, it would have to provide the reports to WorkSafe or an inspector if asked to do so. As noted in Chapter 9, United States law requires companies to report any internal studies that produce results of concern for public health.⁹⁸⁷ This requirement was instrumental in exposing the health risks associated with PFOS.

RECOMMENDATION 15: That the Victorian Government examine laws in the United States of America and elsewhere requiring companies to provide regulatory agencies with any internal studies that produce results of concern for public health, with a view to amending Victorian law to impose similar reporting requirements.

7.7 Conclusion

The Committee finds that WorkSafe, as the State's occupational health and safety regulator armed with the extensive powers conferred by the legislation it administers, should have been far more involved in regulating practices at the Fiskville facility at least after 1985. Since 2005, employers and others have been explicitly encouraged by statute to be 'proactive' in protecting workers and others.⁹⁸⁸ However, WorkSafe has been anything but proactive in the performance of its regulatory role. It has been entirely reactive - to the CFA, the UFU and the media.

The evidence before the Committee is that it was not until December 2011 that WorkSafe began to investigate the issues of chemical pollution and water safety at Fiskville. Even then, its involvement was responsive to a newspaper article and was not initiated proactively. WorkSafe did not conduct a thorough investigation into Fiskville until required to do so by a request in December 2012 from the UFU. Even the decision to shut the site for safety reasons in March 2015 was made with WorkSafe an interested onlooker.

FINDING 73: That during the operation of Fiskville, WorkSafe was anything but proactive in the performance of its regulatory role. It has been entirely reactive - to the CFA, the United Firefighters Union and the media.

FINDING 74: That firefighters at Fiskville and the Victorian community as a whole have been let down by the safety watchdog.

⁹⁸⁷ United States Environmental Protection Agency, *Summary of the Toxic Substances Control Act*, (www.epa.gov/laws-regulations/summary-toxic-substances-control-act), Viewed 20 April 2016

⁹⁸⁸ *Occupational Health and Safety Act 2004*, (Victoria) s. 4(3)

8

Regulation of Fiskville by other regulatory agencies

AT A GLANCE

Background

This Chapter examines the role of the Environment Protection Authority (EPA Victoria) in enforcing compliance with the *Environment Protection Act 1970* at Fiskville. The discussion is divided into two eras. The first is prior to 2011, which saw a review of EPA Victoria's compliance and enforcement (2011) followed by the Joy Report being published (2012). The second is the action taken by EPA Victoria since then, which has included Clean Up Notices issued at Fiskville.

The Chapter then examines how several regulators (the former Department of Environment and Primary Industries, PrimeSafe and the Chief Health Officer) responded to the effects of contamination in sheep on the farm adjoining Fiskville.

Finally, the Chapter examines the roles played at Fiskville by the Moorabool Shire Council and Emergency Management Victoria.

This Chapter addresses Terms of Reference (1) and (5).

Key findings

- That the CFA did not have, nor need, an EPA Victoria licence to operate at Fiskville. However, at various times, in communication with third parties, the CFA has intimated that it is the holder of a licence.
- That EPA Victoria failed to carry out its statutory role at Fiskville and allowed the CFA to contaminate the site to such an extent that it has been closed down and is now the subject of complex and very expensive remediation.
- That the Department of Environment and Primary Industries issued a Contaminated Stock Notice to Matthew and Beccara Lloyd in relation to PFOS in their stock and rescinded the Notice two days later.
- That before the Contaminated Stock Notice was issued, the Department of Environment and Primary Industries had received the Chief Health Officer's advice that the presence of PFOS in the stock did not present any danger to human health.
- That the Committee re-affirms that the Lloyds have been poorly treated, and is concerned that the matter is ongoing.
- That in contrast to the 'soft touch' regulation of the CFA over Fiskville by EPA Victoria and WorkSafe, the regulatory response to the CFA's neighbours was out of proportion to the risks posed by their stock.

- That the Chief Health Officer should have accessed specialist technical advice that was independent of the CFA. It is clear and understandable that the Department of Environment and Primary Industries would rely heavily on the advice of the Chief Health Officer. It is vital in such a situation for a Department to be confident that the Chief Health Officer's opinion has been reached independently of the party that the Department is regulating.
- That the Department of Environment and Primary Industries should not have allowed the CFA to be so closely involved in its statutory decision making. Regulatory authorities must be, and must be seen to be, at arm's length from those they are regulating.
- That neither Moorabool Shire Council nor EPA Victoria used their powers when a neighbouring farmer had a problem with litter from the Fiskville site landing on his property.
- That it was inappropriate for Moorabool Shire Council to leave a farmer to resolve his nuisance complaint directly with the CFA because of the power imbalance between the parties and the extent, severity and frequency of the problems being experienced. These problems posed dangers to the health of the farmer, his family, visitors to his property and his livestock.
- That EPA Victoria and local Councils have overlapping responsibilities for littering and the lack of coordination between the Moorabool Shire Council and EPA Victoria contributed to inaction in the case of Mr Neville Callow.
- That the CFA has yet to adhere to the requirement to report to the Emergency Management Commissioner every six months because, prior to December 2015, there were no published standards. In December 2015, the first part of the standards was published, but the remaining two parts are being developed.

8.1 Introduction

Terms of Reference (1) requires the Committee to carry out a 'comprehensive study of pollution, contamination and unsafe activities at Fiskville between 1970 and the present day'. The Committee heard evidence about significant effects on the environment (including the soil and the water) at the Fiskville site due to the activities conducted there over 45 years, including effects on neighbouring properties and public waterways.

Victoria has had, for most of that time, legislation designed to prevent pollution, contamination and unsafe activities. That legislation has established dedicated regulatory authorities to administer the provisions of the legislation. The Committee considered it necessary to examine what those various regulators did to enforce that legislation. If that enforcement was ineffective, the Committee sought to understand if the legislation was lacking or if the regulators were inactive and, if so, why.

Victoria has had a dedicated Environment Protection Authority (EPA Victoria) in place since 1970, prior to the CFA using the Fiskville site. EPA Victoria staff have trained at Fiskville and have assisted in providing training to others there on the handling of hazardous materials since at least 1992.

This Chapter examines the role of EPA Victoria in relation to the Fiskville site. It also considers the part played by other regulators that have responded to concerns about the Fiskville site, including the Department of Environment and Primary Industries, Moorabool Shire Council and Emergency Management Victoria.

Despite the evolving environmental problems at Fiskville which manifested from the early 1970s onwards, EPA Victoria played a minor role in regulating the site until after the publication of the Joy Report in 2012. The Joy Report was published after EPA Victoria undertook reforms of their compliance and enforcement policy, which are also relevant to their actions since 2012.

The environmental impacts of the CFA's activities at Fiskville were not limited to the property itself. The Committee heard that neighbouring properties have also been polluted, particularly by perfluorooctane sulfonate (PFOS). This Chapter examines the response by the Department of Environment and Primary Industries to the detection of perfluorinated chemicals (PFCs) in stock on a farm adjacent to Fiskville owned by the Lloyd family (see also Case Study 4 on Beccara and Matthew Lloyd).

The environmental regulator was missing in action while the environmental problems at Fiskville mounted, particularly prior to 2011. As was the case with WorkSafe (see Chapter 7), EPA Victoria's sporadic involvement at Fiskville was prompted by external events rather than the proactive use of its own powers, leaving the CFA to run Fiskville with little, if any, regard for the laws that applied. It is first necessary to describe briefly the laws that were in place.

8.2 EPA Victoria

8.2.1 The law

The *Environment Protection Act 1970* was Australia's first comprehensive environmental protection statute. The purpose of the Act is to 'create a legislative framework for the protection of the environment in Victoria having regard to the principles of environmental protection'.⁹⁸⁹ One such principle in the Act is the 'precautionary principle': 'if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'.⁹⁹⁰

⁹⁸⁹ *Environment Protection Act 1970* (Victoria), s. 1A. The 'principles of environmental protection' are set out in ss. 1B to 1L.

⁹⁹⁰ *Ibid.* s.1C. For a discussion of the underlying principles of environmental law in Australia see M. Comino & P. Leadbeter, 'Enforcement of pollution laws in Australia - Past experience and current trends', paper presented at Fifth International Conference on Environmental Compliance and Enforcement, Monterey, USA, November 1998, p.58

The *Environment Protection Act 1970* established EPA Victoria,⁹⁹¹ whose role includes the ‘control’ of ‘the environmental impacts of activities that create a state of potential danger to the environment’.⁹⁹² The *Environment Protection Act 1970* confers on EPA Victoria a broad range of powers to enable it to exercise such control, including the power to ‘undertake investigations and inspections to ensure compliance with this Act and to investigate complaints relating to breaches of this Act’.⁹⁹³

The *Environment Protection Act 1970* creates a number of offences, including:

- Causing or permitting the pollution of the atmosphere, land or water⁹⁹⁴
- Causing or permitting an environmental hazard⁹⁹⁵
- Failing to meet requirements applying to the use of notifiable chemicals⁹⁹⁶
- ‘Aggravated pollution’, which consists of intentionally, recklessly or negligently polluting the environment.⁹⁹⁷

Among the powers conferred on EPA Victoria by the *Environment Protection Act 1970* is the power to direct in writing by notice that the occupier of any premises upon which pollution has occurred ‘take the clean up and ongoing management measures specified in the notice’.⁹⁹⁸ EPA Victoria may specify in the notice any condition that it thinks fit, including that things specified in the notice ‘be done to the satisfaction of the Authority’.⁹⁹⁹ It is an indictable offence to contravene a notice.¹⁰⁰⁰

Part IXD of the *Environment Protection Act 1970* is concerned with ‘environmental audits’. Such audits are carried out by an ‘environmental auditor’ appointed by EPA Victoria under the Act.¹⁰⁰¹ Environmental auditors are engaged by any person who is required by EPA Victoria to carry out an environmental audit.¹⁰⁰² The *Environment Protection Act 1970* provides for three different types of environmental audit:

- An audit on risk caused by an industrial process in which the auditor specifies the ‘risk of any possible harm or detriment to a segment of the environment caused by any industrial process or activity, waste substance or noise’¹⁰⁰³

991 *Environment Protection Act 1970* (Victoria), s. 5

992 *Ibid.* s. 13(1)(d) (emphasis added)

993 *Ibid.* s. 13(1)(k)

994 *Ibid.* ss. 39, 41 and 45

995 *Ibid.* s. 27A(1)

996 *Ibid.* s. 30C (introduced in 1989)

997 *Ibid.* s. 59E

998 *Ibid.* s. 62A(1)

999 *Ibid.* s. 62A(1A)(a)

1000 *Ibid.* s. 62A(3)

1001 *Ibid.* s. 53S

1002 *Ibid.* s. 53U

1003 *Ibid.* s. 53V

- An audit of the condition of a segment of the environment which results in a ‘certificate of environmental audit’ or a ‘statement of environmental audit’¹⁰⁰⁴
- An audit report of the condition of a segment of the environment that includes: an evaluation of the environmental quality of the relevant segment of the environment; an assessment of whether any clean up is required to that segment of the environment; and if any clean up is necessary, any recommendations relating to carrying out of that clean up.¹⁰⁰⁵

The Committee heard from the current CEO of EPA Victoria, Mr Nial Finegan. It asked Mr Finegan about EPA Victoria’s exercise of its regulatory powers in relation to Fiskville. He responded that:

... people have a misplaced understanding of the powers of the EPA. For example, under the *Occupational Health and Safety Act* there is this preventative duty, which is to prevent harm. That same duty does not exist under the *Environment Protection Act*. The *Environment Protection Act* in very simple terms, the way it is framed, for us to take action we almost have to wait for something to go wrong and then prove that something went wrong ...¹⁰⁰⁶

The Committee is of the view that Mr Finegan’s statement is not entirely reconcilable with EPA Victoria’s statutory function under s. 13(1)(d) of the *Environment Protection Act 1970*, which is to control the environmental impacts of activities that may damage the environment. It does not seem to the Committee that EPA Victoria necessarily has to wait for ‘something to go wrong’ before it can act. The Committee notes a 2011 review of EPA Victoria discussed below which found: ‘Although licensing is a regulatory mechanism central to the scheme of the legislation, the Act is intended to apply whether a business has a licence or not.’¹⁰⁰⁷

The Committee also notes Mr Finegan’s view that:

One of the things that is timely is this Inquiry being parallel with the inquiry into the EPA which is considering the powers of the EPA for the future. I think that if we are to prevent another Fiskville, I think the EPA would need very different powers to what it currently has.¹⁰⁰⁸

The Committee accepts that it holds a different view to Mr Finegan on EPA Victoria’s powers under the *Environment Protection Act 1970*. Clearly, a perception by a regulator that its regulatory tools are inadequate is of concern, whether it is the case or not.¹⁰⁰⁹

¹⁰⁰⁴ Ibid. s. 53W

¹⁰⁰⁵ Ibid. s. 53X

¹⁰⁰⁶ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.17

¹⁰⁰⁷ Stan Krpan, *Compliance and Enforcement Review - a review of EPA Victoria’s approach*, (2011), p.12

¹⁰⁰⁸ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.17

¹⁰⁰⁹ This may be compared with The Hon. Bernard Teague AO, *Hazelwood Mine Fire Inquiry Report (part 3)*, (2014), pp.169-172, where the Board discussed the WorkSafe’s and the mining regulator’s perception that there was a ‘regulatory gap’ concerning fire prevention in coal mines.

The Committee notes that the current review of EPA Victoria (that was due to report to the Government on 31 March 2016) will consider: ‘the scope and adequacy of the EPA’s statutory powers, and the effectiveness and efficiency of the suite of tools available to and utilised by the EPA, in enabling protection of the Victorian community and the environment, particularly in light of recent, new and emerging risks and issues’.

RECOMMENDATION 16: That the Victorian Government confirm that EPA Victoria currently has powers under its Act to take pre-emptive action to prevent pollution.

8.2.2 Two distinct eras of EPA Victoria’s involvement

It is clear from the discussion above that since the CFA commenced training activities at Fiskville there have been comprehensive laws in place designed to protect the environment and that EPA Victoria has had extensive enforcement powers under those laws. It is also clear from EPA Victoria’s submission to the Committee and several reviews by external agencies (discussed below) that EPA Victoria has not applied its powers in practice at all times. The Committee has identified two distinct eras of EPA Victoria’s involvement at Fiskville. The first is up until 2011 / 2012 and the second is from that time until the present.

The eras are divided by two significant events. The first was the *Compliance and Enforcement Review - a review of EPA Victoria’s approach* authored by Mr Stan Krpan. The second was the publication of the Joy Report in 2012. At a public hearing on 14 December 2015, Mr Finegan described the Joy Report as “a watershed moment” and “our first real test under the new, re-envisaged EPA”.¹⁰¹⁰

An example of EPA Victoria’s traditional enforcement approach is described in its submission to this Inquiry. EPA Victoria makes reference to a site inspection at Fiskville carried out in 1996, the lack of follow-up and the fact that this was typical of EPA Victoria’s approach at the time:

The EPA inspection of 23 July 1996 identified multiple issues with the site and noted the CFA was progressing with various consultancies to assist with remediation and improvement. The covering letter to CFA recommended continuation of existing work and stated that “further site investigation should be carried out in line with that in the consultant’s reports” and that EPA should be kept informed of progress (records indicate progress reports were made).

At that time, EPA did not issue a statutory notice requiring that a statutory audit be undertaken. It is understood that the approach was typical of field practices in 1996. Common practices of the time, such as using letters rather than notices based on an officer’s judgement, were subsequently reviewed in EPA’s Compliance and Enforcement Review (2011) prompted by observations made in VAGO and others. This has led to comprehensive reforms at EPA. Current practices are set out in EPA’s Compliance and Enforcement Policy and associated operating procedures.¹⁰¹¹

¹⁰¹⁰ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.7

¹⁰¹¹ EPA, *Submission 46*, p.4

Also relevant to this Inquiry are ‘observations’ made by the Ombudsman and Victorian Auditor-General’s Office (VAGO) referred to by EPA Victoria, the review of compliance and enforcement, and the reforms this prompted. These observations provide background to the analysis of the two distinct eras of EPA Victoria’s regulation at Fiskville.

Observations by external reviewers

There are three reports by external reviewers (including two by VAGO) that are relevant to EPA Victoria’s approach to compliance and enforcement prior to the 2011 review that led to changes within the organisation. These reports concerned contaminated sites, management of landfill and hazardous waste - all of which were also concerns at Fiskville.

The first is a report by the Ombudsman about EPA Victoria’s investigation into methane gas leaks at a landfill site at the Brookland Greens Estate (to the east of Melbourne). The situation was so serious that emergency management arrangements had to be instigated on 9 September 2008 ‘... in response to advice received from the Environment Protection Authority Victoria (EPA) that the landfill represented an imminent danger to residents in the estate’.¹⁰¹²

The report made the following findings:

My investigation identified that the EPA failed to take adequate enforcement action in relation to the landfill over a number of years. This was not as a result of a shortage of powers as the Act affords the EPA extensive statutory powers and an array of enforcement tools. In my view, the EPA ineffectively utilised the enforcement tools at its disposal. This failure resulted from several factors, including:

- Delays associated with the EPA’s enforcement process
- Passive management
- Lack of strategic direction at the South Metropolitan Region
- EPA’s culture and decision-making processes.¹⁰¹³

The Ombudsman went on to make further reflections about EPA Victoria’s inaction in its 2010 Annual Report:

My investigation into methane gas leaks in a landfill adjacent to the Brookland Greens Estate identified a culture within the EPA which did not encourage enforcement action. Even though the Environment Protection Act 1970 provides the EPA with extensive statutory powers and enforcement tools, the governing culture at the time within the EPA of under-utilising its powers made its enforcement tools ineffective. On several occasions this resulted in the EPA overlooking the actions and inaction of the City of Casey in the construction and management of the landfill.¹⁰¹⁴

¹⁰¹² Ombudsman Victoria, *Brookland Greens Estate – Investigation into methane gas leaks*, (2009), p.8

¹⁰¹³ *Ibid.* p.149

¹⁰¹⁴ Ombudsman Victoria, *Annual Report 2010 (part 1)*, (2010), p.33

The second is a report by VAGO about Hazardous Waste Management examining EPA Victoria's regulation of the disposal of hazardous waste in accordance with the *Environment Protection Act 1970*. Hazardous waste includes 'liquid, gaseous or solid waste materials that commercial or industrial businesses generate, and may be explosive, flammable, corrosive, toxic, radioactive, or infectious'.¹⁰¹⁵

The report found:

The EPA is not effectively regulating commerce and industry's management of hazardous waste. Its monitoring and inspection activities lack coherence, purpose and coordination. This, combined with poor business information because of the EPA's lack of data reliability, poor analysis and reporting and inadequate documentation of its rationale for decisions, means that there is neither sound compliance monitoring nor effective enforcement regimes.

As a consequence, there is little assurance that hazardous waste is stored and disposed of appropriately.¹⁰¹⁶

The third is a report by VAGO about Managing Contaminated Sites. Responsibility for regulating contaminated sites at the time was split between local Councils, EPA Victoria and the then Department of Planning and Community Development. The report provided five case studies of contaminated sites from around Victoria. The Auditor-General concluded:

In this audit we identified a range of cases that demonstrate the adverse consequences that flow from a lack of accountability and clarity, and gaps in the framework. Most notably we identify cases of inaction by responsible entities in dealing with contamination; this inaction being driven in part by an undue emphasis on avoiding legal and financial liability, rather than protecting human health and the environment.¹⁰¹⁷

It is clear, then, that a range of external reviewers have expressed concerns about EPA Victoria's approach to enforcement. These formed the backdrop to EPA Victoria's 2011 review of compliance and enforcement.

EPA review of compliance and enforcement

In February 2011, EPA Victoria published an extensive report¹⁰¹⁸ of the review by Mr Stan Krpan of its Compliance and Enforcement arrangements. Mr Krpan received 50 submissions from members of the public and consulted 200 EPA Victoria staff, 200 businesses and 300 community members.¹⁰¹⁹ Mr Krpan's report made 119 recommendations and concluded:

¹⁰¹⁵ Victorian Auditor-General's Report, *Hazardous Waste Management*, (2010), p.1

¹⁰¹⁶ *Ibid.* p.vii

¹⁰¹⁷ Victorian Auditor-General's Report, *Managing Contaminated Sites*, (2011), p.vii

¹⁰¹⁸ The report is 450 pages long

¹⁰¹⁹ EPA Victoria, *Compliance and Enforcement Review*, (www.epa.vic.gov.au/our-work/compliance-and-enforcement/ce-review), viewed 18 April 2016

EPA had, in my view, become confused as to the role of compliance and enforcement and had reduced its importance and prominence as a part of the regulator's role. Ombudsman Victoria found that the organisation's culture did not encourage enforcement and that, even though the EP Act provides EPA with extensive statutory powers and enforcement tools, the governing culture at the time within EPA was to 'under-utilise' its powers – a conclusion which was confirmed in my extensive EPA staff consultations.¹⁰²⁰

One of the outcomes of the review was a draft enforcement policy, which the Krpan report suggests was 'based on international best practice'.¹⁰²¹ EPA Victoria's Compliance Policy was updated in June 2011 in response to the Krpan review. The current policy was released on 1 September 2014 and is entitled: *Compliance and Enforcement Policy*.

At a public hearing Mr Finegan gave the Committee his perspective on the changes that EPA Victoria has instituted in response to the external reviews discussed above:

In short, VAGO and the Ombudsman said the regulator was missing, the EPA had failed the community. EPA has acted deliberately upon that, and we are actually in the fifth year of a five-year program to transform how we act as a modern regulator. A big part of that is our compliance and enforcement policy and everything that sits behind that. We will use our statutory tools. We do not do side meetings, we do not do letters of comfort - we do not do anything like that. We will just use the statutory tools given to us by the Parliament of Victoria.¹⁰²²

8.2.3 EPA Victoria's involvement prior to 2011

The Committee has identified five examples from prior to 2011 where EPA Victoria became aware of contamination at Fiskville and did not fully use its compliance and enforcement powers under the *Environment Protection Act 1970*. These examples demonstrate that EPA Victoria's approach to enforcement at Fiskville accords with the trends identified by Krpan and others - that is, that their powers under the *Environment Protection Act 1970* were 'under-utilised'.

In its submission to this Inquiry, EPA Victoria notes that its involvement with Fiskville '... has related primarily to the use of the site by Environment Protection Officers to occasionally undertake emergency response training'.¹⁰²³ EPA Victoria observes that '... there are few records of other interactions [by its officers] with the site prior to the mid-1990s'. This is consistent with the evidence before the Committee. EPA Victoria describes this lack of activity as 'unsurprising' due to: '... the apparent level of community support for the site, the remote location and the fact that it was managed by a government authority'.¹⁰²⁴

¹⁰²⁰ Stan Krpan, *Compliance and Enforcement Review - a review of EPA Victoria's approach*, (2011), p.12

¹⁰²¹ Ibid. p.8

¹⁰²² Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, pp.6-7

¹⁰²³ EPA, *Submission 46*, p.4

¹⁰²⁴ Ibid.

Contrary to the views of EPA Victoria, the Committee finds the lack of activity at Fiskville surprising. This is because of EPA Victoria's statutory charter and the nature of the activities that took place at Fiskville - which is only 80 kilometres from Melbourne - from 1972 onwards.

EPA Victoria was aware of the buried drums in 1988

In Chapter 5, the CFA's practice of burying drums containing chemical residues at Fiskville was discussed. It was noted that on at least two occasions people were exposed to the contents of these buried drums with deleterious health effects.

Documents disclosed under the *Freedom of Information Act 1982* by the CFA suggest that EPA Victoria became aware in the 1980s of the environmental degradation that this dangerous practice was causing.

For example, on 8 September 1988, an internal CFA memo entitled 'Waste Disposal Site - Fiskville' refers to 'discussions with the EPA' concerning the disposal of drums. The memo states that EPA Victoria had:

... indicated that their recommended contractors would not be able to effectively dispose of the materials indicated in the consultant's report' due to poor standard of the drums, the inability to pump out the contents because it had solidified and the 'flashpoint and possible toxicity of the materials identified does not allow for land fill disposal'.¹⁰²⁵

The Committee notes that the CFA received a report about buried waste at Fiskville from AS James Pty Ltd on 1 July 1988.¹⁰²⁶ The circumstances in which this report was commissioned and the report's contents are discussed in Chapter 5. In summary, the consultant advised the CFA that the most appropriate response to the buried drums, which contained toxic and carcinogenic substances including benzene and toluene, was to remove the material and dispose of it in a suitable manner. The Committee considers it likely that the CFA memo of 8 September 1988 was referring to the AS James report. As noted in Chapter 5, the drums were not removed until 1991.¹⁰²⁷

EPA Victoria did not provide any documents or other evidence to the Committee about its involvement at Fiskville in 1988. The Committee assumes that no such documents exist.¹⁰²⁸ The nature of its involvement in relation to this issue is therefore unclear. What is clear, though, is that at least one officer in EPA Victoria was aware in 1988 of a serious issue of buried chemical waste at Fiskville. Despite this, there was apparently no:

- EPA Victoria record of its advice to the CFA
- Attendance by EPA Victoria officers at the site

¹⁰²⁵ CFA memorandum from Deputy Chief Officer (Operations Services), to Acting Chief Officer, 8 September 1988

¹⁰²⁶ Chapter 6 See also Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.104

¹⁰²⁷ *Ibid.* p.106

¹⁰²⁸ In response to a request under s. 28 of the *Parliamentary Committees Act 2003* (see chapter 2), EPA Victoria provided the Committee with a list of in excess of 700 documents relating to its activities at Fiskville

- Audit of whether there were other buried drums at Fiskville
- Advice about the appropriate disposal methods of any such materials
- Contact with the department administering the *Occupational Health and Safety Act 1985* about the obvious occupational health and safety implications of the issue¹⁰²⁹
- Compliance activity under the *Occupational Health and Safety Act 1985* requiring the CFA to address this issue.

This lack of activity is telling because by 1988, the *Environment Protection Act 1970* and the Authority had been in place for nearly two decades. Further, the regulatory regime had been augmented in 1985 by the enactment of the *Environment Protection (Industrial Waste) Act 1985*. Its failure to act on the above matters is consistent with the findings of multiple reviews that EPA Victoria did not use its enforcement powers appropriately.

Mr David Clancy requested EPA Victoria attendance in 1996

Other than the above, there is no documented record of EPA Victoria involvement at Fiskville until 1996. On 23 July 1996, an EPA Victoria Inspector visited Fiskville together with Mr David Clancy and another CFA staff member.¹⁰³⁰ It seems clear that EPA Victoria's involvement at the site in 1996 was the result of Mr Clancy's request rather than any initiative on the part of EPA Victoria itself.

In a letter of 21 August 1996 to Mr Clancy, EPA Victoria noted that '... the [Fiskville] site is likely to be contaminated due to poor practices in the past'. The letter recorded EPA Victoria's encouragement of '... the CFA's proactive approach to determining the extent of contamination of the Fiskville site'. The inspection report attached to the letter recorded heavy contamination in the vicinity of the flammable liquids PAD, including the discharge of contaminants into the 'pond'. It noted that '... some concern was expressed concerning contamination of the waterbodies by firefighting foams used in exercises because they are not biodegradable'.

The covering letter noted that the CFA had engaged a consultant to advise it about cleaning up Fiskville but that:

If no further action is taken on the contamination issues already identified the [EPA] may require further investigation and clean-up to be undertaken through the issue of a pollution abatement notice and / or clean-up notice.¹⁰³¹

This was the inspection referred to in EPA Victoria's submission (above) where EPA Victoria stated (in relation to notices not being issued) that '... it is understood that the approach was typical of field practices in 1996'.¹⁰³² As

¹⁰²⁹ See Chapter 7

¹⁰³⁰ A report of the investigation is attached to correspondence from EPA Victoria to David Clancy of the CFA dated 21 August 1996. See also the Case Study 3 on Mr David Clancy

¹⁰³¹ Correspondence from Mr Paul Day, South West Region, EPA, to Mr David Clancy, Fire Officer, CFA Fiskville, 21 August 1996

¹⁰³² The inspection report is discussed further in Case Study 3 on Mr David Clancy

discussed below, no such notices were issued by EPA Victoria until a further 16 years had passed. Even then, the notices were only issued in response to the Joy Report.

The CFA sought EPA Victoria's help in 1997

The EPA Victoria inspection report discussed in the previous section made reference to the potential for firefighting foams used at Fiskville to contaminate waterways. On 17 February 1997, the Chairman of the CFA, Mr Len Foster, wrote to EPA Victoria's Chairman, Dr Brian Robinson, about the use of fire retardants and foams in Victoria.¹⁰³³ In the letter, Mr Foster noted that, with the increased use of fire retardants and foams by the CFA '... senior staff have raised questions about [their] environmental impacts'. Noting that the scientific literature on the subject was limited, Mr Foster informed EPA Victoria that he had identified a need to develop an Australian standard. He invited Dr Robinson to '... identify a person with whom liaison could be commenced in order to advance this issue'.¹⁰³⁴

Dr Robinson responded on 14 March 1997.¹⁰³⁵ He advised that EPA Victoria '... would be happy to provide input to the development of guidelines for the use of fire retardants and foams by fire and emergency services'. He informed the CFA that '... toxicity testing of some foams has been carried out by EPA and has shown significant toxicity'. The letter concluded with advice about the identity of the EPA Victoria contact for 'further discussion' on the issue.

No further documents were provided to the Committee about this issue. Mr Foster was shown this correspondence by the Committee at a public hearing and was asked whether EPA Victoria had developed any guidelines as the CFA had requested. He stated that he was "... not quite sure what happened after this time".¹⁰³⁶

The Committee also asked Mr Finegan whether any guidelines had been developed by EPA Victoria and he replied that they had not.¹⁰³⁷ He informed the Committee: "The advice of the EPA back to the CFA around that time was a general concern about the persistent nature of these chemicals and any of their use should be limited. Beyond that, there were no guidelines."¹⁰³⁸

The Committee was interested in why there was no follow-up to a statutory authority asking EPA Victoria for advice on an important issue of environmental contamination. Mr Finegan referred the Committee to what he said were the limited powers available to EPA Victoria to address the use of firefighting foams. He noted that the WorkCover authority¹⁰³⁹ had a responsibility for the

¹⁰³³ Correspondence from Mr Len Foster, Chairman, CFA, to Dr Brian Robinson, Chairman, EPA, 17 February 1997

¹⁰³⁴ Ibid.

¹⁰³⁵ Correspondence from Dr Brian Robinson, Chairman, EPA, to Mr Len Foster, Chairman, CFA, 14 March 1997

¹⁰³⁶ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.47

¹⁰³⁷ Ibid. p.9

¹⁰³⁸ Ibid.

¹⁰³⁹ 'WorkSafe' is an administrative arm of the Victorian Workcover Authority responsible for the administration of the legislation described at Chapter 7

occupational health and safety aspects of the use of foams. In response to a question from the Committee about the interaction between EPA Victoria and WorkSafe between 1996 and 2011, Mr Finegan replied:

The bits I have been able to find, I think the EPA was saying back to the CFA - whether it was the use of recycled water or whether it was other matters - it was saying that, 'you, CFA, need to consider the occupation [sic] health and safety impacts of this', and referred matters back to the WorkCover authority.¹⁰⁴⁰

On 2 February 2016, in a written response to a question taken on notice at the public hearing, EPA Victoria informed the Committee that its records show '... very little interaction with WorkSafe specifically relating to Fiskville'. Such interaction as there was related to the joint involvement in presenting training at Fiskville.¹⁰⁴¹

The buried drums incident of 2002

EPA Victoria was further involved at Fiskville in March 2002. As discussed in Chapters 4 and 5, an incident occurred when a CFA contractor accidentally dug up several drums of chemical waste that had been buried some years earlier. The incident was reported by the Fiskville Officer in Charge, Mr Mark Glover, to EPA Victoria by telephone. According to Mr Glover he was given directions by EPA Victoria about disposal of the drums and contaminated soil without any attendance by EPA Victoria at the site and without EPA Victoria making any inquiry about the contents of the drums. Further, despite the occupational health and safety implication of the incident, there was apparently no contact by EPA Victoria with WorkSafe.

Changes to water safety standards in 2009

As outlined in Chapters 4 and 7, in 2009 the CFA asked EPA Victoria to approve a change to the CFA's water safety standards (increasing the acceptable levels of E. coli in the firefighting water at Fiskville from < 10 organisms per 100 ml to < 150 organisms per 100 ml). EPA Victoria did so without making any inquiries into the matter and, again, without visiting the site. It advised the CFA to consult with WorkSafe but took no action itself to inform its fellow safety regulator of the matter.

Lack of interaction between EPA Victoria and WorkSafe

EPA Victoria and WorkSafe agreed to a number of memoranda of understanding (MOU) from 2004 onwards. In each successive MOU, the senior most officers of EPA Victoria and WorkSafe expressed their commitment to cooperating in respect of matters of mutual concern and interest.¹⁰⁴² Despite this, the Committee finds

¹⁰⁴⁰ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.9. The lack of communication between EPA and WorkSafe in 2009 concerning water standards is discussed below

¹⁰⁴¹ Correspondence from Mr Nial Finegan, CEO, EPA Victoria, to Chair, Environment, Natural Resources and Regional Development Committee, 2 February 2016

¹⁰⁴² Memorandum of Understanding dated 15 March 2004; Memorandum of Understanding dated 14 July 2008; Memorandum of Understanding dated 24 December 2010

that the agencies had minimal interaction with each other in their dealings with the CFA concerning Fiskville between 1988 and 2011.¹⁰⁴³ Crucial information obtained by one agency which would have been of interest to the other was not passed on.

8.2.4 EPA Victoria's involvement post the Joy Report (2012) – the Clean Up Notices

In Chapter 7, it was noted that WorkSafe immediately responded to the publication of the December 2011 *Herald Sun* article about contamination at Fiskville by attending the site. By contrast, EPA Victoria's more recent involvement at Fiskville was triggered by the Joy Report. The Joy Report was asked to make recommendations about the type of clean up and remediation that would be required at Fiskville. Professor Joy made a number of recommendations in June 2012 aimed at investigating the soil and water pollution at Fiskville and remediating the site.

In its submission to this Inquiry, EPA Victoria states that it '... promptly responded to the Joy Report by inspecting the site and issuing notices to ensure the relevant recommendations were carried out'.¹⁰⁴⁴ The first EPA Victoria visit to Fiskville (post the Joy Report) was in fact on 4 September 2012. Clean Up Notices were not served by EPA Victoria on the CFA until 23 January 2013.¹⁰⁴⁵

The Committee was concerned by a document provided to it by EPA Victoria dated 16 January 2013 and headed 'Not to be Published'. The author of this internal EPA memo notes that the CFA provided feedback to EPA Victoria on the draft s. 62A notices that had been sent to it by EPA Victoria. The author continues:

CFA is currently preparing a media release they intend to issue when the EPA Notices are issued. They propose to discuss the overall media issue with EPA Media and Communications so that their message is not inconsistent with any media message EPA may issue. This is an issue that EPA may wish to prepare a media release for.¹⁰⁴⁶

The Committee considers it inappropriate for a regulator to discuss media strategies with a body it is meant to oversee.

What do the Clean Up Notices require?

The Notices served on the CFA by EPA Victoria require the CFA to engage an 'environmental auditor'¹⁰⁴⁷ to conduct:

¹⁰⁴³ Mr Finegan informed the Committee at its public hearing on 14 December 2015 that EPA Victoria would advise it if EPA Victoria interacted with WorkSafe between 1991 and 2011 concerning Fiskville – Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.10. On 2 February 2016, EPA Victoria advised the Committee that '[its] records show very little interaction with WorkSafe specifically relating to Fiskville'

¹⁰⁴⁴ EPA, *Submission 46*, p.4

¹⁰⁴⁵ Section 62A Notices numbered 90004570 and 90004571 both dated 31 December 2012

¹⁰⁴⁶ Author unknown, internal EPA memo dated 16 January 2013 concerning 'Issue of Clean Up Notices to CFA, Fiskville'

¹⁰⁴⁷ The role of 'environmental auditors' under the *Environment Protection Act 1970* (Victoria) was discussed above.

- In the case of notice no. 90004570, an environmental audit in accordance with s. 53V of the *Environment Protection Act 1970*¹⁰⁴⁸
- In the case of notice no. 90004571, an environmental audit in accordance with s. 53X of the *Environment Protection Act 1970*.¹⁰⁴⁹

The s. 53V audit was required to be completed by 31 March 2014. The CFA was required to have submitted a 'Clean Up Plan' to EPA Victoria by 30 May 2014. Upon receiving 'written instruction from EPA', the CFA was required to implement the Clean Up Plan 'to clean up, treat, remove or contain any contaminated soil, [etc] that represent an unacceptable risk of harm or detriment to the environment' by 30 June 2014. The clean up is required to be completed by 28 February 2017.¹⁰⁵⁰

The second notice required the CFA to submit to EPA Victoria by 30 May 2014 'a Clean Up Plan with time bound milestones to restore beneficial use to the extent practicable'. By 30 June 2014, upon receiving 'written instruction from the EPA' the CFA was required to implement the Clean Up Plan. By 30 June 2017, the CFA is required to submit to EPA Victoria an environmental audit report prepared in accordance with s. 53X of the *Environment Protection Act 1985* accompanied by either:

- A Certificate of Environmental Audit in accordance with s. 53Y of the Act¹⁰⁵¹
- A Statement of Environmental Audit in accordance with s. 53Y of the Act.¹⁰⁵²

Assuming the CFA meets these deadlines, by 30 June 2017, the Fiskville site will have been remediated to some extent and EPA Victoria will have a report about what, if any, beneficial use can be made of the site.

The environmental auditor appointed by the CFA pursuant to EPA Victoria notices is Mr Strudwick, an employee of AECOM Australia Pty Ltd. Mr Strudwick emphasised to the Committee that he was carrying out the audits in his personal capacity and giving evidence to the Committee in his personal capacity.¹⁰⁵³ The Committee appreciates his evidence.

Mr Strudwick told the Committee that he had inspected the Fiskville site in February 2013 and again in October 2013.¹⁰⁵⁴ He explained that the s. 53V audit had been completed and the s. 53X audit is pending in accordance with the requirements of the second notice.¹⁰⁵⁵

¹⁰⁴⁸ As noted above, such an audit identifies a risk of possible harm or detriment

¹⁰⁴⁹ A s. 53X audit includes an assessment of the need for a clean up and recommendations for the conduct of any such clean up

¹⁰⁵⁰ Section 62A Notice numbered 90004570, clauses 3.1-3.4

¹⁰⁵¹ In such a document, an auditor certifies that the condition of the relevant segment of the environment 'is not or is not potentially detrimental to any beneficial use of that segment': s. 4, *Environment Protection Act 1970* (Victoria)

¹⁰⁵² In such a document, an auditor certifies that the condition of the relevant segment of the environment 'is or is potentially detrimental to any beneficial use of that segment' and 'if the condition of the segment...is not or is not potentially detrimental to any particular beneficial use of that segment', it must so state: s. 4, *Environment Protection Act 1970* (Victoria)

¹⁰⁵³ Mr Darryl Strudwick, Auditor, AECOM, *Transcript of evidence*, 25 May 2015, p.94

¹⁰⁵⁴ *Ibid.* p.95

¹⁰⁵⁵ *Ibid.*

Remediation of the Fiskville site is discussed further in Chapter 10.

8.2.5 Fiskville licence to operate

The Committee was concerned by evidence of mistaken beliefs regarding the CFA's licence to operate a fire training facility at Fiskville.

The CFA did not have a licence from EPA Victoria to operate Fiskville. This was confirmed by Mr Finegan when he spoke with the Committee.¹⁰⁵⁶ Yet in June 2011, Fiskville staff met with Mr Neville Callow, the owner of a neighbouring property, in regard to a complaint from Mr Callow (see Case Study 5 about Mr Callow).¹⁰⁵⁷ The CFA's briefing note about the meeting states: 'Callow was advised that CFA had been on site for 40 years and had EPA consent to do fire related training activities.'¹⁰⁵⁸

Mr Justin Justin, the Officer in Charge of Fiskville at the time,¹⁰⁵⁹ further advised Mr Callow in a letter dated 18 August 2011 that '... hot fire training activities are an established practice at Fiskville and are conducted in accordance with approvals from relevant authorities'.

However, an email from CFA Operations Manager Mr Michael Harris to Mr Justin dated 16 December 2011 states:

The staff at Fiskville were of the belief that we had a licence from EPA in relation to burning operations including such things as Tyres, I initiated a search just after the complaint was received from Neville Callow to ensure that we were in fact complying with the licence conditions. At the time I left, no licence or file had been located. The information I acted upon came from the collective conversations with Turk [Mr John Myers], Glenn and Paul. The risk / actions you refer to were dependent on locating the file.¹⁰⁶⁰

This mistaken view - yet another example of inaccurate information about Fiskville that affected other people's decision making - was also apparent outside of the CFA. For example, when the Committee asked Mr Geoff Cramer from Central Highlands Water who determined which substances in the water at Fiskville were tested for he replied: "That decision was made by CFA and a lot of those parameters were the ones that were set in 1997 as part of an EPA licence."¹⁰⁶¹

Regarding a permit from the local council, Moorabool Shire Council's CEO Mr Rob Croxford told the Committee that Fiskville did not have any local council permits to operate. It was Mr Croxford's view that Fiskville had 'existing use rights', which begin after 15 years of continuous usage of a site.¹⁰⁶²

¹⁰⁵⁶ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.5

¹⁰⁵⁷ See also section 8.4.1 below

¹⁰⁵⁸ CFA briefing note to Mr Lex De Man regarding complaint of Mr Neville Callow, 15 December 2011

¹⁰⁵⁹ Mr Justin was in this position from 15 August 2011 to 27 January 2015

¹⁰⁶⁰ Email correspondence from Mr Michael Harris to Mr Justin Justin, 16 December 2011

¹⁰⁶¹ Mr Geoff Cramer, Manager, Laboratory Services, Central Highlands Water, *Transcript of evidence*, 19 November 2015, p.5

¹⁰⁶² Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.7

The question of existing use rights is complicated by the fact that clause 63.01 of the Moorabool Planning Scheme states: ‘An existing use right is established in relation to use of land under this scheme if any of the following apply.’ It then lists five dot points, the most relevant of which is point four: ‘Proof of continuous use for 15 years is established under Clause 63.11.’¹⁰⁶³

Clause 63.11, entitled ‘proof of continuous use’, states:

If, in relation to an application or proceeding under the Act or this scheme, including an application for a certificate of compliance under section 97N of the Act, the extent of any existing use right for a period in excess of 15 years is in question, it is sufficient proof of the establishment of the existing use right if the use has been carried out continuously for 15 years prior to the date of the application or proceeding. An existing use right may be established under this clause even if the use did not comply with the scheme immediately prior to or during the 15 year period, unless either:

- At any time before or after commencement of the 15 year period the use has been held to be unlawful by a decision of a court or tribunal.
- During the 15 year period, the responsible authority has clearly and unambiguously given a written direction for the use to cease by reason of its non-compliance with the scheme.¹⁰⁶⁴

Those seeking confirmation of their ‘existing use right’ may make an application under s. 97N (1) of the *Planning and Environment Act 1987* (often called a ‘certificate of compliance’).¹⁰⁶⁵ Any person may apply to the responsible authority for a certificate stating that an existing use or development of land complies with the requirements of the planning scheme at the date of the certificate, or a certificate stating that a proposed use or development (or part of a use or development) of land would comply with the requirements of the planning scheme at the date of the certificate.¹⁰⁶⁶

Mr Croxford confirmed that the CFA had not made any application to Moorabool Shire Council under s. 97N (1) of the *Planning and Environment Act 1987* for a certificate of compliance in relation to the Fiskville training facility. Mr Croxford told the Committee that Council has approved applications for building works at Fiskville, including for diversion of water around Lake Fiskville, but based these approvals only on “... an assumed pre-existing use right for that facility”.¹⁰⁶⁷

Moorabool Shire Council, then, simply formed the view that the CFA held existing use rights but did not seek to explore the scope of these in any detail. The Committee believes that had the Council sought to enforce its planning scheme in relation to the Fiskville site, the CFA would have claimed existing use rights, but the character of such rights would have been tested. Any judgment stemming from such a test would have clarified the extent to which those rights were held in the land.

¹⁰⁶³ Clause 63.01 Moorabool Planning Scheme. The Committee notes that this clause is contained in the planning schemes for all Councils in Victoria

¹⁰⁶⁴ Clause 63.11 Moorabool Planning Scheme

¹⁰⁶⁵ *Planning and Environment Act 1987*, (Victoria), s. 97N(1)

¹⁰⁶⁶ Ibid.

¹⁰⁶⁷ Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.3

FINDING 75: That the CFA did not have, nor need, an EPA Victoria licence to operate at Fiskville. However, at various times, in communication with third parties, the CFA has intimated that it is the holder of a licence.

8.2.6 Conclusion: EPA Victoria failed to carry out its statutory role at Fiskville

The Committee notes the findings of a number of external reviews of EPA Victoria that prior to 2011, EPA Victoria under-utilised its powers under the *Environment Protection Act 1970*. The Committee considers that EPA Victoria has been more proactive since 2011 / 2012.

Events occurred at Fiskville with little if any involvement of the State's environmental regulator. Over 45 years, the site was polluted to such an extent that a Clean Up Notice had to be served by EPA Victoria requiring an expensive four-year program.¹⁰⁶⁸ At the present time, it is unclear what, if any, beneficial use may be able to be made of the land when the remediation is completed.

The Committee concludes that EPA Victoria should have been far more active in regulating activities at Fiskville prior to 2011. In particular, it disagrees with the reasons in EPA Victoria's submission to this Inquiry for lack of action prior to the mid-1990s:

- The 'remote location' of the site
- The 'apparent level of community support for the site'
- The fact that Fiskville was 'managed by a government authority'.

In relation to this last point concerning the government status of the CFA, the Committee was concerned to find minutes of CFA Board meetings from the 1980s recording discussion of undertakings from EPA Victoria about not enforcing the *Environment Protection Act 1970* against the CFA. At a Board meeting on 2 March 1981, there was a discussion of the '... problems encountered by [CFA] volunteers in relation to the E.P.A. Act'. Reference is made to the Minister for Local Government supporting the CFA '... in its endeavours to have the E.P.A. Act changed'.¹⁰⁶⁹ At an earlier CFA Board meeting, the then CFA Chairman noted that the CFA had received correspondence from the Minister responsible for EPA Victoria that '... indicated that [EPA Victoria] gave assurance that it will not prosecute the C.F.A. on connection [sic.] with its carrying out of its duties'.¹⁰⁷⁰

The Committee notes that, at all relevant times since 1970, the *Environment Protection Act 1970* has applied to government bodies in the same way that it has applied to private industry.¹⁰⁷¹ There was no justification under the law for EPA Victoria to treat the CFA any differently to Victorian industry. If anything,

¹⁰⁶⁸ The potential cost of the clean up to the CFA is discussed in Chapter 10

¹⁰⁶⁹ CFA Board meeting Minutes, 2 March 1981, p.12

¹⁰⁷⁰ CFA Board meeting Minutes, 9 February 1981, p.23

¹⁰⁷¹ *Environment Protection Act 1970*, (Victoria), s. 2

considering the reasons explained in Chapter 1 of this Final Report concerning government acting as an ‘exemplar’, higher standards should be applied to government agencies.

Over many years, there was ample opportunity for EPA Victoria to play a role in regulating the Fiskville site. It failed to carry out its statutory role and allowed the CFA to contaminate the site to such an extent that it has been closed down and is now the subject of complex and very expensive remediation. This makes Fiskville another example of what Krpan describes as ‘... a disappointing history of regulators who overlook their core function and are brought under the spotlight only after a significant regulatory failure or crisis’.¹⁰⁷²

FINDING 76: That EPA Victoria failed to carry out its statutory role at Fiskville and allowed the CFA to contaminate the site to such an extent that it has been closed down and is now the subject of complex and very expensive remediation.

8.3 Regulatory response to PFC contamination at the Lloyds’ farm

In September 2013, PFOS was detected in stock on a farm adjacent to Fiskville owned by the Lloyd family.¹⁰⁷³ As is discussed in Chapter 9, there is a degree of uncertainty in the scientific literature about the health effects of PFOS. The response of the then Department of Environment and Primary Industries (DEPI) to the detection of PFOS was to issue the Lloyds with a ‘Contaminated Stock Notice’. However, within two days of the Notice being issued, it was revoked. The Committee heard evidence from the Lloyds and from representatives of the various government departments which responded to the presence of PFOS in the stock.

8.3.1 The relevant law

Contamination of livestock in Victoria at the time was regulated by DEPI¹⁰⁷⁴ pursuant to the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* and the *Food Act 1984*.

Under s. 49 of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992*, if a departmental officer ‘believes on reasonable grounds’ that stock is ‘contaminated’, the officer may issue a Contaminated Stock Notice to the stock owner. ‘Contaminated’, in relation to an animal, is defined in s. 4(1) of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* as an animal in which a ‘contaminant’ is present:

- In excess of the ‘maximum residue limit’

¹⁰⁷² Stan Krpan, *Compliance and Enforcement Review - a review of EPA Victoria’s approach*, (2011), p.9

¹⁰⁷³ See Case Study 4 on the Lloyds

¹⁰⁷⁴ Now called the Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

- If there is no maximum residue limit for that contaminant, at such a level that ... the food produced from the animal ... is not likely to comply with the *Food Act 1984*.

The maximum residue limit (MRL) for a substance in relation to an animal is defined as the limit determined by Order pursuant to s. 4(4) of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992*. The Committee asked Mr Brendan Tatham, Chief Executive Officer of PrimeSafe - Victoria's food safety regulator for meat and seafood¹⁰⁷⁵ - whether there are any standards for the safe levels of PFOS in livestock raised for human consumption.¹⁰⁷⁶ Mr Tatham informed the Committee that the governing instrument is the 'Food Standards Code', which sets MRLs for chemicals in food, including meat. He said that there is currently no MRL prescribed for PFOS in that Code.¹⁰⁷⁷

Mr Tatham also informed the Committee that for the food to be considered uncontaminated "... if a particular chemical is not listed, then the Standard requires that there be no detectable residue of that chemical in any food".¹⁰⁷⁸ As to the meaning of 'detectable residue', Mr Tatham advised that:

Schedule 1 of [Food] Standard 1.4.2 does not include a reference to PFOS and, in those circumstances therefore, the requirement for compliance purposes is that food must not contain detectable levels of PFOS. My understanding is that testing equipment typically operates by reference to minimum detection levels (i.e. there are acknowledged margins of error such that a residue will only be considered detectable if is detected above the relevant minimum detection level of the testing equipment).¹⁰⁷⁹

In his oral evidence, Mr Tatham confirmed that the presence of PFOS in detectable levels in livestock (as was the case with the Lloyds' stock) renders the stock 'contaminated' under the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* because there is no specified MRL for PFOS.¹⁰⁸⁰ He informed the Committee that, as the CEO of PrimeSafe, he would like to see an MRL for PFOS determined in the Food Standards Code.¹⁰⁸¹

In April 2013, DEPI had promulgated a Standard Operating Procedure (SOP) for Contaminated Stock Notices.¹⁰⁸² Clause 2 of the SOP provides that consideration should be given to issuing a Contaminated Stock Notice to producers who:

- Refuse to sign a [property management plan (PMP)]
- Are not managing their cattle responsibly in accordance with their PMP (major non-conformances)

¹⁰⁷⁵ PrimeSafe is established under s. 43 of the *Meat Industry Act 1993* (Victoria)

¹⁰⁷⁶ Statement of Brendan Tatham dated 20 November 2015, para 31; Dr Brendan Tatham, CEO, Primesafe, *Transcript of evidence*, 23 November 2015, p.21

¹⁰⁷⁷ Statement of Brendan Tatham dated 20 November 2015, paragraph 35

¹⁰⁷⁸ *Ibid.* referring to Standard 1.4.2 of the Food Standards Code, clause 2(3)

¹⁰⁷⁹ *Ibid.* paragraph 36

¹⁰⁸⁰ Dr Brendan Tatham, CEO, Primesafe, *Transcript of evidence*, 23 November 2015, p.24

¹⁰⁸¹ *Ibid.* p.24

¹⁰⁸² Statement of Dr Britt dated 23 November 2015, paragraph 15; the SOP is attachment 'AB-2' to the statement

- Have sold cattle containing residues above MRL
- Have cattle that sample evidence shows are, or on grazing evidence are strongly suspected to be, grossly contaminated – that is, several times the MRL.¹⁰⁸³

As noted above, a Contaminated Stock Notice may only be issued in circumstances where an authorised officer ‘reasonably believes’ stock is contaminated. In circumstances where an authorised officer merely ‘reasonably suspects’ that stock is contaminated, the officer may by notice in writing require the owner of the stock to test the stock.¹⁰⁸⁴ ‘Belief’ and ‘suspicion’ are different legal concepts. The High Court has concluded that ‘... the facts which can reasonably ground a suspicion may be quite insufficient to ground a belief’.¹⁰⁸⁵

A notice requiring testing under s. 56 of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* may stipulate that the testing occur within a specified timeframe.¹⁰⁸⁶ The owner is required to have the stock tested and, if the tests show that the stock is contaminated, must advise the authorised officer of that fact ‘within the prescribed time’.¹⁰⁸⁷

8.3.2 The response to the detection of PFC at the Lloyds’ farm

Stock Contamination Notice

On 25 September 2013, Mr Gordon Nash, Senior Animal Health Officer, DEPI, issued a Contaminated Stock Notice to Mr Matthew Lloyd pursuant to s. 49 of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992*.¹⁰⁸⁸ The Contaminated Stock Notice imposed the following restrictions on all livestock on the Lloyds’ farm: ‘That no livestock leave the property unless by written approval of an authorised officer.’ The Contaminated Stock Notice was served on Mr Lloyd after a series of meetings of officers from DEPI, Department of Health and Human Services (DHHS), PrimeSafe and the CFA.

Although Mr Nash’s name appears on the Contaminated Stock Notice, the evidence before the Committee is that it was another, more senior officer of DEPI, Dr Tony Britt, who made the decision to issue the notice.¹⁰⁸⁹ Dr Britt was at a meeting with senior officers of DEPI on 24 September 2013 when he was advised that the CFA had informed DEPI that ‘... the chemical PFOS had been detected in sheep on a farm neighbouring the Fiskville site in samples that had been taken some weeks earlier’. Dr Britt was informed that ‘... the CFA was expecting media coverage of the detection in the coming days’.¹⁰⁹⁰

¹⁰⁸³ Attachment ‘AB-2’ to the statement of Dr Britt dated 23 November 2015, clause 2

¹⁰⁸⁴ *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* (Victoria), s. 56(1)

¹⁰⁸⁵ See *George v Rockett* (1990) 170 CLR 104 at 115

¹⁰⁸⁶ *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* (Victoria), s. 56(1)

¹⁰⁸⁷ *Ibid.* s. 56(4)

¹⁰⁸⁸ Contaminated Stock Notice issued to Mr Matthew Lloyd by Authorised Officer Nash dated 25 September 2013

¹⁰⁸⁹ Dr Britt is the Manager of Major Projects, Department of Economic Development, Jobs, Transport Resources

¹⁰⁹⁰ Statement of Dr Anthony Britt dated 23 November 2015, paragraph 18

Although Dr Britt had not heard of PFOS, and was unaware whether a tolerance in meat and offal had been set for PFOS,¹⁰⁹¹ he advised the meeting that ‘... the issuing of a Contaminated Stock Notice could be appropriate as a way of managing any risk which may have existed while further information was sought’.¹⁰⁹² He added that ‘... given the seeming likelihood of media coverage, I explained that media coverage of the chemical contamination of livestock would potentially have damaging implications for the domestic and export trade in meat products’.¹⁰⁹³

Following this meeting, an email setting out ‘suggested next steps’ was circulated to various DEPI officers, including Dr Britt, by Ms Cassandra Meagher, Dr Britt’s superior. The email listed the immediate action as: ‘prevent stock movements: Biosecurity can issue a Contaminated Stock Notice to prevent any remaining animals from being removed from the identified property’. The email also noted: ‘Dept of health need to be consulted re whether public health issue. We expect that it is unlikely that there will be an issue but need to ascertain more info before coming to a view’.¹⁰⁹⁴

Other evidence before the Committee confirms that the Contaminated Stock Notice was issued on a precautionary basis. Mr Cameron Bell, Manager, Veterinary Science, DEPI, was appointed as the Incident Controller for the Lloyds incident. He kept a detailed Incident Log in this role, which has been of considerable assistance to the Committee.¹⁰⁹⁵ In his statement to this Inquiry, which is largely based on his log,¹⁰⁹⁶ Mr Bell informed the Committee that the decision was made to issue the Contaminated Stock Notice on 25 September 2013 ‘... until more was known about the possible risks of the situation’.¹⁰⁹⁷

Mr Bell accompanied Mr Nash to the Lloyds’ property on 25 September 2013 when Mr Nash issued the Contaminated Stock Notice to Mr Lloyd. Also present were: the Lloyds; Mr Michael Wootten, Acting CEO of the CFA; Ms Sherry Herman of the CFA; and Dr Roger Drew, a toxicologist working for the CFA.¹⁰⁹⁸ Dr Britt, who made the decision to issue the Contaminated Stock Notice, was not present.

The same group of people, other than the Lloyds, had met at Fiskville at 2.00pm on that day before visiting the Lloyds at 5.30pm.¹⁰⁹⁹ Mr Bell’s Incident Log records the following:

¹⁰⁹¹ Ibid. paragraph 21

¹⁰⁹² Ibid. paragraph 20

¹⁰⁹³ Ibid.

¹⁰⁹⁴ Statement of Dr Anthony Britt dated 23 November 2015, attachment ‘AB-3’, email dated 24 September 2013 from Ms Cassandra Meagher to Dr Tony Britt and others

¹⁰⁹⁵ The Log is attachment ‘CB-1’ to the statement of Mr Cameron Bell dated 23 November 2015

¹⁰⁹⁶ Statement of Mr Cameron Bell dated 23 November 2015, paragraph 7

¹⁰⁹⁷ Statement of Mr Cameron Bell dated 23 November 2015, paragraph 29. See also at paragraph 25 – the Contaminated Stock Notice would be a ‘temporary measure to allow further assessment’

¹⁰⁹⁸ Statement of Mr Cameron Bell dated 23 November 2015, paragraph 34. Mr Bell’s Log records the presence at this meeting of ‘Roger Ward (toxicologist)’. This seems to be a mistaken reference to Dr Roger Drew

¹⁰⁹⁹ Statement of Mr Cameron Bell dated 23 November 2015, paragraph 34; Mr Bell’s incident log dated 25 September 2013, Sheets 15 and 18

- 3.15pm: F - Tony – ‘Dept Health – no food safety issue based on what we currently know’¹¹⁰⁰
- F - 3.50pm with Tony – CHO + Pauline Ireland-not a food safety issue.¹¹⁰¹

The Committee concludes in relation to these log entries that ‘Tony’ is likely to have been Dr Tony Britt and ‘CHO’ is the Chief Health Officer, Dr Rosemary Lester (Dr Lester was the Chief Health Officer from 2011 until February 2015). ‘F’ appears to be an abbreviation for ‘telephone call’. From this note, it seems clear that before the meeting with the Lloyds on 25 September 2013 (at 5.30pm) when the Contaminated Stock Notice was issued, Dr Britt, Mr Bell and Mr Nash were all aware that the view of Dr Lester was that there was no food safety issue with the stock on the Lloyds’ farm. This is despite the presence of detectable levels of PFOS meaning that the stock was ‘contaminated’ under the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* (as discussed above).

Mr Bell explained to the Committee what occurred when the group visited the Lloyds:

A copy of the CSN [Contaminated Stock Notice] was provided to Mr Lloyd and we explained that the process of issuing the CSN was being followed as a precautionary measure to prevent movement of the livestock until we better understood the risk posed by the PFOS readings. Mr Lloyd appeared to understand this and stated that he did not intend on moving any livestock until Christmas when he had lambs ready for sale.¹¹⁰²

In light of the evidence of the intention of the Lloyds not to move the stock until December 2013, the Committee asked the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) witness panel¹¹⁰³ why the Contaminated Stock Notice was still issued. Dr Charles Milne, Victoria’s Chief Veterinary Officer, told the Committee that issuing a Contaminated Stock Notice:

... is good administrative procedure. Owners may tell you one thing and they may believe one thing, but the reality is that it is helpful in terms of clarity if you serve a notice specifically detailing what it is that the owners are required to comply with.¹¹⁰⁴

According to Mr Bell, at the meeting with the Lloyds on 25 September 2013 Dr Drew discussed the PFOS test results and their interpretation ‘at length’ with the Lloyds.¹¹⁰⁵ Mr Bell said that during a teleconference the following day Dr Drew advised:

‘Met [with] Lloyds last night ... they were not prepared for news of their sheep being contaminated; upset by this. Concerns their property/business developed over 14 years will be taken away. Concerned about the ‘stigma’ from the community.’¹¹⁰⁶

¹¹⁰⁰ Mr Bell’s incident log dated 25 September 2013, Sheet 16; ‘F’ appears to be code for telephone call

¹¹⁰¹ Mr Bell’s incident log dated 25 September 2013, Sheet 17

¹¹⁰² Statement of Mr Cameron Bell dated 23 November 2015, paragraph 35

¹¹⁰³ Mr Bell, Mr Nash, Dr Britt and Dr Milne (the Chief Veterinary Officer) gave evidence to the Committee as a panel on 23 November 2015

¹¹⁰⁴ Dr Charles Milne, Chief Veterinary Officer, *Transcript of evidence*, 23 November 2015, p.35

¹¹⁰⁵ Statement of Mr Cameron Bell dated 23 November 2015, paragraph 34

¹¹⁰⁶ Mr Bell’s incident log dated 25 September 2013, Sheet 20

It is clear from the SOP discussed above that a Contaminated Stock Notice is not to be issued lightly. In his evidence to the Committee, Dr Drew stated that, although he acknowledges that the officers “did what they saw was appropriate at the time”, he was “surprised” by the decision to issue the Contaminated Stock Notice.¹¹⁰⁷ Events subsequent to the Notice being issued support Dr Drew’s statement.

The Notice is rescinded

Dr Britt rescinded the Contaminated Stock Notice on 27 September 2013 by a letter addressed to Mr Lloyd.¹¹⁰⁸ The letter merely stated that the notice dated 25 September 2013 ‘is hereby revoked’. It provided no explanation for DEPI’s decision. In the words of Mr Lloyd, the letter offered “no real reason” for the decision to revoke the notice.¹¹⁰⁹

Dr Britt explained to the Committee that in deciding to revoke the Contaminated Stock Notice he had relied on the advice he had received from the Chief Health Officer.¹¹¹⁰ He told the Committee that the advice came in the form of an email to him from Dr Lester at 6.40pm on 25 September 2013.¹¹¹¹ In her email, Dr Lester advised that although ‘... more sampling was needed to assess hazard with certainty ... lambs sourced from [the Lloyds] property do not, from the evidence currently available, pose a public health risk’.¹¹¹² As discussed above, this advice had already been received by Dr Britt in the form of a telephone call three hours earlier and had been conveyed to Mr Bell during the course of that afternoon (that is, before the Contaminated Stock Notice was issued to the Lloyds).

In his witness statement, Dr Britt makes clear that it was not just the advice of Dr Lester that led him to revoke the Contaminated Stock Notice. He refers to a meeting of DEPI, the CFA and PrimeSafe on 27 September 2013 at the DHHS offices. According to Dr Britt, Dr Drew, the CFA toxicologist, presented to the group and ‘explained ... that the levels of PFOS detected in the livestock in his professional opinion did not present any concerns from a food safety perspective’.¹¹¹³ Dr Britt explained that, on the basis of the information presented at the meeting, and the emails he had received from Dr Lester, he was satisfied that the Contaminated Stock Notice ‘... was no longer warranted under the [Control of Use] Act and that it should be revoked’.¹¹¹⁴

¹¹⁰⁷ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.10

¹¹⁰⁸ Letter dated 27 September 2013 from Dr Tony Britt, Director Animal Biosecurity and Welfare, DEPI to Mr Matthew Lloyd (attachment 15 to the statement of Dr Britt dated 23 November 2015). Although there is no express power in the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* to revoke a Contaminated Stock Notice, the Committee accepts that there is power to revoke a Contaminated Stock Notice under s. 41A of the *Interpretation of Legislation Act 1984* (Victoria)

¹¹⁰⁹ Mr Matthew Lloyd, *Transcript of evidence*, 18 May 2015, p.68

¹¹¹⁰ Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.6

¹¹¹¹ Statement of Dr Anthony Britt dated 23 November 2015, paragraphs 30-32

¹¹¹² Email from Dr Rosemary Lester, Chief Health Officer to Dr Tony Britt, DEPI, 25 September 2013 (attachment ‘AB-12’ to the statement of Dr Anthony Britt dated 23 November 2015)

¹¹¹³ Statement of Dr Anthony Britt dated 23 November 2015, paragraph 35

¹¹¹⁴ Statement of Dr Anthony Britt dated 23 November 2015, paragraph 36

In response to a question about why he relied on a toxicologist working for the CFA, Dr Britt sought to distance himself from reliance on Dr Drew's advice: "I was present at a meeting on 27 September [2013] at which Dr Drew presented, and I obviously took into account his opinion, but the opinion I valued was the opinion of the Chief Health Officer."¹¹¹⁵

The difficulty with Dr Britt's evidence is what Dr Lester herself told the Committee. Dr Lester emphasised her reliance on the advice she had received from Dr Drew:

I know you have heard extensive evidence from Dr Roger Drew and Professor Brian Priestley about their very high levels of expertise in PFOS. In the position of chief health officer, I am a general public health physician. I have to take advice on a variety of issues to form my professional opinions. PFOS is a very highly specialised area, so that is somewhere where I would take advice both internally from expert internal staff in the department and externally from expert consultants such as Dr Roger Drew. In terms of their evidence as to what is safe and what is not safe, I would refer back to their evidence and I do not have anything to add to that.¹¹¹⁶

FINDING 77: That the Department of Environment and Primary Industries issued a Contaminated Stock Notice to Matthew and Beccara Lloyd in relation to PFOS in their stock and rescinded the Notice two days later.

FINDING 78: That before the Contaminated Stock Notice was issued, the Department of Environment and Primary Industries had received the Chief Health Officer's advice that the presence of PFOS in the stock did not present any danger to human health.

8.3.3 Compensation for the Lloyds

The Committee has included a Case Study on the Lloyds (Case Study 4). It discusses the difficulties the Lloyds have encountered seeking suitable compensation for the harm done to them by the contamination of their property. The Lloyds have suffered a loss of income and years of concern about their health, concerns that were made worse by their inability to access their own medical records. These problems are ongoing, a situation that the Committee finds inexcusable.

FINDING 79: That the Committee re-affirms that the Lloyds have been poorly treated, and is concerned that the matter is ongoing.

RECOMMENDATION 17: The Committee re-affirms its view that the Victorian Government ensure a resolution to the Lloyds' case forthwith.

¹¹¹⁵ Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.12. See also at p.12: 'My decision to revoke the contaminated stock notice relied on the advice I received from the chief health officer'

¹¹¹⁶ Dr Rosemary Lester, *Transcript of evidence*, 14 December 2015, p.3

8.3.4 An inappropriate regulatory response

The Lloyds were and remain victims of the pollution of the Fiskville site. They have been through an ordeal not of their own making. (The question of compensation for 'Fiskville-affected persons' is examined in Chapter 11.)

In contrast to the 'soft touch' regulation of the CFA over Fiskville by EPA Victoria and WorkSafe,¹¹¹⁷ the Committee concludes that the regulatory response to the CFA's neighbours was out of proportion to the risks posed by their stock.

The Committee considers that it is questionable whether the notice should have been issued in the first place. While the Committee accepts that the stock was technically 'contaminated' within the meaning of the *Agricultural and Veterinary Chemical (Control of Use) Act 1992*, DEPI had a discretion about issuing the Notice. Before the Contaminated Stock Notice was issued, DEPI had the Chief Health Officer's advice that the presence of PFOS in the stock did not present any danger to human health. Yet it was this advice that is said to have been the reason for revocation of the notice two days later.

The Committee asked the DEDJTR witnesses if it is common to issue and rescind Contaminated Stock Notices in such a short timeframe. Dr Milne responded: "... it is very rare to serve stock contamination notices". However, because the legislation is there to protect public health, he said that in the absence of information about PFOS, it was appropriate to issue the notice immediately:

I think the really important thing to recognise in handling incidents of this nature is that you are working in a climate of uncertainty and the primary test is always the protection of public health. It is under the precautionary principle that it is entirely appropriate to go in hard and when the information becomes available that allows you to understand the risk better, then you relax the measures that you have implemented ... Yes, that can have an impact on the owners, but actually if you do not take that approach and products get onto the market, then you can have a far more serious consequence where people's health or indeed their lives can be put at risk.¹¹¹⁸

Dr Britt added that it is not uncommon for stock contamination notices to be lifted based on evidence gained *soon after* they are issued.¹¹¹⁹

The Committee accepts that a conservative and prudent approach to matters involving public health is desirable. However, apart from the advice of the Chief Health Officer that there was no health risk, there was a further reason why the Contaminated Stock Notice may have been unnecessary. Mr Lloyd told DEPI that he was not going to move the stock until December 2013. The Committee notes that under the applicable SOP (discussed above), the Lloyds did not satisfy any of

¹¹¹⁷ Regulation by WorkSafe is discussed in Chapter 7

¹¹¹⁸ Dr Charles Milne, Chief Veterinary Officer, *Transcript of evidence*, 23 November 2015, p.7. On 18 March 2016, the Committee was informed that the Department has only issued 35 Contaminated Stock Notices in the 15 years since 2000 (including this one) – Email correspondence DEDJTR to the Committee Secretariat, 18 March 2016

¹¹¹⁹ Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.11 (emphasis added)

the criteria for the issue of a Contaminated Stock Notice. In particular, they were never given the opportunity to sign a property management plan (let alone failed to follow one).

The Committee considers it likely that the Lloyds, if asked, may have undertaken not to move the stock without first contacting DEPI. The Committee concludes that this is what should have occurred while further testing was carried out. If they had refused to give such an undertaking, the matter could then have been escalated by the issuing of a Contaminated Stock Notice.

It is clear that the lack of any MRL for PFOS played a part in DEPI's response. It meant that the stock was 'contaminated' under the *Agricultural and Veterinary Chemical (Control of Use) Act 1992* (because PFOS had been detected in it) even if, at the same time, it presented no danger to human health. The common understanding of 'contaminated' food is that it is harmful in some way to the health of a person that consumes it.

This state of affairs caused (and has the potential to continue to cause) confusion. The Committee agrees with the view of PrimeSafe's CEO, Mr Tatham, that an MRL for PFOS needs to be determined.¹¹²⁰ However, there is little evidence before the Committee about how this would occur - for example, whether it is a matter that Victoria can determine unilaterally or whether there needs to be a national approach. It is also unclear to the Committee what occurs overseas in relation to safe levels of PFOS in food.

FINDING 80: That in contrast to the 'soft touch' regulation of the CFA over Fiskville by EPA Victoria and WorkSafe, the regulatory response to the CFA's neighbours was out of proportion to the risks posed by their stock.

RECOMMENDATION 18: That the Victorian Government investigate the development of a Maximum Residue Limit for PFOS and other PFCs.

Expert advice

Another aspect of the response to the detection of PFOS in the Lloyds' stock causes the Committee concern. The Committee notes that all of the regulators involved (DEPI, the Chief Health Officer and DHHS) relied on the advice of Dr Drew to make important decisions about the appropriate regulatory response. Dr Drew was an expert toxicologist who was, at all relevant times, advising, and being paid by, the party that caused the pollution in the first place, the CFA.

The Committee accepts that Dr Drew is an eminent toxicologist and does not question the advice he gave to the Chief Health Officer. However, he was being paid by the CFA to provide his expertise, which raises concerns of a perceived conflict of interest that should have been avoided.

¹¹²⁰ Standards for PFOS are discussed in Chapter 9

It is vital that Departments and the Chief Health Officer have access to the best independent expert advice about emerging contaminants like PFOS. It is also vital that a regulator such as DEPI should act, and be seen to be acting, independently of a party with such a clear interest in the outcome as the CFA. Mr Finegan was asked about this issue by Committee Chair Ms Bronwyn Halfpenny.

The CHAIR—is it normal that in this case the polluter’s consultant [Dr Drew] seems to provide information to the chief health officer, the EPA, the Department of Defence and the department of agriculture? Is this a normal occurrence in terms of good governance, to have this situation? Have you ever heard of it before?

Mr FINEGAN—As I am getting to know all of the names and see the commonality of some of the names, I have raised this with other people who have been relying on them and talking about peer review. I have made the comment that you might need to broaden the pool of peers that you are using for peer review. Without making any comment on people, if you ask the same people the same questions all the time, as professional or as diligent as they might be, they will continue to have the same views. I think it is time for some other views to come in. It is a good governance thing. I think if you see what is happening at the commonwealth level, there is a Senate inquiry into PFOS. There is stuff around Williamstown in New South Wales. Queensland has been doing work, and there are a number of defence sites in Victoria. I think there is a greater effort required to understand the issue of PFOS around what it means for us.

FINDING 81: That the Chief Health Officer should have accessed specialist technical advice that was independent of the CFA. It is clear and understandable that the Department of Environment and Primary Industries would rely heavily on the advice of the Chief Health Officer. It is vital in such a situation for a Department to be confident that the Chief Health Officer’s opinion has been reached independently of the party that the Department is regulating.

FINDING 82: That the Department of Environment and Primary Industries should not have allowed the CFA to be so closely involved in its statutory decision making. Regulatory authorities must be, and must be seen to be, at arm’s length from those they are regulating.

RECOMMENDATION 19: That the Victorian Government establish a framework to ensure that the management of a contaminated site such as Fiskville has the necessary leadership to ensure that the polluter and regulators are responsive, meeting legislative requirements and timelines, and taking the required steps to consult with affected individuals, assess the contamination and implement a timely remediation plan.

8.4 Moorabool Shire Council responsibilities

Fiskville is located within the boundaries of Moorabool Shire Council. The Council also has regulatory responsibilities relevant to Fiskville. The Committee was interested in the ways in which Moorabool Shire Council executed its responsibilities under the nuisance provisions of the *Public Health and Wellbeing Act 2008* and enforced the prohibition against littering under the *Environment*

Protection Act 1970. The Committee also sought to identify the relationships and interactions between the regulatory bodies charged with monitoring the environment in Victoria (that is, EPA Victoria and the Council).

8.4.1 Nuisance

Under the *Public Health and Wellbeing Act 2008*, ‘a person must not cause a nuisance or knowingly allow or suffer a nuisance to exist on, or emanate from, any land owned or occupied by that person’.¹¹²¹ Causing a nuisance is an offence against the Act.¹¹²² Councils have a duty to ‘remedy as far as is reasonably possible all nuisances existing in its municipal district’.¹¹²³ Division 1, Part 6 of the Act applies to nuisances ‘which are, or are liable to be, dangerous to health or offensive’.¹¹²⁴

Nuisances may arise from anything ‘which is, or is liable to be, dangerous to health or offensive’.¹¹²⁵ The Act states that the term ‘offensive’ means ‘noxious or injurious to personal comfort’¹¹²⁶ and that regard ‘must not be had to the number of persons affected’ and ‘may be had to the degree of offensiveness’.¹¹²⁷

Mr Neville Callow, the owner of a farm adjacent to Fiskville, informed the Committee that in 2001 he raised concerns with the Council about fumes, smoke and debris produced by the fire training at Fiskville.¹¹²⁸ The CEO of the Council, Mr Rob Croxford, informed the Committee that the Council’s files only recorded complaints from Mr Callow dating back to August 2011.¹¹²⁹

In his evidence to the Committee, Mr Callow described how he and his family have been affected:

... I have been severely affected by the toxic smoke and fumes, which have resulted in nodules on my lungs. I have got four small nodules on my left-hand side here. I am currently under a respiratory specialist in Footscray ...¹¹³⁰

My only source of drinking water, which is collected in a large tank from my shed, I believe has been polluted by the smoke and fumes crossing my private property ... My daughter had never experienced asthma before I purchased this property; however, since being at Fiskville, she has had many episodes ...¹¹³¹

1121 *Public Health and Wellbeing Act 2008* (Victoria), s. 61(1)

1122 *Ibid.* s. 61

1123 *Ibid.* s. 60

1124 *Ibid.* s. 51. A ‘nuisance’ is a common law term meaning ‘an activity or state of affairs the causes damage to land... or unreasonably interferes with the use or enjoyment of land’: *Butterworths Concise Australian Legal Dictionary* (2nd ed) citing *Hargrave v Goldman* (1963) 110 CLR 40 at 60

1125 *Public Health and Wellbeing Act 2008* (Victoria), s. 58(2)

1126 *Ibid.* s. 58(4)

1127 *Ibid.* s. 58(3)

1128 Mr Callow provided a detailed submission to the Inquiry comprising photographs, an excerpt from his interview by the Joy Inquiry and a ‘nuisance diary’ he had kept. He gave evidence at a public hearing on 25 May 2015

1129 Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.7. He conceded there may have been ‘informal discussions’ between Mr Callow and the Council prior to that date—*Ibid.* p.8

1130 Mr Neville Callow, *Transcript of evidence*, 25 May 2015, p.113

1131 *Ibid.*

You can tell pretty much what they are burning. If it is tyres, it is super black. That is probably not so bad - it is bad enough - but when you get that plastic polystyrene, when they are burning mattresses, pillows or whatever they do, that is deadly. Two whiffs and it blocks your airway off and you get that severe across the front. If you do not get out of that smoke pretty much straightaway, you have had it ...¹¹³²

I sold a young cow to a local, and it died six months later, full of cancer. I have lost two newly born calves as a result of explosives training. A horse I had on agistment had the hair burnt off the top of its body as a result of acid rain.¹¹³³

Mr Callow also referred to contractors working on his property being affected. For example:

When the smoke and fumes came across the shed, the smoke was so toxic that it blocked off the workers' airways and gave them massive headaches across the front of their head, resulting in the work having to cease. Because they were so affected they could not get down off the roof via the ladders.¹¹³⁴

Under the *Public Health and Wellbeing Act 2008*, where a person believes a nuisance exists, the person may notify the Council¹¹³⁵ and the Council must investigate any notice of a nuisance.¹¹³⁶ Where a nuisance is found to exist, the Council must either take any action specified in s. 62(4) or 'if Council is of the opinion that the matter is better settled privately, advise the person notifying the Council of the nuisance of any available methods for settling the matter privately'.¹¹³⁷ According to s. 62(4), a Council may issue an improvement notice or a prohibition notice, or bring proceedings under s. 219(2) for an offence against the Act.¹¹³⁸

Proceedings for the offence of nuisance can only be instituted by the Council.¹¹³⁹ However, where a Council fails to investigate an alleged nuisance within a 'reasonable time', the person alleging the nuisance may make a complaint to the Magistrates' Court which may summon the person alleged to be causing the nuisance and proceed as if the Council had made a complaint under s. 197(2) of the Act.¹¹⁴⁰

Mr Croxford explained that Moorabool Shire Council first followed the statutory procedure for responding to nuisance complaints under the *Public Health and Wellbeing Act 2008* in response to Mr Callow's complaint in 2013.¹¹⁴¹ When Mr Callow raised his concerns, there was initially some confusion about whether

1132 Ibid. p.118

1133 Ibid. p.113

1134 Ibid.

1135 *Public Health and Wellbeing Act 2008* (Victoria), s. 62(1)

1136 Ibid. s. 62(2)

1137 Ibid. s. 62(3)(b)

1138 Ibid. s. 62(4)

1139 Ibid. s. 64

1140 Ibid. s. 63. Under s. 197 of the Act, a Council may make a complaint to the Magistrates' Court in a case where it has issued an improvement or prohibition notice concerning a nuisance and the notice has not been complied with.

1141 Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.7

EPA Victoria or the Council should respond. Mr Croxford described this in his evidence to the Committee when questioned by Committee Chair Ms Bronwyn Halfpenny:

Mr CROXFORD—From the file notes, there was correspondence to the EPA saying this is potentially an issue here that they should get involved in.

The CHAIR—And that is the end of the matter

Mr CROXFORD—I guess there is a conversation backwards and forwards about how that is progressing, but it appears that it has been passed back to the shire to manage it under the health and wellbeing act.

The CHAIR—It was passed back. Sorry, what was that?

Mr CROXFORD—It appears that it has been passed back from the EPA to the shire to say the best way forward is to manage it under the health and wellbeing act, and I think we have provided those notes to you.

The CHAIR—Okay. But it does not make sense. You were just saying that it was the EPA's responsibility. Now you are saying that the EPA has passed it back to the shire.

Mr CROXFORD—For that particular complaint, yes.¹¹⁴²

EPA Victoria advised Mr Callow that it did not have authority to act and that it was a matter for Moorabool Shire Council to respond to. Mr Finegan confirmed that this was the case when he spoke with the Committee describing EPA Victoria's role as acting as a "broker" in organising meetings between Mr Callow, Moorabool Shire Council and the CFA.¹¹⁴³

EPA Victoria's understanding that nuisance is a Council responsibility accords with the Committee's understanding of the *Public Health and Wellbeing Act 2008* – particularly s. 62(2) that provides 'the Council must investigate any notice of a nuisance' (see above).

The Council responded to Mr Callow's complaint by letter signed by the Council's 'co-ordinator of Community Health and Safety' dated 8 October 2013. The letter informed Mr Callow that the Council had investigated his complaint as required by the Act and that:

CFA Fiskville has satisfied Council that it is effectively managing the risk of Hot Fire Training emissions of smoke and odour drifting onto and affecting neighbouring properties by providing sufficient information to demonstrate that the following measures are being implemented:

- Hot Fire Training activities are guided by an Emissions Control Procedure which outlines management of potential smoke drift by considering wind speed and direction
- Hot Fire Training Advice notices are distributed on a weekly basis to all local neighbours by email

¹¹⁴² Ibid. p.14

¹¹⁴³ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, pp.16-17

- CFA Fiskville maintains a complaints management system and acts on complaints appropriately
- Contact details to lodge complaints are provided to local neighbours on the Hot Fire Training Advice notices.¹¹⁴⁴

The Committee spoke with Mr Croxford about nuisance complaints in Moorabool Shire. He informed the Committee: “Generally, they are worked through or action is taken to mitigate it if the person causing the nuisance is not amenable to doing something about it, so there is a separate stream to follow in that regard and that can result in action and notices et cetera.”¹¹⁴⁵

When asked by Committee member Ms Vicki Ward if Moorabool Shire Council believes that the best way to resolve matters is through the parties reaching agreement (under s. 62(3)(b) *Public Health and Wellbeing Act 2008*) Mr Croxford replied: “That is the first port of call, yes.”¹¹⁴⁶

After Mr Callow completed a ‘nuisance diary’ from June to August 2013 Moorabool Shire Council intervened and, as noted, wrote to the CFA to begin negotiating a solution.¹¹⁴⁷ However, this was after an extended period of time (a full discussion of the process is provided in Case Study 5 about Mr Callow). Mr Callow had first raised concerns in 2011, but it was not until October 2013 that the CFA began issuing Fire Training Advice Notices to all local neighbours via email.

The Committee was provided with copies of these notices and an example is provided in Appendix 9. This example shows that in the week commencing 7 July 2014, hot fire training was conducted on four days out of seven, between the hours of 8.30 - 17.00. These were the times when the neighbours could expect smoke to come over their properties.

The weekly notifications went some way towards resolving Mr Callow’s concern that he would not know when to expect smoke to affect his property. This gave him an opportunity to, for example, go indoors or move to a part of the property not affected by the fumes and smoke.

8.4.2 Littering

Littering is regulated under Part VIIA of the *Environment Protection Act 1970*. Under s. 45E(1) of that Act, a person must not ‘deposit any litter’ (unless an exception applies). ‘Litter’ is defined as including:

... any solid or liquid domestic or commercial waste, refuse, debris or rubbish and, without limiting the generality of the above, includes any waste glass, metal, plastic, paper, fabric, wood, food, soil, sand, concrete or rocks, abandoned vehicles, abandoned vehicle parts and garden remnants and clippings, but does not include

¹¹⁴⁴ Correspondence from Moorabool Shire Council to Mr Neville Callow, 8 October 2013, p.1

¹¹⁴⁵ Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.8

¹¹⁴⁶ *Ibid.* p.9

¹¹⁴⁷ Further information about this is provided in Case Study 5 about Mr Neville Callow

any gases, dust or smoke or any waste that is produced or emitted during, or as a result of, any of the normal operations of the mining, building or manufacturing industry or of any primary industry.¹¹⁴⁸

The Committee became aware that litter from Fiskville was landing on Mr Callow's property. In his evidence to the Committee Mr Callow described how he had been affected by debris generated by fire training at Fiskville: "I have lost cattle as a result of them eating the plastic and the polystyrene blown onto my property from Fiskville."¹¹⁴⁹

Mr Callow showed the Committee pictures of debris - pieces of plastic and metal - that he said were caused by explosives training at Fiskville.¹¹⁵⁰ The Committee's view is that these items fall under the meaning of 'litter' under Part VIIA of the *Environment Protection Act 1970*. (The littering provisions of the *Environment Protection Act 1970* expressly exclude gases, smoke and dust, therefore Mr Callow's complaints relating to the thick black smoke from hot fire training exercises could not have been dealt with under this section of the Act.¹¹⁵¹)

Under s. 45ZB(1) of the *Environment Protection Act 1970*, if a person carries out any activity that has caused, or is likely to cause, the deposit of litter contrary to s. 45E or is the occupier of premises from which litter has, or is likely to, escape, a litter enforcement officer may serve a litter abatement notice on the person.¹¹⁵² The notice may require the person to do one or more of the following:

- Not deposit litter contrary to s. 45E
- To ensure that no litter escapes from the premises occupied by the person
- To do or not do specified things to ensure that the person does not breach this Part.¹¹⁵³

A 'litter enforcement officer' is defined in s. 4:

In relation to any land or waters in a council's municipal district, an officer of the council appointed ... as a litter enforcement officer

In relation to land or waters under the control or management of a litter authority or any offence that may result in litter appearing on any such land or waters, an officer of the litter authority appointed by it as a litter enforcement officer.

A 'litter authority' is also defined in s. 4 and - importantly - includes EPA Victoria, as well as 'any other body created by or under an Act, any government department, any municipal council, any protection agency, any body declared by order of the Governor in Council to be a litter authority'.

¹¹⁴⁸ *Environment Protection Act 1970* (Victoria), s. 4(1). 'Deposit', in relation to litter, means the act of parting with the possession of the litter'—s. 4(1) *Environment Protection Act 1970* (Victoria)

¹¹⁴⁹ Mr Neville Callow, *Transcript of evidence*, 25 May 2015, p.113

¹¹⁵⁰ Mr Neville Callow, *Submission 42*, part 2. Mr Callow's experiences are discussed in more detail in Case Study 5.

¹¹⁵¹ Under s. 45D(1) of the *Environment Protection Act 1970*, Part VIIA does not apply to the deposit of any litter that constitutes an offence under any other Part of the Act

¹¹⁵² *Environment Protection Act 1970* (Victoria), s. 45ZB

¹¹⁵³ *Ibid.* s. 45ZB(2)

The Committee notes that under this definition Moorabool Shire Council and EPA Victoria each had the power to issue a ‘litter abatement notice’ applying to the litter on Mr Callow’s property. Yet neither EPA Victoria nor Moorabool Shire Council did so.

Mr Finegan was questioned as to EPA Victoria’s control of litter and any power it had to compel Councils to resolve litter complaints. Mr Finegan replied: “Chair, my belief of it is this is an area where we would have not used powers. We would have expected council to use theirs around litter. In terms of litter, where we tend to get involved is litter or debris blowing off licensed sites.”¹¹⁵⁴

Mr Finegan provided the Committee with a formal response in writing, stating that EPA Victoria resolves litter reports under roadside litter laws. He said:

Pollution reports of litter coming offsite from EPA-licensed landfills or other EPA-licensed businesses or industries. Offsite litter would contravene licence conditions (as would offsite odour, dust or noise) and, after appropriate investigation, EPA could issue the duty holder with a pollution abatement notice.

Incoming pollution reports alleging litter coming from places that are not vehicle or an EPA-licensed site, are referred to local government for action. If local government asked us to help them investigate the matter, or otherwise assist, we would. However, we would not proactively follow up a litter report referred to local government, nor use our powers to force them to fix the issue.¹¹⁵⁵

8.4.3 The regulatory response to Mr Callow’s complaints about Fiskville was delayed and inadequate

Moorabool Shire Council was aware from mid-2011 of allegations that litter and smoke were being blown from Fiskville onto neighbouring properties. The Council did not issue a litter abatement notice to prevent further litter from landing on Mr Callow’s property. The Council conducted a nuisance investigation and initially concluded that it was for Mr Callow and the CFA to manage the issue privately before intervening some time later.

The Committee’s view is that while it may be appropriate for Councils to allow residential property owners to resolve their disputes under the *Public Health and Wellbeing Act 2008*, this was inappropriate when Mr Callow’s neighbour was the CFA. It was inappropriate because of the power imbalance between the parties and the extent, severity and frequency of the problems that faced Mr Callow. That is, every time the CFA conducted training, this posed risks for the health of Mr Callow, his family, visitors to his property and his livestock.

It took a long time for Moorabool Shire Council to take action towards a resolution of Mr Callow’s complaint. Mr Croxford stated that it was difficult to expect a small Council to be able to successfully regulate a large training site such as Fiskville:

¹¹⁵⁴ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.19

¹¹⁵⁵ Correspondence from Mr Nial Finegan, Chief Executive Officer, EPA Victoria to Chair, Environment, Natural Resources and Regional Development Committee, 2 February 2016

The CFA training facility ran its own operations. The CFA is a very big organisation. We do not go in there looking for difficulties or conversations with the CFA or other large organisations that operate in our area. We are a small organisation that operates over 2,000 square kilometres, so there is plenty to do.¹¹⁵⁶

... for the resources and expertise the council has, to go into Fiskville and determine there is or is not a problem is nigh on impossible. We did not know there was an issue until more recent times. Then do we have the skills, do we have the ability? No.¹¹⁵⁷

If the Council considers that it - as a small organisation - faces difficulty in regulating the CFA's operations, then this raises serious questions as to why it considered it appropriate to leave an individual property owner to deal directly with the CFA to resolve a dispute.

In relation to the role of EPA Victoria in these matters, it is the Committee's view that, regardless of whether the CFA had an EPA Victoria licence or not, the fact that EPA Victoria views itself as only responsible for the resolution of pollution coming from EPA-licensed landfills, businesses or industries is a misunderstanding of the *Environment Protection Act 1970*. The Act states under s. 45ZB(1) that if a person carries out any activity that has caused, or is likely to cause, the deposit of litter contrary to s. 45E, a litter enforcement officer may serve a litter abatement notice on the person.¹¹⁵⁸ The definitions of 'litter authority' and 'litter enforcement officer' clearly encompass EPA Victoria and its employees, respectively.

The evidence that EPA Victoria will only intervene when the source of the litter is a landfill site or EPA-licensed property is also inconsistent with the approach EPA Victoria takes to litter thrown out of vehicles by individuals. EPA Victoria encourages members of the community to report to it when they witness such an act. EPA Victoria's website clearly states that EPA Victoria has the power to issue substantial fines in such cases:

EPA has the power to issue an infringement or fine to the owner of the registered vehicle if litter is thrown out of their vehicle. EPA verifies the details of each litter report against the VicRoads database, if the details match, an infringement is issued. Fines range from \$303 for a small piece of rubbish or unlit cigarette to \$607 for a lit cigarette.¹¹⁵⁹

It seems to the Committee that EPA Victoria's action is reserved for two opposite ends of the spectrum. On the one hand, EPA Victoria acts in relation to one-off littering from cars. On the other hand, EPA Victoria acts in response to litter from landfill or large industrial sites. This was recognised by Mr Finegan:

¹¹⁵⁶ Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.5

¹¹⁵⁷ *Ibid.* p.10

¹¹⁵⁸ *Environment Protection Act 1970* (Victoria), s. 45ZB

¹¹⁵⁹ EPA Victoria, *Get involved - Report litter*, (www.epa.vic.gov.au/get-involved/report-litter), viewed 28 March 2016

Litter in general is a local government issue to manage. If you throw a cigarette butt out of your car, the EPA deals with that. If you do illegal dumping, right at the other end of the scale, the EPA deals with that, and then local government deals with littering in between.¹¹⁶⁰

Mr Callow faced a situation that was somewhere in the middle in terms of severity and this meant he fell into a regulatory vacuum. Moorabool Shire Council did not deal with the litter and neither did EPA Victoria. Moorabool Shire Council claimed it did not have the expertise or resources and EPA Victoria expected the CFA to behave as a ‘good neighbour’, with Mr Finegan stating: “When you have one state authority living next door to the community where it is any of the neighbours, you would expect a good neighbourly approach.”¹¹⁶¹

The Committee concludes that neither the Moorabool Shire Council nor EPA Victoria did enough to assist Mr Callow. This may be partly due to their overlapping responsibilities under Part VIIA of the *Environment Protection Act 1970*, which may have led to each assuming that the other would or should have acted to resolve the situation.

FINDING 83: That neither Moorabool Shire Council nor EPA Victoria used their powers when a neighbouring farmer had a problem with litter from the Fiskville site landing on his property.

FINDING 84: That it was inappropriate for Moorabool Shire Council to leave a farmer to resolve his nuisance complaint directly with the CFA because of the power imbalance between the parties and the extent, severity and frequency of the problems being experienced. These problems posed dangers to the health of the farmer, his family, visitors to his property and his livestock.

The Committee is of the view that the overlapping responsibilities are not the main problem. Rather, it is the lack of coordination between agencies that is at fault.¹¹⁶² Where both agencies are made aware of a problem, it is incumbent on each agency to either take action or ascertain that the other agency will definitely be acting. It is unacceptable to simply assume that the other agency will take action. The affected resident certainly should not be sent between agencies and be told by both that the other is responsible in the way that Mr Callow was. The Committee does not accept the Council’s argument about limited resources and expertise, nor EPA Victoria’s argument that the CFA can be expected to behave as a ‘good neighbour’, as justifications for the lack of action taken by either.

FINDING 85: That EPA Victoria and local Councils have overlapping responsibilities for littering and the lack of coordination between the Moorabool Shire Council and EPA Victoria contributed to inaction in the case of Mr Neville Callow.

¹¹⁶⁰ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.17

¹¹⁶¹ *Ibid.*

¹¹⁶² See the similar observations in Chapter 7 about a lack of communication about Fiskville between WorkSafe and EPA Victoria

8.5 Emergency Management Victoria and Fiskville

8.5.1 Standards

One of the key findings of the Victorian Bushfires Royal Commission was that there was a need for a Fire Commissioner who would be responsible for ‘developing and building operational capacity [of the fire agencies including the CFA]’.¹¹⁶³ In response to this recommendation, the Office of the Fire Services Commissioner was established. That Office has since become the Office of the Emergency Management Commissioner. The incumbent is Mr Craig Lapsley, who gave evidence to the Committee with Mr Neil Robertson, the Chief Executive of Emergency Management Victoria.

Under s. 48 of the *Emergency Management Act 2013*, the Emergency Management Commissioner is required to develop ‘operational standards’ for ‘responder agencies’, such as the CFA. Section 6DA of the *Country Fire Authority Act 1958* requires the CFA to report every six months to the Emergency Management Commissioner on its compliance with these standards.

Under s. 48(1) of the *Emergency Management Act 2013*, the Emergency Management Commissioner must develop, and review from time to time, operational standards in relation to the performance by responder agencies of their functions.

Evidence provided to the Committee indicates that the CFA was unable to report in compliance with s. 6DA of *Country Fire Authority Act 1958* because the operational standards were still being developed. When Commissioner Lapsley appeared before the Committee he stated: “At this stage we have not been able to achieve the six-monthly reporting or, for that, any formal reporting from the agencies under the standards framework due to the evolution of it. That would be a blind spot to you in the sense that it is not there.”¹¹⁶⁴

Commissioner Lapsley informed the Committee that the standards were intended to have three parts: capability and response; risk and resilience; and relief and recovery.¹¹⁶⁵ He also informed the Committee that the first part of the standards was to have been published by November 2015:

This document is the first set of standards. As I hold it up, it is a draft, but it has actually been through the consultative mechanism and now will be published, dated November 2015. That, you might say, is convenient - that we are in here today - but it is a program time line that it was always going to be November 2015 to achieve this.¹¹⁶⁶

¹¹⁶³ The Hon. Bernard Teague AO, *Victorian Bushfires Royal Commission*, (2010), Summary, p.19, and recommendation 63; see also Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.2

¹¹⁶⁴ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.3

¹¹⁶⁵ *Ibid.* pp.2-3

¹¹⁶⁶ *Ibid.* p.3

Commissioner Lapsley further explained that the second part was being prepared and that the third part was “yet to be developed”.¹¹⁶⁷

On 3 December 2015, Mr Robertson wrote to the Committee to provide a copy of the sections of the standards that had been drafted, as well as an update about progress, stating: ‘You may recall that the EMC explained during the public hearing that the Performance Standards were in the process of being finalised and as such, the enclosed copy is a draft and may be subject to minor changes.’¹¹⁶⁸

A final version of the ‘capability and response’ aspect of the performance standards was published in December 2015. The standards provide the following information about their role: ‘Standards describe the minimum requirements that are expected in order to show that the objective is being met. They also provide criteria or indicators that provide a basis for the measurement and assessment of performance.’¹¹⁶⁹

The Emergency Management Victoria website states: ‘The Emergency Management Performance Standards will be effective as of 1 January 2016 for the commencement of reporting on 1 July 2016.’¹¹⁷⁰ The ‘capability and response’ aspect of the performance standards (published) refers to the ‘risk and resilience’ and ‘relief and recovery’ elements of the standards as being ‘in development’.¹¹⁷¹

FINDING 86: That the CFA has yet to adhere to the requirement to report to the Emergency Management Commissioner every six months because, prior to December 2015, there were no published standards. In December 2015, the first part of the standards was published, but the remaining two parts are being developed.

RECOMMENDATION 20: That Emergency Management Victoria urgently publish the remaining two parts of the operational standards required under section 48 of the *Emergency Management Act 2013*.

8.5.2 Other oversight mechanisms

In his evidence to the Committee, Commissioner Lapsley explained that the *Emergency Management Act 2013* provides powers that can be used to monitor and review agencies such as the CFA. He indicated that, for certain reasons, these powers were rarely exercised.

As noted, one of the functions of the Emergency Management Commissioner is to ‘develop and maintain operational standards for the performance of emergency management functions by responder agencies’.¹¹⁷² Section 33 of the *Emergency*

¹¹⁶⁷ Ibid. p.3

¹¹⁶⁸ Correspondence from Mr Neil Robertson, Chief Executive Officer, Emergency Management Victoria, to Chair, Environment, Natural Resources and Regional Development Committee, 3 December 2015

¹¹⁶⁹ Emergency Management Victoria, *Emergency Management Performance Standards*, (2015), p.10

¹¹⁷⁰ Emergency Management Victoria, *Emergency Management Performance Standards*, (www.emv.vic.gov.au/procedures/standards/) viewed 18 April 2016

¹¹⁷¹ Emergency Management Victoria, *Emergency Management Performance Standards*, (2015), p.9

¹¹⁷² *Emergency Management Act 2013* (Victoria), s. 32(1)(j)

Management Act 2013 outlines the powers of the Emergency Management Commissioner: “The Emergency Management Commissioner has power to do all things that are necessary or convenient to be done for or in connection with the performance of the functions of the Emergency Management Commissioner.”¹¹⁷³

Commissioner Lapsley told the Committee that he was reluctant to use these powers because he did not believe that they were effective in the long term:

You could use that, but, again, the big hammer approach sometimes works for the short term not the long term, so it is about how you take culture and systems and organisations to the new world, but we have got those mechanisms. That is why they are there.¹¹⁷⁴

Commissioner Lapsley further noted that he had only once used his power to request information, under s. 35 of the *Emergency Management Act 2013*. Section 35(1) provides:

The Emergency Management Commissioner, by written notice, may require an agency or a Department to give to the Emergency Management Commissioner any information that the Emergency Management Commissioner reasonably believes is necessary for the purposes of performing the functions specified in s. 32(1)(j), (k) and (l)¹¹⁷⁵.

Section 35(2) provides that such information must be provided with 28 days, unless the circumstances set out apply.

Commissioner Lapsley told the Committee:

The other one is I have the ability to request information and that it will be provided in a 28-day period. Some of those things are there, and I have only used that once already. In the main we do encourage that people are collaborative in the way in which they operate.¹¹⁷⁶

8.5.3 Failure to act earlier on Fiskville

During Commissioner Lapsley’s evidence, the Committee became aware that he was knew of concerns about Fiskville prior to December 2011 (Commissioner Lapsley was the Fire Services Commissioner between 2010 and 2013):

Ms WARD—So is it accurate to say that the extent of PFOS contamination at Fiskville did not become apparent to either of you until 2012, 2013?

¹¹⁷³ Ibid. s. 33

¹¹⁷⁴ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.14

¹¹⁷⁵ Under the *Emergency Management Act 2013*, paragraphs 31(1)(j), (k) and (l) provide: ‘(l) The functions of the Emergency Management Commissioner are to— (j) develop and maintain operational standards for the performance of emergency management functions by responder agencies; and (k) develop and maintain incident management operating procedures for responder agencies; and (l) coordinate data collection and impact assessment processes’

¹¹⁷⁶ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.14

Comm. LAPSLEY—I am not sure. I would say it is definitely not 2013. I would have to go back and look, but I think I was aware of the concerns in 2011. It was there.

Ms WARD—So how did you become aware of those concerns:

Comm. LAPSLEY—I think it was the noise that was happening before the *Herald Sun* story. There was noise.

Ms WARD—So there was a lot of chatter going on?

Comm. LAPSLEY—There was noise. There was noise that went on for a number of months before that broke.

Ms WARD—Did you seek to talk to anyone about that?

Comm. LAPSLEY— I did actually speak to the [CFA] CEO about—remember the CEO at the time was an ex-EPA CEO—and said, ‘How would you actually validate, test, work this through?’. I do not know what Mick [Bourke] did about that, but it was an informal chat about, ‘What would you do as a CEO of EPA if you had this noise? What is it? What do you do?’ [...] I suppose the question you are actually asking is: was it alarming enough to see intervention? No, it was not.¹¹⁷⁷

The Committee considers it unfortunate that there was not greater action on Fiskville in 2011 in response to this ‘noise’, especially after the matter was raised with the CFA’s CEO by Commissioner Lapsley.

1177 Ibid. p.12

9

The consequences — human health

AT A GLANCE

Background

This Chapter begins with a brief discussion of two common health risks faced by firefighters: cancer and lung disorders. It then presents an overview of several health studies related to Fiskville and Australian firefighters, and other research relating to the connection between chemical exposure and illness as well as a summary of the CFA's health programs initiated following the Joy Report.

The Chapter finishes with an in-depth examination of perfluorinated chemicals (PFCs), including the latest evidence on the health risks they pose and expert views on 'safe' levels in the human body and the environment.

This Chapter addresses Terms of Reference (2).

Key findings

- That the risk categories for exposure at Fiskville developed by Professor Joy are not based on science and should not form the basis of future health studies or compensation schemes.
- That there are two distinct eras of exposure to chemicals at Fiskville:
 - (i) The historical exposure from burning, burying, and unsafely storing and handling hazardous materials
 - (ii) The exposure to contaminated firewater.
- That firefighting has been classified by the International Agency for Research on Cancer as possibly carcinogenic.
- That the three main methods of exposure to chemicals at Fiskville were: absorption; inhalation; and ingestion.
- That firefighters and others at Fiskville have been exposed to a mix of chemicals causing a 'multiplier effect'; that is, when mixing chemicals causes a more dangerous effect than the chemicals produce individually.
- That uncertainty about the fuels burnt at Fiskville and lack of legal avenues has hindered the ability to determine the health risks of chemical exposure to individuals and provide compensation for possible health conditions resulting from exposure.
- That the risks to human health caused by contamination at Fiskville could potentially result in a range of health conditions that have extracted and will continue to extract a huge cost to individuals, families and the community.

- That the chemical exposure at Fiskville was not confined to firefighters. Residents, visitors, other staff, neighbours, and many local children and students attending Fiskville State School were also exposed.
- That, while acknowledging its limitations, the Monash University Fiskville Health Study found a statistically significant higher than expected cancer rate among firefighters in the high risk group (that is, full-time trainers and PAD workers).
- That the CFA Health Surveillance Program is ongoing and monitors individuals for a period of five years following their acceptance into the program.
- That the CFA Health Surveillance Program initially excluded a number of people affected by Fiskville, based on Professor Joy's risk categories, but has now been extended to people in all categories.
- That the polluter should not be the agency responsible for monitoring the health of those it has harmed.
- That another significant health concern at Fiskville was now-banned firefighting foam residue containing PFCs, including PFOS and PFOA.
- That concern around PFCs centres on persistence, bioaccumulation and toxicity, although there are differing views on toxicity.
- That the German Environment Agency has defined threshold levels of PFOS and PFOA in human blood.
- That the Committee does not believe that the 'safe' parameter for PFOS in firewater at Fiskville should have been raised to 2,600 micrograms per litre. The Committee bases its decision on the scientific uncertainty surrounding PFCs, which should have resulted in Senversa and the CFA taking a more cautious approach.
- That standards for safe levels of PFCs in human blood, water, soil and food have not been established in Australia.
- That the German Environment Agency is a world leader in researching the impact of PFC contamination on human health.
- That there is widespread agreement not to use firefighting foams containing PFCs because of their persistence in the environment, toxicity and suspected risk to human health.
- That although health experts remain uncertain about the exact health risks posed by PFCs most believe that exposure to PFCs should be limited as much as possible.
- That regulators in Victoria have demonstrated poor governance by consulting with a narrow group of experts and relying on the opinion of experts commissioned by the polluter.
- That regulators in Victoria lacked the required knowledge to deal with the PFOS and PFOA contamination at Fiskville.
- That regulators in Victoria should widen the range of experts they consult to further understand the properties of PFCs.

9.1 Introduction

Terms of Reference (2) instructs the Committee to provide a study of the health of Fiskville employees, residents and visitors between 1970 and the present day. As the Committee did not have access to raw data regarding people's health it therefore relied on previous studies, as outlined below. One of the limitations of these studies was that they accepted the high, medium and low risk categories developed by Professor Joy despite the lack of scientific rigour underpinning them. In fact, Recommendation 5 from the Joy Report states that any health studies based on his report should 'evaluate the usefulness' of these categories. These limitations mean that further health studies may be required. It is important that any further Fiskville health studies do not rely on Professor Joy's risk categories.

The Committee received a large amount of evidence regarding the risk to firefighters and others at Fiskville posed by perfluorinated chemicals (PFCs), as well as other chemicals used at Fiskville. The Committee spent a great deal of time collating and analysing the most recent evidence on PFCs. It did this through a combination of literature searches and speaking with experts, both in Australia and during a study trip to Germany.¹¹⁷⁸ This evidence dominates this Chapter.

The Committee is also aware that firefighters were not the only people exposed to risk at Fiskville. See Chapter 11 for a comprehensive list of 'Fiskville-affected persons'.

FINDING 87: That the risk categories for exposure at Fiskville developed by Professor Joy are not based on science and should not form the basis of future health studies or compensation schemes.

FINDING 88: That there are two distinct eras of exposure to chemicals at Fiskville:

- The historical exposure from burning, burying, and unsafely storing and handling hazardous materials
- The exposure to contaminated firewater.

9.2 Firefighters and cancer

The Committee spoke with Dr Tee Guidotti, an international consultant in occupational and environmental health. Dr Guidotti edited and contributed to the recent book, *Health Risks and Fair Compensation in the Fire Service*. The book concludes that firefighters face significant occupational health risks in addition to the obviously severe safety hazards.¹¹⁷⁹

¹¹⁷⁸ For more on what the Committee learnt in Germany about the remediation of contaminated sites see Chapter 10

¹¹⁷⁹ Dr Tee Guidotti (ed), *Health Risks and Fair Compensation in the Fire Service*, (1st edition, 2016) Springer, p.1

Dr Guidotti has also produced a report for the Department of Veterans' Affairs, *Health Risks and Occupation as a Firefighter*, in which he refers to a 2007 report by the International Agency for Research on Cancer (IARC) that linked firefighting to three cancers: testicular cancer; prostate cancer; and non-Hodgkin lymphoma. Firefighting, as an occupation, was therefore classified in Group 2B: 'possibly carcinogenic to humans'.¹¹⁸⁰

Dr Guidotti classifies the carcinogens that firefighters come into contact with into three categories:

- Carcinogenic chemicals arising from combustion, including polycyclic aromatic hydrocarbons
- Carcinogenic chemicals incidental to structural firefighting, including asbestos
- Carcinogenic chemicals arising from work as a firefighter, including diesel exhaust.¹¹⁸¹

Dr Kerry Nugent, Principal Scientist at the National Industrial Chemicals Notification and Assessment Scheme (NICNAS), was another witness who referred the Committee to IARC's view that firefighting in itself is possibly carcinogenic.¹¹⁸²

The risk for firefighters comes mainly from the toxicity of the products of combustion absorbed, inhaled or ingested while extinguishing a fire. Dr Guidotti told the Committee that the risk to exposure exists not just during a fire but also during 'overhaul' at the end of a fire. This is because firefighters are usually not wearing protective clothing or equipment at this stage, yet combustion is still occurring. Dr Guidotti explained that this implies that "... it is a matter of degree of exposure. It is not a matter of whether exposure occurs."¹¹⁸³

Mr Nigel Holmes from the Queensland Department of Environment and Heritage Protection told the Committee that incomplete combustion, such as with burning embers, can produce over 200 chemical compounds.¹¹⁸⁴

Recent evidence viewed by the Committee shows that firefighters also have an elevated risk of developing melanoma, brain and liver cancers.¹¹⁸⁵

FINDING 89: That firefighting has been classified by the International Agency for Research on Cancer as possibly carcinogenic.

¹¹⁸⁰ World Health Organization, International Agency for Research on Cancer, *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, (monographs.iarc.fr/ENG/Classification/index.php), viewed 19 February 2016

¹¹⁸¹ Dr Tee Guidotti (ed), *Health Risks and Fair Compensation in the Fire Service*, (1st edition, 2016) Springer, pp. 78-79. Dr Guidotti told the Committee that chemicals such as benzenes "... have a higher potency in terms of being a carcinogen than we really appreciated just ten years ago". See Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p. 5.

¹¹⁸² Dr Kerry Nugent, Principal Scientist, National Industrial Chemicals Notification and Assessment Scheme, *Transcript of evidence*, 6 November 2015, p.9

¹¹⁸³ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.3

¹¹⁸⁴ Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 June 2015, p.239

¹¹⁸⁵ European Standards (EN469) CEN PPE Committee Guidance Note and Update - Cancers of Firefighters, 2016.

9.3 Lung disorders in firefighters

The Committee examined lung disorders in firefighters. Firefighters inhale the products of combustion, on-site toxic materials, and particles generated by burning and collapsing structures. Chronic effects on firefighters' lungs were only proven relatively recently once suitable longitudinal studies of pulmonary function became available. The current evidence suggests that in general firefighters are not at risk of chronic fixed obstructive airways disease. Dr Guidotti writes: 'It is still remarkable, despite demonstration that chronic lung disease does exist as a risk of firefighting, how little benign lung disease is associated with firefighting considering the extent and severity of the hazards.'¹¹⁸⁶

However, firefighters remain susceptible to disabling lung disease following specific, acute events associated with extreme exposure - what may be referred to as 'exceptional exposures'.¹¹⁸⁷ These events then interact with individual susceptibility. Asthma is the most common diagnosis for firefighters.¹¹⁸⁸

The three main methods of exposure at Fiskville were: absorption; ingestion; and inhalation. Professor Joy concluded that inhalation would have been the most common pathway for chemicals to enter the body, via vapours, gases, mists and particles.¹¹⁸⁹

Current legislation provides compensation for occupations such as miners who suffer from lung disorders, but firefighters are not presently covered. Specific health risks faced by firefighters and ways of providing redress are discussed further in Chapter 11. Guidotti's *Health Risks and Occupation as a Firefighter* also examines several other health risks faced by firefighters, including: cardiovascular disease; autoimmune disease; neurological and sensory disorders; and behavioural disorders.¹¹⁹⁰

FINDING 90: That the three main methods of exposure to chemicals at Fiskville were: absorption; inhalation; and ingestion.

9.4 Examples of past contamination at Fiskville

A literature search of the health effects of chemicals identified in the 1988 AS James study of buried drums at Fiskville (see Chapter 5) found that four chemicals were present: benzene, toluene, xylene and phenol. Each of these is discussed below, followed by a discussion of the multiplier effect.

¹¹⁸⁶ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014), p.134

¹¹⁸⁷ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.12

¹¹⁸⁸ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014), p.150-151

¹¹⁸⁹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), pp.87-89. See also pp. 90-95 for the experiences of PAD workers, instructors and trainees.

¹¹⁹⁰ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014)

9.4.1 Benzene

Benzene is classified by IARC as a Group 1 agent.¹¹⁹¹ This indicates that benzene is carcinogenic to humans. In animals and humans, benzene is absorbed by all routes of exposure, although dermal absorption is limited by its rapid evaporation from the skin. It is metabolised in the liver and several other organs, including bone marrow.¹¹⁹² According to NICNAS, there is 'sufficient evidence' that benzene exposure leads to an increased incidence of acute non-lymphocytic leukaemia and acute myeloid leukaemia. There is also evidence that benzene metabolites can cause chromosomal abnormalities in lymphocytes.¹¹⁹³

9.4.2 Toluene

Toluene is classified by IARC as a Group 3 agent.¹¹⁹⁴ This indicates that it is not classifiable as to its carcinogenicity to humans. IARC last evaluated toluene in 1999. The studies at that time were not strong enough to conclude that there was an association between the agent and cancer.¹¹⁹⁵ IARC also notes that prolonged contact between toluene and human skin may cause non-allergic contact dermatitis. Exposure to toluene can also cause nervous system symptoms and signs and excessive exposure may cause adverse effects on the kidney and liver.¹¹⁹⁶

9.4.3 Xylene

Xylene is also classified by IARC as a Group 3 agent and was also last evaluated in 1999.¹¹⁹⁷ According to a journal article published in 2010, the health effects of exposure to xylene include:

- Depression of the central nervous system
- Irritation of the nose and throat
- Temporary damage to the eye on contact
- Irritation of the lungs and skin
- Nausea.¹¹⁹⁸

1191 World Health Organization, International Agency for Research on Cancer, *IARC Monographs on the evaluation of carcinogenic risks to humans, chemical agents and related occupations, vol 100F*, (2012), p.285

1192 National Industrial Chemicals Notification and Assessment Scheme, *Benzene - Priority Existing Chemical Assessment Report No. 21*, (2001), p. v

1193 Ibid.

1194 World Health Organization, International Agency for Research on Cancer, *IARC Monographs on the evaluation of carcinogenic risks to humans, re-evaluation of some organic chemicals, Hydrazine and Hydrogen Peroxide, vol. 71*, (2012), p.885

1195 Ibid.

1196 Ibid. p.844

1197 Ibid. p.1204

1198 Reena Kandyala, et al., 'Xylene: An overview of its health hazards and preventive measures' (2010) Vol. 14 (Issue 1) *Journal of Oral & Maxillofacial Pathology* pp.1-5

9.4.4 Phenol

Phenol is also classified by IARC as a Group 3 agent and was also last evaluated in 1999.¹¹⁹⁹ According to *Ullmann's Encyclopaedia of Industrial Chemistry*, exposure with the skin and eyes causes caustic burns on the affected area.¹²⁰⁰ Additionally, gangrene can occur if phenol penetrates deep into human tissue.¹²⁰¹

9.4.5 Multiplier effect

Trainees at Fiskville were exposed to a combination of dangerous chemicals such as those listed above (as are firefighters in general). Combining these chemicals can result in a 'multiplier effect'; that is, when mixing chemicals causes a more dangerous effect than the chemicals produce individually.

For example, Sexton & Linder write that:

... exposure to multiple environmental agents, including biologic, chemical, physical, radiologic and psychosocial stressors, can, under the right circumstances, modify the toxic effects of these same agents acting alone.¹²⁰²

They add that '... there is empirical evidence that interactive effects from exposure to a mixture of environmental stressors can contribute to three categories of adverse health effects'. These include: interfering with normal development causing hormonal problems and distorted physiologic behaviour; cellular damage including cancer; and illness such as cardiovascular disease. However, reactions between chemicals need to be analysed on a case-by-case basis.¹²⁰³

These health risks may be further exacerbated by exposure to out-of-date chemicals, such as what occurred at Fiskville up to and including the mid-1990s.¹²⁰⁴

FINDING 91: That firefighters and others at Fiskville have been exposed to a mix of chemicals causing a 'multiplier effect'; that is, when mixing chemicals causes a more dangerous effect than the chemicals produce individually.

1199 Ibid. p.762

1200 Heinz Weber, et al., *Ullmann's Encyclopedia of Industrial Chemistry*, (2004) Phenol, p.517

1201 Ibid.

1202 Sexton, K., & Linder, S. H., Cumulative Risk Assessment for Combined Health Effects From Chemical and Nonchemical Stressors. *American Journal Of Public Health*, (2011), 101(S1), ss.81-88

1203 Ibid.

1204 Dr Roger Klein, *Transcript of evidence*, 19 June 2015, p.240

9.5 Chemical exposure – when, what, who? The need for an epidemiological approach

9.5.1 A lack of records about contaminants

A strong theme throughout this Inquiry was the way in which the lack of specific knowledge of the fuels burnt at Fiskville has hindered the ability to determine the health risks of chemical exposure - either via smoke and fumes or via contaminated water and soil. For example, when asked about the cause of his illness and those of his colleagues at Fiskville, Mr Cory Woodyatt, a United Firefighters Union (UFU) delegate from the Melton Fire Station, told the Committee:

I can provide the evidence from doctors' comments on the ailments that have occurred, but I cannot provide evidence to say that they were attributable to Fiskville. I also cannot provide evidence to say that they were not attributable to Fiskville. It is up in the air at the moment, but nobody will be able to provide evidence to say that the elements I mentioned in relation to my squad colleagues have not come from their time at Fiskville or that they have.¹²⁰⁵

A lack of scientific certainty must not prevent justice being done, nor stand in the way of anyone affected by unsafe practices at Fiskville - that is, not just firefighters but also staff, family members and those at Fiskville State School - accessing adequate medical care. This is discussed further in Chapter 11.

FINDING 92: That uncertainty about the fuels burnt at Fiskville and lack of legal avenues has hindered the ability to determine the health risks of chemical exposure to individuals and provide compensation for possible health conditions resulting from exposure.

FINDING 93: That the risks to human health caused by contamination at Fiskville could potentially result in a range of health conditions that have extracted and will continue to extract a huge cost to individuals, families and the community.

FINDING 94: That the chemical exposure at Fiskville was not confined to firefighters. Residents, visitors, other staff, neighbours and many local children and students attending Fiskville State School were also exposed.

9.5.2 The role of epidemiological research

Epidemiological research has been used as the basis for conclusions about links between exposures to pollutants and health effects. For example, the Hazelwood Mine Fire Inquiry concluded that the ‘... most likely explanation for some of the increase in deaths in the Latrobe valley in 2014 [was] air pollution arising from the Hazelwood mine fire, and possibly also the bushfires that occurred at the same time’.¹²⁰⁶

¹²⁰⁵ Mr Cory Woodyatt, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.193

¹²⁰⁶ The Hon. Bernard Teague AO, *Hazelwood Mine Fire Inquiry Report, Vol II, Investigation into 2009-2014 Deaths*, (2014), p.74

The Hazelwood Board of Inquiry explained that it had relied on several epidemiological analyses of the link between the fire and the increase in deaths.¹²⁰⁷ The Board referred to the acceptance by Courts around the world of epidemiological evidence in cases where causation of disease is in issue – for example, asbestos exposure cases.¹²⁰⁸

Epidemiologists distinguish between ‘association’ and ‘causation’. As discussed in Chapter 1, Professor Malcolm Sim, Head of the Centre for Occupational and Environmental Health in the Department of Epidemiology and Preventative Medicine at Monash University writes that ‘... epidemiology is around showing *association*, so we take some exposure variable, we take an outcome such as cancer and we can show that the two are associated [however] this does not show *causation*’.¹²⁰⁹

Before one can identify a causative link, other considerations apply. The criteria that are generally applied are the ‘Bradford Hill’ criteria first developed in 1965.¹²¹⁰ The accepted criteria are: strength, consistency, specificity, temporality, biological gradient, plausibility, coherence, experiment and analogy.

In relation to Fiskville, as Professor Sim explains, there are three features of the data (discussed below) that gave his research team a strong indication of a causal link between the findings:

- The strength of association - ‘... when you find very high excess, as we found here for some of the individual tumours and the almost doubling of the overall tumour rate, that is what we call a strong association’.¹²¹¹
- The exposure response (sometimes referred to as the ‘dose-response’ or ‘biological gradient’) - ‘...we found quite a strong exposure response relationship between the different groups’.¹²¹²
- The results are consistent with the published literature which demonstrates that there are high rates of cancer in firefighter groups in the United States of America and Europe.¹²¹³

It was for these reasons that Professor Sim concluded that the results supported a finding of causation in addition to association based on the use of the Bradford Hill criteria.¹²¹⁴

¹²⁰⁷ Ibid. Chapters 5 and 6

¹²⁰⁸ Ibid. pp.63-64

¹²⁰⁹ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.5 (emphasis added)

¹²¹⁰ Hill AB, ‘The environment and disease: association or causation?’(1965) 58 *Proc R Soc Med* pp.295-300; for a recent article evaluating the criteria in a modern setting, see R.M. Lucas and A.J. McMichael, ‘Association or Causation: evaluating links between “environment and disease”’ (2005) 83(10) *Bulletin of the World Health Organisation* pp.792-795

¹²¹¹ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.5

¹²¹² Ibid.

¹²¹³ Ibid.; see also Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.4

¹²¹⁴ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.5

BOX 9.1: Association and causation

Association means that a relationship between two or more variables has been identified. For example, smoking has been shown to be associated with lower birth weights.

Causation means that a change in one variable directly causes a change in another variable. For example, smoking has been shown to cause cancer.

9.6 The Cancer Council study

The CFA commissioned Cancer Council Victoria to undertake an epidemiological analysis of the cancer risk for CFA firefighters who worked and trained at Fiskville. Epidemiology is the study of the distribution of diseases and determinants of disease in populations. For example, the link between smoking and lung cancer has been established through the application of epidemiological analysis.

The Cancer Council study focused on a cohort of 599 men and linked to the Victorian Cancer Registry to identify diagnosed cancers. The study identified 61 men who had been diagnosed with cancer and four with secondary cancers. Of this group, the most common cancers diagnosed were prostate cancer and melanoma.¹²¹⁵

Cancer Council Victoria used the risk framework developed by Professor Joy that categorised Fiskville staff and trainees as having either 'high', 'medium' or 'low' risk of exposure to hazardous materials. The study found that those in the high risk group - full-time Fiskville trainers and PAD operators - had a 62 per cent increased risk of cancer. However, the study found that overall, firefighters that worked or trained at Fiskville did not have an increased incidence of cancer compared with the general Australian population.¹²¹⁶

The study acknowledged that its small sample size was a significant limitation to the accuracy of its findings.¹²¹⁷

The Committee also notes that caution needs to be applied when discussing a disease as broad as cancer. This is because of the issue of 'aggregation'; that is, when several cancers are grouped together it is easy to miss one cancer being particularly prominent. Dr Guidotti explained this concept to the Committee with a reference to a particular type of brain cancer, glioma:

In the brain, for example, there is one type of cancer - it is called glioma - that is most likely to be associated with exposures such as firefighting; the others are not. However, it has been common practice to put them all together into cancer of the

¹²¹⁵ Cancer Council Victoria, *An analysis of cancer risk experienced by fire fighters who were trained at Fiskville*, (2014), p.1

¹²¹⁶ *Ibid.* p.2

¹²¹⁷ *Ibid.*

brain. What that means is that an elevation from gliomas can be diluted by some of these other things that are probably - we are not sure, but probably - less closely associated, and so they may not show up as high an elevation as would otherwise be the case. So an elevation in this category, which we see consistently in studies but not to a very high degree, is probably masking an elevation of the type that is most commonly associated with the occupation.¹²¹⁸

A further weakness with the grouping approach taken in the Joy Report is that it does not make a distinction between the different types of health risks that Fiskville presented. Slater and Gordon make this point in their submission to this Inquiry. They state that while Professor Joy's approach is understandable considering the lack of individualised data regarding activities at Fiskville (a point that Professor Joy makes in his report):

... it also makes it difficult for any individual to accurately assess where they might fall within the spectrum of risks - exposures to particular carcinogens on particular occasions might leave them at a greater or lower level of risk than the overall figure indicates.¹²¹⁹

9.7 Monash University Fiskville Firefighters' health study

Parallel to the Cancer Council Victoria study, the CFA also commissioned researchers at Monash University's Centre for Occupational and Environmental Health in the Department of Epidemiology and Preventative Health to conduct an epidemiological study investigating the risk of cancer and mortality for individuals who worked and trained at Fiskville. The study was completed in November 2014 and released in January 2015.

The study - like the one undertaken by Cancer Council Victoria - used the risk framework created by Professor Joy to assess whether individuals were likely to have had a high, medium or low risk of chronic exposure to hazardous materials used at Fiskville. Professor Sim explains:

We had no other way of trying to break this up. I think it is really important that we were able to break this into those three groups, even though it is fairly crude. If we just looked at the cancer rate right across all groups, we may well have missed that high finding in the high group. But even though this was crude, it is better than nothing and it is a useful starting point. It certainly indicated that something about that work for those instructors and the PAD workers was related to these excesses of cancer.¹²²⁰

The study focused on a cohort of 606 people: 95 men were placed in the high risk group; 256 men in the medium risk group; and 252 men in the low risk group.¹²²¹ The Monash researchers used the National Death Index and Australian Cancer

¹²¹⁸ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.6

¹²¹⁹ Slater and Gordon Lawyers, *Submission 417*, p.27

¹²²⁰ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters' Health Study*, (2014), p.6

¹²²¹ These figures represent the final cohort that the study used after a small number of individuals were excluded from the analysis. Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters' Health Study*, (2014), p.4

Database and the Victorian Cancer Registry as the basis of comparison for the cohort. The researchers used the databases to assess whether the three Fiskville groups had higher or lower than expected cancer and mortality rates, when compared to the rates found in the general Australian and Victorian populations.

The study identified that out of 606 people in the cohort there were 28 deaths (16 from cancer) and 69 diagnosed cancers. Overall, the study found that for the cohort as a whole ‘... the observed number of all cancers was slightly in excess of the expected number of cancers’. However, there was a significantly increased risk of brain cancer and melanoma for the whole cohort.¹²²²

The study identified significant cancer risks for those categorised as being in the high risk group. Within the high risk group, 25 out of 95 men were diagnosed with cancer.¹²²³ For this group, the study found that ‘... observed cancers were higher than expected for all the cancer categories ... expect for the respiratory tract’.¹²²⁴ In particular, the study found higher than expected cancer rates of melanoma and cancer of the testis and that these were statistically significant.¹²²⁵ Further, ‘... when compared to the Victorian population and to the Australian-born Victorian population, the overall cancer risk was significantly raised for the high risk group’.¹²²⁶

The study also found that the risk of cancer was elevated for the medium risk group. For this group, the study found a slight excess in the number of overall cancers compared with the general population, although it was not considered statistically significant.¹²²⁷ However, the study found a statistically significant excess of brain cancer.¹²²⁸ For the low risk group, the study found an overall reduced risk of cancer.¹²²⁹

The study also used the low risk group as a reference group and compared it to both the high and medium risk groups. This internal comparison of the cohort showed that there was a ‘significant and level-related difference’ between the high and medium risk groups’ cancer incidence when compared with the low group.¹²³⁰

While incidence of cancer was significantly elevated for the high and medium risk groups, the incidence of mortality was significantly decreased for the whole cohort.¹²³¹ The study explains this as a possible result of the so-called ‘healthy worker effect’; that is, firefighters are more likely to have higher than average fitness due to the demands of their work.¹²³²

1222 Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.28

1223 Ibid. p.30

1224 Ibid. p.28

1225 Ibid. p.4 and p.28

1226 Ibid. p.4

1227 Ibid. p.28

1228 Ibid.

1229 Ibid.

1230 Ibid. p.34

1231 Ibid. p.4-5

1232 Ibid. p.5

The Committee notes Dr Guidotti’s evidence that if it weren’t for the dangers inherent in firefighting the ‘healthy worker effect’ would be such that firefighters would live even longer than they do; that is, the dangers negate the healthy lifestyle of most firefighters.¹²³³

BOX 9.2: The ‘healthy worker effect’

The ‘healthy worker effect’ is a reference to the fact that people who work are generally healthier than the general population and, as such, less likely to die at a young age. This is because the severely ill or disabled are more likely to be excluded from employment. The healthy worker effect can also be applied to specific occupations. For example, firefighters generally have a healthier lifestyle than the rest of the population because they tend to exercise more and smoke less.

The Monash researchers noted a number of limitations of their study, including:

- The small numbers in the cohort (especially when the cohort was divided into high, medium and low risk groups for analysis)
- Concerns around lack of completeness - that is, all relevant individuals may not have been identified by the CFA or the study
- The lack of lifestyle and other health information about the individuals that could reveal other known cancer risks.¹²³⁴

The study also explained that many types of cancer have a latency period so that if exposure occurred in 1995, for example, it is likely that any tumours arising would be diagnosed from around this point in time and the years following.¹²³⁵

Similarly, Dr Guidotti told the Committee about past studies of bladder cancer in firefighters which showed only a slight increased risk. However, when other factors were taken into account, such as latency periods, the studies showed a much stronger association.¹²³⁶

The Monash study states that its limitations mean the findings should be interpreted cautiously.¹²³⁷ At the same time, the study argued that it was able to identify significantly increased risks of melanoma, brain cancer and testicular cancer in subgroups of the cohort even though these increases were based on small numbers.¹²³⁸ The study’s cohort only included three women, so their risks could not be calculated. No deaths or cancers were recorded for the women.¹²³⁹

¹²³³ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.4

¹²³⁴ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.5

¹²³⁵ *Ibid.* p.41

¹²³⁶ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.5

¹²³⁷ Professor Malcolm Sim, et al., Monash University, *Fiskville Firefighters’ Health Study*, (2014), p.5

¹²³⁸ *Ibid.* p.42

¹²³⁹ *Ibid.*

FINDING 95: That, while acknowledging its limitations, the Monash University Fiskville Health Study found a statistically significant higher than expected cancer rate among firefighters in the high risk group (that is, full-time trainers and PAD workers).

9.8 Monash University Australian Firefighters' health study

Monash University's Centre for Occupational and Environmental Health has also been commissioned by the Australasian Fire and Emergency Service Authorities Council to conduct a national study of firefighters' mortality and cancer risk.¹²⁴⁰ The two Monash studies do not make any comparisons to each other's findings.

The study examined 232,871 current and former Australian firefighters who had begun their careers between 1976 and 2003. The cohort was assigned to three groups for analysis: career full-time; part-time paid; and volunteer firefighters.¹²⁴¹

Overall, the study found that the risk of mortality was significantly decreased for male paid firefighters and for male and female volunteer firefighters. The researchers suggest that this is due to the 'healthy worker effect'.¹²⁴² With respect to male career full-time firefighters, the study found that compared to the Australian population, this group had an increased incidence of cancer, particularly for those who had worked for longer than 20 years. The risk of melanoma, kidney and prostate cancers was significantly increased for this group.¹²⁴³

For male part-time paid firefighters, the study found that the incidence of cancer (especially prostate cancer and melanoma) was significantly increased when compared with the Australian population.¹²⁴⁴ For male volunteer firefighters, the study found that they did not have an overall increased risk of cancer compared to the Australian population. There was, however, an increased risk of prostate cancer for this group, mainly in those that had served for more than ten years.¹²⁴⁵ The study found that there were too few female firefighters in the cohort to undertake meaningful analysis.¹²⁴⁶

Overall, compared to the Australian population, the incidence of cancer was eight per cent higher for male full-time firefighters and 11 per cent higher for male part-time firefighters. Compared to the Australian population the incidence of cancer for male volunteers was lower.¹²⁴⁷

¹²⁴⁰ A/Prof Deborah Glass, et al., Monash University, *Final Report Australian Firefighters' Health Study*, (2014), p.9

¹²⁴¹ *Ibid.* pp.9-10

¹²⁴² *Ibid.* p.11

¹²⁴³ *Ibid.* p.11

¹²⁴⁴ *Ibid.* p.13

¹²⁴⁵ *Ibid.*

¹²⁴⁶ *Ibid.* p.15

¹²⁴⁷ *Ibid.* p.67

The study also examined the cancer incidence for firefighters identified as having been involved in training other firefighters. The study states: ‘... the results suggest that trainers do not appear to have a higher death or cancer risk than other firefighters’.¹²⁴⁸

While the study does not compare these findings to the Fiskville study, it is important to note that the Monash Fiskville health study demonstrated that PAD operators and full-time trainers were found to have an increased cancer risk, compared with other firefighters and others who visited, worked and trained at Fiskville.

9.9 The CFA’s Health Surveillance and Health Check Programs

The CFA Health Surveillance Program was established in 2012 following the release of the Joy Report. It is ongoing and monitors individuals for a period of five years following their acceptance into the program. It initially was available only to people in Professor Joy’s high and medium risk groups.

Ms Sherry Herman, the former Program Manager of the CFA’s ‘Informing the Future’ program, explained to the Committee that the CFA advertised the program in local newspapers in the Fiskville region. People with a long history at the CFA also assisted in identifying as many people as possible to participate in the program. Ms Herman said:

So what that team did - and they did report their progress up through me so I was getting quite familiar with it - is they brought in people who were long-term volunteers, who really knew CFA and knew the communities within CFA quite well, and they would go and visit with people and sit down and just get lists of names - ‘Who worked there when you worked there? Where are they now?’. They got out old photographs and old newspapers and microfiche, death notices, anything they could possibly get their hands on, and then whenever they would find one person they would sit down with that person and then find out everybody they knew, so it was quite a long and painstaking process.¹²⁴⁹

The CFA responded to criticism that the Health Surveillance Program had only included people in Professor Joy’s high and medium risk groups by establishing its Health Check Program in March 2015 with eligibility expanded beyond the high and medium risk groups. The Health Check Program involves a single health check by either the CFA Medical Officer or the individual’s own medical practitioner (overseen by the CFA Medical Officer). The CFA Medical Officer can also recommend that a person be moved to the CFA Health Surveillance Program.

The objectives of the CFA Health Check Program are to:

- Provide a health and wellbeing information hotline service for people with concerns about the allegations of use of and potential exposure to hazardous chemicals used in firefighting practices at Fiskville from 1971

¹²⁴⁸ Ibid. p.84

¹²⁴⁹ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.10

- Support the process of identifying those individuals and groups at risk due to use of, and potential exposure to, hazardous chemicals used during firefighting practices at Fiskville from 1971
- Provide coordinated health and welfare advice to those who believed they may be at risk or have health concerns (and who request support) due to use of, and potential exposure to, hazardous chemicals used in firefighting practices at Fiskville from 1971
- Provide coordinated medical and welfare assessment to those identified as potentially at risk
- Establish and maintain a complete case management system that captures all relevant information to enable ongoing support of those identified as at potential risk
- Establish a database utilising existing incident reporting and health monitoring protocols to record, track and support people.¹²⁵⁰

Ms Angela Seach, the CFA's Acting Executive Manager, Organisational Development, told the Committee that although the Health Surveillance Program initially used Professor Joy's high and medium risk categories, it has since been extended to include anyone who feels they may be at risk from their time at Fiskville. This includes volunteer instructors and trainees.¹²⁵¹

The Committee notes that this extension only occurred after this Inquiry had begun. In his submission to this Inquiry dated 25 March 2015, Mr Michael Whelan, who worked at the CFA from 1978 to 1997, told the Committee that he had received a letter from Mr Mick Bourke, the CEO of the CFA, stating: 'Please be assured the CFA will continue to provide ongoing welfare assistance and support including the Health Surveillance Program for members of the 'high' and 'medium' risk groups ...'.¹²⁵²

As well, the extension was not widely known. For example, Mr Michael James, a firefighter at the CFA for nearly 30 years, told the Committee: "In my opinion the health monitoring program needs to change. It needs to be extended beyond the medium / high-risk group that was identified as a result of the reports up until now."¹²⁵³

Ms Herman was also not aware that volunteers had been able to access assistance: "... it seems strange that you would not add volunteers, but I think the assessment was made very much on the basis of risk or perceived risk".¹²⁵⁴

The Committee commends the CFA for extending the criteria for the Health Surveillance Program and Health Check Program, to cover anyone concerned about their experiences at Fiskville. However, a basic principle exists that a

¹²⁵⁰ Correspondence, Amanda Cattermole, Deputy Secretary, Regulation, Health Protection and Emergency Management, to Chair, Environment, Natural Resources and Regional Development Committee, 23 October 2015

¹²⁵¹ Ms Angela Seach, Acting Executive Manager Organisational Development, CFA, *Transcript of evidence*, 27 January 2016, p.4

¹²⁵² Mr Michael Whelan, *Submission 44*, p.4

¹²⁵³ Mr Michael James, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.183

¹²⁵⁴ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.14

polluter should not be the agency responsible for monitoring the health of those it has harmed. This is especially the case for the CFA, which has lost the trust of many people who attended Fiskville (see Chapter 5).

FINDING 96: That the CFA Health Surveillance Program is ongoing and monitors individuals for a period of five years following their acceptance into the program.

FINDING 97: That the CFA Health Surveillance Program initially excluded a number of people affected by Fiskville, based on Professor Joy’s risk categories, but has now been extended to people in all categories.

FINDING 98: That the polluter should not be the agency responsible for monitoring the health of those it has harmed.

BOX 9.3: The Committee’s Interim Report

Recommendation 2 from the Committee’s Interim Report stated:

‘That the Victorian Government assess the feasibility of providing voluntary testing for PFOS free of charge to firefighters – career and volunteer – current and former staff at Fiskville, other trainees, and people who live or have lived on neighbouring properties.’

In its response to the Committee the Victorian Government referred to the Health Check Program established in March 2015. It also stated that the Department of Environment, Land, Water and Planning will meet all costs associated with health testing for current and former employees of the Department and its previous iterations who spent time at Fiskville. EPA Victoria has made a similar commitment, while WorkSafe ‘... will also consider whether health testing should also be offered to WorkSafe staff who have attended or trained at the Fiskville site’.

Recommendation 3 from the Committee’s Interim Report stated:

‘That the Victorian Government ensures that any person who seeks records or documents relating to their involvement with Fiskville is able to do so from government agencies and departments without hindrance.’

In its response to the Committee the Victorian Government stated that the Department of Premier and Cabinet has written to the Secretaries of other Victorian Government departments to ensure that anyone who requests documents will be provided with access as soon as possible (except where the documents would be exempt under the *Freedom of Information Act 1982*). The CFA will also establish links to all relevant health and environmental assessments held by various Victorian Government departments and agencies on its website to create a single portal for information about Fiskville.¹²⁵⁵

¹²⁵⁵ See: Parliament of Victoria, Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville*, (www.parliament.vic.gov.au/enrrdc/article/2526), 13 April 2016

9.10 Perfluorinated chemicals

The second contamination era at Fiskville saw concerns raised about: the safety of foams used to extinguish training fires; and how used firewater contaminated with these foams, and other chemical residues, was collected and stored (see Chapter 4).

No member of this Committee is a scientist. As such, the Committee has relied on a number of experts in trying to understand if there is a connection between PFC contamination and poor health. However, this does not preclude the Committee from questioning information or challenging the experts. In the past, regulators accepted the word of experts who denied the link between tobacco and cancer. Other contaminants - lead, mercury, asbestos, DDT, for example - hold similar warnings.

Fiskville, as at other firefighting training grounds around the world, for many years used firefighting foams containing perfluorooctane sulfonate (PFOS) and / or perfluorooctanoic acid (PFOA) – collectively known as perfluorinated chemicals (PFCs) or, less commonly, perfluoroalkyl substances (PFAS). PFCs are effective at repelling oil and water and have a wide range of industrial and consumer uses aside from firefighting foams, such as in non-stick cookware, grease-proof packaging, cleaning products, and furniture and floor stain protectants.¹²⁵⁶ The most common pathway for PFOS to enter the body is via ingestion of food and water. Using products containing PFOS or inhaling particulate matter are considered a much smaller risk.¹²⁵⁷

As a result of their use in common products, PFCs are found in small concentrations in the environment and the general population without concern. However, PFCs are suspected of being very dangerous to humans - in particular after very high and long-lasting exposure¹²⁵⁸ - and are in the process of being either banned, phased out or limited across the globe.¹²⁵⁹

At Fiskville, PFCs are only one contaminant of concern. However, the Committee heard a great deal of evidence on these chemicals as well as debate on their effect on the environment and human health. This volume of evidence reflects the large amount of concern surrounding PFCs, which the Committee addresses below.

The Committee also understands that although PFOS and PFOA are often discussed together, and share some properties, they are separate chemicals and results from the study of one cannot automatically be assumed to relate to the other. In the following discussion, the Committee refers both to PFCs in

¹²⁵⁶ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.69

¹²⁵⁷ Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, p.14

¹²⁵⁸ Apel P, Schröter-Kermani C and Kolossa-Gehring M, 'Human exposure to PFOA / PFOS and health risks', Presentation to the Environment, Natural Resources and Regional Development Committee, Dessau, 1 December 2012

¹²⁵⁹ American Chemical Society, 'PFOS phaseout pays off', *Environmental Science and Technology*, 2008, 4618; Gallen C, Baduel C, Lai F, et al, 'Spatio-temporal assessment of perfluorinated compounds in the Brisbane River system, Australia: impact of a major flood event', *Marine Pollution Bulletin*, 2014, 1-9; European Chemicals Agency, 'Annex XV restriction report: proposal for a restriction', 17 October 2014

general and PFOS and PFOA more specifically, which reflects the evidence that the Committee received. However, the majority of evidence received focused on PFOS.

9.10.1 PFCs at Fiskville

Firefighting foams containing PFOS and PFOA were used at Fiskville from the 1970s until 2007. Human contact with these PFCs came about through:

- Absorption (through wet clothes¹²⁶⁰)
- Inhalation (through firewater mist, for example)
- Ingestion (direct contamination from the soil or food - see the discussion on the 'dirty mess' at Fiskville in Chapter 3 and fish eaten from Lake Fiskville below).

As stated in Chapter 4, the Joy Report describes the system at Fiskville for collecting, treating and storing used firewater in the 1970s as 'rudimentary'¹²⁶¹ and that as the surface of the PAD area was unsealed prior to its redevelopment in the 1990s, much of the used (and potentially contaminated) firewater flowed into adjoining paddocks. The used firewater was '... contaminated by products of combustion, unburnt flammable liquids and fire suppression materials such as foam'.¹²⁶²

Evidence before the Committee shows that senior management at the CFA was aware of PFOS contamination at Fiskville at least as early as 2010 (see Chapter 6, particularly the discussion on AirServices Australia). Further, a report from consultants Wynsafe in 2010 advised that '... if current Standard Operating Procedures (SOPs) are followed, and related Personal Protective Equipment (PPE) is used, personnel will suffer no adverse health effects from exposure to PFOS and / or PFOA in the firefighting water'.¹²⁶³

A 2014 environmental audit report of the Fiskville site found that the most widespread contaminants at the site are PFCs, particularly PFOS and PFOA. The audit notes that although foams containing PFCs have not been used at the site since 2007, residual concentrations are present in both water and sediments in the site's dams and in Lake Fiskville.¹²⁶⁴

The audit states that there were two main modes of distribution of PFCs at Fiskville. First, the site's water management system involved the collection of used firewater (which included foam residue) in on-site dams that flowed into Lake Fiskville (as discussed in Chapter 4). Water from the lake then flowed into

¹²⁶⁰ The Committee notes that PFCs do not readily permeate human skin

¹²⁶¹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.26

¹²⁶² Ibid. p.27

¹²⁶³ Wynsafe Occupational Health Services, *Perfluorochemicals in Firefighting Water at CFA Fiskville*, (2010), p.5

¹²⁶⁴ AECOM, *Environmental Audit Report – Risk to Land, Surface Water and Groundwater – CFA Fiskville Training College*, EPA Victoria, Melbourne, 2014, p.6

the local Beremboke and Eclipse Creeks and neighbouring properties during times of high rainfall.¹²⁶⁵ Second, fine mist containing PFCs produced during fire training was distributed throughout the site by wind.¹²⁶⁶

Despite the dam filtration systems in place, the auditor found traces of PFOS up to 18.5 kilometres downstream from the Fiskville site in Beremboke and Eclipse Creeks.¹²⁶⁷ Further, at a test site 1.25 kilometres from Fiskville ‘... the concentration of PFOS in surface water exceeds the adopted health based water quality criteria’.¹²⁶⁸ (The auditors used drinking water guidelines where no ecological guidelines were available - see the discussion below on ‘safe’ levels of PFCs). The audit also found that PFCs were widely identified in soil across Fiskville and off-site, particularly in soil near the PAD and Dam 1.¹²⁶⁹

Despite PFC contamination being widespread, the audit concluded:

Based on the information reviewed and verified, the Auditor considers that the potential risks as a result of exposures to PFOS (and other PFCs) at the site for the exposure scenarios assessed are low and acceptable. This conclusion is based on water from Lake Fiskville not being consumed by people as drinking water.¹²⁷⁰

The Committee heard contrasting evidence regarding the extent of contamination at Fiskville. For example, Mr Michael Rehfisch, an Environmental Auditor at Senversa (who carried out the tests in March 2015 that lead to Fiskville’s closure), told the Committee that there was “... widespread PFC contamination across the property”.¹²⁷¹ However, Dr Roger Drew, a toxicologist contracted by the CFA, advised that the PFC contamination was “... confined to an area close to the boundary with Fiskville and ... those concentrations are very, very low - much lower than the United States EPA safe level for people to live on”.¹²⁷²

Mr Rehfisch added that the CFA has planned further assessment as part of the Clean Up Notices issued by EPA Victoria (see Chapter 10):

There is a very large assessment program that will be commenced by CFA, which will cover soil, sediment, surface water, the shallow perched water that is around the PAD area and potentially deeper groundwater, although there is nothing to indicate to date ... that it is of concern.¹²⁷³

Dr Drew told the Committee that although PFOA was detected on-site at Fiskville it was in amounts too small to be considered a risk. It was his view that PFOS is the main chemical of concern at Fiskville and its surrounds.¹²⁷⁴

¹²⁶⁵ Ibid. p.7

¹²⁶⁶ Ibid. p.17

¹²⁶⁷ Ibid. p.8

¹²⁶⁸ Ibid. p.19

¹²⁶⁹ Ibid. p.18

¹²⁷⁰ Ibid. p.9

¹²⁷¹ Mr Michael Rehfisch, Senversa, *Transcript of evidence*, 19 November 2015, p.7

¹²⁷² Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.5

¹²⁷³ Mr Michael Rehfisch, Senversa, *Transcript of evidence*, 19 November 2015, p.9

¹²⁷⁴ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.4

FINDING 99: That another significant health concern at Fiskville was now-banned firefighting foam residue containing PFCs, including PFOS and PFOA.

9.10.2 Persistence, bioaccumulation and toxicity

Negative health and environmental impacts of PFCs became a concern in the 1990s, with research growing rapidly from the 2000s onwards. Scientific research about the environmental and human health effects of PFOS has increased over the past decade. In 2009, PFOS and other PFCs were listed under the Stockholm Convention on Persistent Organic Pollutants (see Appendix 6),¹²⁷⁵ due to their demonstrated persistence, bioaccumulation and toxicity (PBT) characteristics.

Several expert witnesses in this Inquiry confirmed to the Committee that the main concern with PFCs is PBT.¹²⁷⁶ Mr Rehfish told the Committee that the persistent nature of PFOS and PFOA explains why they are still present at Fiskville several years after the CFA stopped using foams containing PFCs¹²⁷⁷ (whereas other contaminants take less time to break down). Further, the surfactants in the foam aid the movement of PFCs through soil and groundwater.¹²⁷⁸ (See Chapter 4 for an explanation of surfactants and how firefighting foams work.) Persistency also aids bioaccumulation and the Committee learnt that PFCs are particularly problematic in the human body because of the way they bind to fat proteins.¹²⁷⁹

The Committee also learnt that PFCs are sometimes referred to as an ‘emerging contaminant’, which indicates that knowledge about how they affect humans and the environment is in the early stages of being analysed by the scientific community. A different view is that PFCs should be considered a ‘contaminant of emerging concern’; that is, something which has existed for some time but for which concerns have only been raised more recently.¹²⁸⁰

As discussed in Chapter 8, the first instance the Committee could find of the CFA expressing concern about contaminants in firefighting foam was in 1997, when the CFA sought advice from EPA Victoria about potential environmental contamination caused by the use of fire retardants and foam.

FINDING 100: That concern around PFCs centres on persistence, bioaccumulation and toxicity, although there are differing views on toxicity.

¹²⁷⁵ See: Stockholm Convention, (chm.pops.int/default.aspx), viewed 4 January 2016

¹²⁷⁶ Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, p.3; Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October, p.5; Dr Kerry Nugent, NICNAS, *Transcript of evidence*, 6 November 2015, p.5

¹²⁷⁷ Mr Michael Rehfish, *Senversa*, *Transcript of evidence*, 19 November 2015, p.7

¹²⁷⁸ Professor Ravi Naidu, CRC Care, *Transcript of evidence*, 19 October 2015, p.3

¹²⁷⁹ *Ibid.* p.8; Dr Lesa Aylward, University of Queensland, *Transcript of evidence*, 9 November 2015, p.3. The Committee notes that PCBs (polychlorinated biphenyls), which are used in flame retardants, remain a concern in the environment despite being phased out in the late 1970s. See: Sébastien Suavé and Mélanie Desrosiers, ‘A review of what is an emerging contaminant’ (2014) 8(15) *Chemistry Central Journal*, p.4

¹²⁸⁰ Sébastien Suavé and Mélanie Desrosiers, ‘A review of what is an emerging contaminant’ (2014) 8(15) *Chemistry Central Journal* p.1. See also: Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.9

BOX 9.4: Why major producers no longer manufacture PFOS

Two of the biggest manufacturers of PFOS in the past were 3M and DuPont. In the late 1990s, the United States Environmental Protection Agency (US EPA) detected the widespread presence of PFOS in the blood of the general population of the United States.¹²⁸¹ Further, in early 2000 3M informed the US EPA of health concerns revealed in a study it had carried out on rats exposed to PFOS.¹²⁸² (United States law requires companies to report any internal studies that produce results of concern for public health.¹²⁸³) In the same year, 3M announced that it would begin phasing out the production of PFOS and related chemicals. 3M ceased production of PFOS at the end of 2002,¹²⁸⁴ as did DuPont¹²⁸⁵.

According to 3M, this was due to a number of reasons:

- PFOS is widespread in the environment and 3M did not want to add to this
- 3M is committed to responsible environmental management and sound business practices
- A desire to direct energies to other business opportunities.¹²⁸⁶

3M's Dr Charles Reich, Executive Vice President, Specialty Chemicals Markets, is recorded as saying:

Our decision anticipates increasing attention to the appropriate use and management of persistent materials. While the chemistry has been used effectively for more than 40 years and our products are safe, our decision to phase out production is based on our principles of responsible environmental management.¹²⁸⁷

3M continues to licence its technology to other companies in Italy, China and Japan.¹²⁸⁸

In October 2015, a woman in the United States was awarded USD 1.6 million after a jury ruled that a chemical from a DuPont plant that manufactured PFCs had contaminated drinking water and contributed to her developing kidney cancer.¹²⁸⁹

The Committee notes that PFC levels in the environment and humans have been falling in line with declining production levels.¹²⁹⁰

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- 1281** United States Environmental Protection Agency, Assessing and Managing Chemicals under TSCA, (www.epa.gov/assessing-and-managing-chemicals-under-tsca), viewed 14 December 2015
- 1282** Industrial Fire World, The Day the Bubble Burst, Why 3M Decided It Was Time to Quit Making AFFF Industrial Fire Fighting Foam, (fireworld.com/Archives/tabid/93/articleType/ArticleView/articleId/86849/The-Day-the-Bubble-Burst.aspx), viewed 16 February 2016
- 1283** United States Environmental Protection Agency, Summary of the Toxic Substances Control Act, (www.epa.gov/laws-regulations/summary-toxic-substances-control-act), viewed 20 April 2016
- 1284** PFOS phaseout pays off' (2008) 42(13) Environ. Sci. Technol pp. 4618–4618
- 1285** Dr Rye Senjen, National Toxics Network, Transcript of evidence, 19 November 2015, p.3
- 1286** Brief History of Perfluorochemical Production, Products and Environmental Presence', Michael A. Santoro, Director, Regulatory Affairs, 3M Company, St. Paul, MN, ASTSWMO Mid-Year Meeting, 23-24 April, 2008
- 1287** Industrial Fire World, The Day the Bubble Burst, Why 3M Decided It Was Time to Quit Making AFFF Industrial Fire Fighting Foam, (fireworld.com/Archives/tabid/93/articleType/ArticleView/articleId/86849/The-Day-the-Bubble-Burst.aspx), viewed 16 February 2016
- 1288** Brief History of Perfluorochemical Production, Products and Environmental Presence', Michael A. Santoro, Director, Regulatory Affairs, 3M Company, St. Paul, MN, ASTSWMO Mid-Year Meeting, 23-24 April, 2008
- 1289** See: www.rt.com/usa/318032-dupont-chemical-cancer-lawsuit/; accessed 25 January 2016
- 1290** Apel P, Schröter-Kermani C and Kolossa-Gehring M, 'Human exposure to PFOA / PFOS and health risks', Presentation to the Environment, Natural Resources and Regional Development Committee, Dessau, 1 December 2012

BOX 9.5: Ratifying the latest amendment to the Stockholm Convention

In Australia, an amendment to the Stockholm Convention on Persistent Organic Pollutants takes effect upon ratification of that amendment. Australia is yet to ratify changes made several years ago to Appendix B. To do so it must undertake a domestic treaty making process. The Department of the Environment is responsible for the treaty making process, which requires a regulatory impact analysis and preparation of a regulation impact statement (RIS) as well as a national interest analysis. An initial RIS was prepared in 2009, but the technical implications of the listing are now being examined further. Consultations began in December 2010 with a meeting of the Stockholm Reference Group. The Department is continuing to consult with:

- Other State and Territory government agencies
- Affected industry, environment and public health groups.¹²⁹¹

In September 2015, the Committee wrote to the Minister for the Environment, Greg Hunt, requesting an update on the ratification of the amendment. In November 2015, Minister Hunt replied, stating:

Australia's treaty making process is a multi-stage process which includes preparation of a regulation impact statement (RIS), a national interest analysis, consideration by the Joint Standing Committee on Treaties for 20 joint sitting days, consideration and agreement to possible implementation measures, decision-making by the Executive Council and then, if Executive Council agrees, lodgement of an instrument of ratification. Given the nature of the process and the consultation and decision-making required, it is not possible to foreshadow a precise final date when lodgement of an instrument of ratification may be made.

In the case of perfluorooctane sulfonic acid (PFOS) specifically, I expect an early assessment RIS to be released for consultation early in 2016. This follows extensive analytical work to gather information on the uses, alternatives, disposal processes, availability of treatment capacity, and environmental fate of PFOS in Australia. The RIS is expected to consider i) status quo, ii) non-regulatory measures and iii) regulatory measures in order to determine which approach could meet the outcomes specified in the Convention. The regulatory burden posed on industry must also be calculated, and be offset, as per Australian Government requirements.¹²⁹²

RECOMMENDATION 21: That the Victorian Government lead Government action to support the expeditious ratifying of changes made to Appendix B of the Stockholm Convention on Persistent Organic Pollutants.

¹²⁹¹ Australian Government, Department for the Environment, Persistent Organic Pollutants, (www.environment.gov.au/protection/chemicals-management/pops/new-pops), 5 December 2015

¹²⁹² Correspondence from Mr Greg Hunt MP, Federal Minister for the Environment, to Chair, Environment, Natural Resources and Regional Development Committee, received 23 November 2015

9.10.3 Uncertainty

While there may be agreement about the persistency and bioaccumulative properties of PFCs, there is a great deal of debate about their toxicity. This uncertainty regarding the health impacts of PFCs is reflected in their description as ‘non-specific’ chemicals; that is, the effects that are observed are relatively small and require large studies to verify.¹²⁹³

Researchers cannot experiment on humans, but evidence about the toxicity of PFCs is growing from epidemiological studies. Professor Brian Priestly from the Australian Centre for Human Health Risk Assessment told the Committee that these studies generally fall into one of three types:

- Workers involved in the manufacture of PFCs in the United States
- Residents living near a DuPont plant in the United States that manufactured PFCs
- ‘Normally exposed humans’ - that is, people exposed through the food chain or ingesting dust contaminated by household products that contained PFCs – the largest group by far.¹²⁹⁴

Professor Priestly was one of several witnesses to tell the Committee that studies on the effects of PFCs on humans have produced inconsistent results. In particular, he said that not all studies take account of possible confounding factors (that is, other factors that may cause the same health condition). For example, regarding humans’ immune system Professor Priestly said:

It is very difficult to tease out whether [results] are associated with a particular PFC, whether they may be confounded by exposures to other persistent organic pollutant compounds, which are also known to have effects on the immune system ... when you look closely at the studies you find that the associations are not always with the same PFC. They are not always with the same type of vaccine. For example, I have seen studies where the effects were limited to one vaccine and not to another. The other point that I make is that when you are looking at multiple types of chemicals that are studied in these studies and some of them appear to have an association but others do not, it is very difficult to tease out whether the associations you are seeing are actually really related to that particular chemical or whether they are confounded by other chemicals.¹²⁹⁵

Professor Priestly added that relying on animal studies to compare results is problematic because animals clear PFCs from their bodies much faster than humans.¹²⁹⁶ For example, during the Committee’s study trip to Germany it learnt

¹²⁹³ Professor Jochen Mueller, University of Queensland, *Transcript of evidence*, 9 November 2015, p.6

¹²⁹⁴ Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October 2015, p.3 and p.8

¹²⁹⁵ *Ibid.* p.8

¹²⁹⁶ *Ibid.* p.3

that female rats take 2-4 hours to eliminate PFOA from their bodies, whereas humans can take anywhere from 2-8 years depending on factors such as age and the means of exposure.¹²⁹⁷

Dr Drew explained to the Committee that animal studies, including on rats, are used to help determine ‘safe’ levels of PFCs for humans (see discussion below). However, this is done by providing the animals with a dose in their food on a daily basis, such that the amount of PFCs in the animal is maintained at the same level. In this way the effects of the serum concentrations can be monitored before the PFCs are expelled from the body.¹²⁹⁸ However, in Germany the Committee heard contrasting evidence, to the effect that this method is unreliable as the rats still expel a large amount of PFOS from their bodies each day.¹²⁹⁹

Dr Lesa Aylward from the National Research Centre for Environmental Toxicology at the University of Queensland provided similar evidence to Dr Priestly when discussing the difficulty of determining causation (as opposed to association) with PFCs. This is because, as she told the Committee, health effects linked with PFCs have “... other risk factors as well and other reasons that they occur”.¹³⁰⁰

Professor Michael Ackland, Victoria’s Acting Chief Health Officer, provided the Committee with an example of how uncertainty can affect a health regulator’s response to the threat of a toxic substance. Professor Ackland discussed mercury contamination that afflicted Victoria’s Gippsland Lakes in 2014 and 2015, including how the Department of Health and Human Services’ response was informed by specific knowledge of mercury’s properties. However, according to Professor Ackland this certainty does not exist with PFCs, in particular PFOS. He said: “We were able to form a position because we know a lot about mercury that we do not know about PFOS and that provided us with a lot of confidence.”¹³⁰¹

Dr Nugent simply told the Committee: “It is very difficult to draw firm conclusions apart from that you really do want to make sure that [PFOS] is as far away as possible.”¹³⁰²

Table 9.1 below collates the challenges that exist in establishing causation between chemical exposure and cancer. The challenges arise because it is difficult to link wider (epidemiological) data with individual experiences.

¹²⁹⁷ ‘Human exposure to PFOA / PFOS and health risks’, German Federal Environment Agency Presentation to Environment, Natural Resources and Regional Development Committee, 1 December 2015

¹²⁹⁸ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.14

¹²⁹⁹ Committee meeting with Umwelt Bundesamt, Dessau, 1 December 2015

¹³⁰⁰ Dr Lesa Aylward, University of Queensland, *Transcript of evidence*, 9 November 2015, p.15

¹³⁰¹ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.10

¹³⁰² Dr Kerry Nugent, NICNAS, *Transcript of evidence*, 6 November 2015, p.7

Table 9.1 Challenges to establishing causation with cancer

Challenge	Reason
Exposure levels	Available research may be insufficient to determine the threshold for risky exposure levels (in terms of time, intensity and circumstances)
Multiple and competing exposures	Risk-factors may be present in work and non-work environments, and individuals are likely to move across several jobs in their lifetime, making it difficult to pinpoint the exact time and which exposure (if any) caused cancer. This is further complicated by often long latency periods, by the contribution of exposure to lifestyle and environmental causes of cancer (for example, tobacco, UV and alcohol) and the inability to always control for other potentially culpable exposures
Latency periods	Different cancers have different latency periods; that is, periods between exposure to the carcinogenic agent and manifestation of the cancer, often resulting in significant gaps between exposure and diagnosis. This tends to inhibit legal fact-finding of what exact exposures (if any) caused cancers and at what time
Genetic predisposition	Cancers may be developed as a result of a known or unknown genetic predisposition, as opposed to workplace exposure
Low awareness about occupational and environmental carcinogens among treating doctors	Information about past exposure to carcinogens gathered by treating doctors at the time of diagnosis can contribute to the evidence base for establishing causation

Source: Cancer Council Victoria, *Submission No. 65*, 27 March 2015, Attachment 1, p.6.

9.10.4 Examples of contrasting evidence

The uncertainty regarding the toxicity of PFCs was reflected in the contrasting evidence the Committee examined throughout this Inquiry.

Relatively high level of concern

The US EPA has stated that ‘... continued exposure to low levels of PFOA in drinking water may result in adverse health effects’¹³⁰³ and that PFCs are ‘... likely to be carcinogenic to humans’.¹³⁰⁴

The Committee also spoke with Professor Ravi Naidu, an expert in remediating contaminated sites. He referred the Committee to recent evidence that PFCs may be toxic to the liver and the thyroid gland and may also affect foetal and neonatal development. However, Professor Naidu told the Committee that there are no known cases of fatalities caused by PFCs.¹³⁰⁵

Mr Holmes advised the Committee that there is a growing body of evidence showing associations between PFCs and adverse health outcomes and that “... the associations are getting stronger and stronger - that is the way I would put it - certainly to a level that I would be concerned”.¹³⁰⁶

¹³⁰³ United States Environmental Protection Agency, ‘Emerging Contaminants – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)’, March 2014, p.4

¹³⁰⁴ Ibid. p.5

¹³⁰⁵ Professor Ravi Naidu, CRC Care, *Transcript of evidence*, 19 October 2015, pp.2-3

¹³⁰⁶ Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, p.9

The Committee heard equally strong language from Dr Rye Senjen of the National Toxics Network. Dr Senjen referred the Committee to studies linking PFCs with obesity, as well as to recent studies claiming that even tiny doses of PFCs can act as endocrine disruptors in the body. She further argued that there is a “strong connection” between PFCs and cancer and that the evidence regarding PFOS and PFOA was so strong they should no longer be considered an ‘emerging’ issue.¹³⁰⁷

The National Toxic Network’s submission to this Inquiry states that it is possible that no level of PFC exposure may be considered safe:

As PFOS and PFOA have no means of break down, being passed from one generation to the next via breast milk and in utero, and have in some cases demonstrated changes in gene expression at very low levels, it is possible that like lead and mercury, there may be no safe level of exposure to PFOS and / or PFOA.¹³⁰⁸

Mr Holmes added that firefighting bodies and regulators may have remained unaware of the threat of PFCs in the past because the manufacturers did not release the relevant data when they had it.¹³⁰⁹ (In 2014, the US EPA fined DuPont over USD 10 million for breaching the requirement that companies report evidence on risk from chemicals they manufacture, process or distribute.¹³¹⁰) Dr Nugent suggested that the manufacturers in fact only released data regarding PFOS when they were ready to introduce new PFOS-free foams onto the market.¹³¹¹ Dr Senjen was of the view that the manufacturers’ removal of firefighting foam containing PFOS from the market was a “... a massive admission of guilt”.¹³¹²

Relatively low level of concern

Other evidence presented to the Committee suggested that, at least at the levels to which the general public is exposed, PFCs do not pose a large threat. For example, Professor Ackland stated: “There is no evidence to date that PFOS itself is an established carcinogen - that is, that it is an established chemical that causes cancers.” He went on to say: “Based on available evidence I am satisfied, and I can give advice to this Committee, that there is negligible risk to public health or food safety in relation to PFOS.”¹³¹³

Dr Drew told the Committee that the epidemiological data on PFOS only shows an association with adverse health effects (such as cancer), not causation. He also made reference to a recent study that presents a positive association between PFOS and protection from colorectal cancer in humans.¹³¹⁴

¹³⁰⁷ Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.8

¹³⁰⁸ National Toxics Network, *Submission 476*, p.7

¹³⁰⁹ Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, pp.12-13

¹³¹⁰ US EPA, ‘EPA settles PFOA case against DuPont for largest environmental administrative penalty in agency history’, (media release, 14 December 2005)

¹³¹¹ Dr Kerry Nugent, NICNAS, *Transcript of evidence*, 6 November 2015, p.8

¹³¹² Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.6

¹³¹³ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.5

¹³¹⁴ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.8

Dr Drew told the Committee that studies of workers who manufactured PFOS show the PFOS concentrations in their blood to be anywhere between 100–500 times higher than background (general population) levels, but that:

... no specific adverse effects or illnesses have been identified as a result of PFOS in that population ... If PFOS was going to produce adverse effects or harm in individuals, we would expect to see it in this population, which is the highest exposed population in the world.¹³¹⁵

Similar evidence was presented by Professor Priestly when he said:

At the moment the evidence is suggesting that the current levels of exposure, even for some of the occupationally exposed people, which are orders of magnitude higher [than background levels], do not appear to be clearly associated with any well-defined adverse health effects.¹³¹⁶

As such, Dr Drew argued that results of recent epidemiological studies in fact indicate there should be less concern about PFOS than several years ago when this data was not available.¹³¹⁷

Dr Drew added that the complexity of an issue such as the chemical composition and potential toxicity of PFOS can fuel anxiety in the wider population: “It is understandable the concern is there when they read it in the newspapers and they have no other information to be able to judge it [because] they are not scientists.”¹³¹⁸

Similarly, Professor Jochen Mueller from the University of Queensland argued that until there is evidence of causation of adverse health effects by PFOS, authorities and health professionals need to be wary about alarming the public. He said: “... I am not sure whether we are doing a service to some parts of the community to concern them with something when really at this stage there is no evidence that it really causes a health issue”.¹³¹⁹

9.11 Determining ‘safe’ levels of PFCs

The Committee was particularly interested in investigating how regulators around the world determine ‘safe’ levels of PFCs, in particular in human blood, water, soil and food. The Committee learnt that the main challenges in determining these levels are: understanding the chemical properties of PFCs and how they affect humans; and understanding how PFCs exist in the environment, including the most likely pathways of entering the human body.¹³²⁰

¹³¹⁵ Ibid.

¹³¹⁶ Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October 2015, p.8

¹³¹⁷ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.11

¹³¹⁸ Ibid. p.10

¹³¹⁹ Professor Jochen Mueller, University of Queensland, *Transcript of evidence*, 9 November 2015, p.8

¹³²⁰ Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October 2015 p.7

9.11.1 Blood

The Committee heard that there is no internationally agreed PFOS level in human blood above which a person's health would be considered to be at risk.¹³²¹ However, the German Environment Agency recently defined threshold levels for blood as 5 nanograms / ml for PFOS and 2 nanograms / ml for PFOA.¹³²²

Professor Ackland told the Committee that the background level (sometimes referred to as the average) of PFOS in the general community is less than 0.1 milligrams per litre of blood. He added that another important level of note is the 'no observed effect level' (sometimes expressed as NOEL). This is the level below which it is generally agreed there are definitely no adverse health effects. Professor Ackland said that for adults this figure is 2 milligrams per litre.¹³²³

Dr Drew agreed with the figure of 2 milligrams per litre for adults. He added that in his opinion the NOEL figure for children is 0.8 milligrams per litre¹³²⁴ and that some estimates for adults show the level to be as high as 4 milligrams per litre.¹³²⁵ As well, Dr Drew reminded the Committee that recording a level above the background level does not in and of itself indicate that a person's health is at risk.¹³²⁶ The Committee believes that this is an important point to note in any discussion on PFOS contamination linked to Fiskville.

Professor Ackland also referred to a study carried out on 12 people who had eaten fish from Lake Fiskville. Although the fish contained high levels of PFOS, all 12 people recorded blood levels below 2 milligrams per litre with many showing levels around 0.1 milligrams per litre. Referring to his above view regarding PFOS, Professor Ackland told the Committee that the data from Lake Fiskville contributed "... a fundamentally important part of the evidence chain that helps me to form a view about this exposure".¹³²⁷

Professor Ackland acquired his background and NOEL figures from the work of Dr Drew, who explained to the Committee that three types of studies have contributed to his understanding of PFCs:

- Studies on workers involved in the manufacture of PFCs in the United States
- Animal studies
- Converting the tolerable daily intake (TDI) determined by the European Food Safety Authority.¹³²⁸

¹³²¹ Dr Lesa Aylward, University of Queensland, *Transcript of evidence*, 9 November 2015, p.14; Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, p.10; Dr Roger Drew, Tox Consult, *Transcript of evidence*, 23 November 2015, p.3

¹³²² Email correspondence from Petra Apel, Umweltbundesamt to secretariat, 11 May 2016.

¹³²³ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.4

¹³²⁴ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.9

¹³²⁵ *Ibid.* p.3

¹³²⁶ *Ibid.* p.13

¹³²⁷ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.12

¹³²⁸ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.3

The TDI is an estimate of the amount of PFOS that can be consumed every day of a person's life without any adverse health effects. Professor Ackland told the Committee that the currently accepted figure set by the European Food Safety Authority is 0.15 micrograms per kilogram of body weight.¹³²⁹

The Committee heard a view that testing for PFOS in blood currently serves no purpose because of the lack of certainty around causation. For example, in advice to residents in New South Wales affected by PFOS contamination (see Chapter 5) the Department of Defence stated: 'While blood tests can provide a measure of PFOS, they are not recommended because they don't predict a level of health risk.'¹³³⁰

The Committee disagrees with the view that blood tests serve no purpose and notes the report of a recent Senate Inquiry into contaminated land owned by the Department of Defence. The Inquiry concluded:

Voluntary blood testing of affected residents, tracked over time, could provide other valuable information. For example, the results of testing could lead to evidence regarding pathways of exposure. It could also be important in determining subsequent entitlements to compensation for health outcomes in the future.¹³³¹

The Senate Committee added that blood tests can help ease any uncertainty felt by local residents.¹³³² The Committee believes that blood tests can also act as a 'trigger' to providing more pre-emptive health checks that may detect early signs of, for example, particular cancers.

Dr Tee Guidotti also argued for the worth of blood tests because of the way in which they may assist medical knowledge in the future. He told the Committee that:

... we are much further now than we were ten years ago and 20 years ago and entire families of bio-indicators and genomic testing have developed over the years that we did not have available before. Many of the new genomic studies can give us an idea of which genes are upregulated and which are likely to be associated with if not different chemical classes - because they are not that good - that suggest cancer risk, getting that exposure in the most changed individuals and elevating an individual's personal cancer risk. Having a serum bank or something of the sort or saving blood samples could be very useful ...¹³³³

Dr Guidotti argued that such tests should be accompanied by a longitudinal study of people affected by activities at Fiskville.¹³³⁴ Here the Committee is keeping in mind evidence from witnesses such as Mr David Card,¹³³⁵ who attended Fiskville

¹³²⁹ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.4

¹³³⁰ New South Wales Government, 'Williamtown RAAF Base Contamination: Frequently asked questions', 25 September 2015, p.2

¹³³¹ Foreign Affairs, Defence and Trade References Committee, *Inquiry into Fire Fighting Foam Contamination. Part A - RAAF Base Williamtown*, Commonwealth of Australia, Canberra, 2016, p.69

¹³³² Ibid.

¹³³³ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.11

¹³³⁴ Ibid.

¹³³⁵ Mr David Card, *Transcript of evidence*, 18 May 2015

State School and has suffered from testicular and abdominal cancer, and that of Mrs Deborah Etherton,¹³³⁶ the wife of a Fiskville staff member, who has suffered from breast cancer (as discussed in Chapter 3).

The Committee has also viewed evidence regarding a range of diseases, such as bowel cancer, leukaemia and melanoma, that have affected people living at or near Fiskville. The Committee stresses that blood tests for PFCs should always be accompanied by the latest evidence on the health risks of PFCs, including background levels and NOEL levels. It agrees with the Senate Inquiry finding above that tests can help ease uncertainty felt by people affected by contamination.

For an example of blood tests carried out on the residents of a neighbouring property at Fiskville see Case Study 4 on Matthew and Beccara Lloyd.

The evidence on how PFCs affect human health is rapidly evolving. It is crucial that regulators in Victoria keep up to date with the latest evidence. If not, they risk making poor decisions based on outdated information and a lack of understanding of the properties of these chemicals.

See Appendix 10 for an international comparison of PFC levels in human blood.

FINDING 101: That the German Environment Agency has defined threshold levels of PFOS and PFOA in human blood.

RECOMMENDATION 22: That the Victorian Government implement a strategy for ensuring that all relevant regulatory agencies are kept up to date on the latest scientific evidence relating to the risks associated with exposure to hazardous materials and chemicals.

9.11.2 Drinking water – international comparisons

The jurisdictions listed in Table 9.2 have issued the following provisional drinking water guidance values for PFOS and PFOA.¹³³⁷ The figures are based on adults drinking two litres of water every day for life.¹³³⁸

In Australia, drinking water quality standards for PFOS and PFOA are yet to be developed. Although the ‘Australian Drinking Water Guidelines 6, 2011’ (Version 3.1 Updated March 2015) do not include PFCs, 0.3 micrograms per litre is generally considered to be the accepted Health Risk Limit for PFOS and PFOA (based on the Minnesota Department of Health values¹³³⁹). That figure is slightly lower in Victoria. For example, when the Victorian government announced the closure

¹³³⁶ Mrs Deborah Etherton, *Transcript of evidence*, 18 May 2015

¹³³⁷ Maxxam, *Analytical Guidelines for PFCs*, Technical Bulletin, August 2015

¹³³⁸ Mr Michael Rehfish, *Senversa*, *Transcript of evidence*, 19 November 2015, p.13

¹³³⁹ Department of Environment and Conservation Western Australia, ‘Firefighting foams with perfluorochemicals - environmental review’, June 2013, p.28

of the Fiskville site it stated: ‘International guidelines for safe levels of PFOS in drinking water is 0.2 micrograms and for non-drinking water is 4 micrograms per litre.’¹³⁴⁰

Table 9.2 Comparisons of international drinking water guideline values for PFOS and PFOA

Jurisdiction	PFOS (micrograms / litre)	PFOA micrograms / litre)
Canada	0.3	0.7
United States Health Protection Authority ^(a)	0.2	0.4
Minnesota Department of Health	0.3 ^(b)	0.3
United Kingdom Health Protection Authority	0.3	10 ^(c)
Germany	0.1 (sum of PFOA and PFOS)	

(a) In addition to the US EPA issuing a ‘provisional health advisory’ for the acceptable level of PFOA and PFOS for short-term exposure, three States have established drinking water guidelines for PFOA and one for PFOS.

(b) The document doc says 0.2 but the correct figure is 0.3. See: (www.health.state.mn.us/divs/eh/hazardous/topics/pfcs/drinkingwater.html), viewed 25 June 2015

(c) See: HPA, ‘Maximum acceptable concentrations of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in drinking water’, 2007. Plus: Drinking Water Inspectorate three-tier approach in ‘Guidance on the Water Supply (Water Quality) Regulations 2000 specific to PFOS (perfluorooctane sulphonate) and PFOA (perfluorooctanoic acid) concentrations in drinking water’ (2009).

Source: Research conducted by the Committee Secretariat.

Drinking water at Fiskville and surrounding properties was sourced from mains supply or tanks. No traces of PFOS or PFOA were found in the drinking water at Fiskville.

9.11.3 Incidental exposure to water

Aside from drinking water firefighters come into contact with contaminated water through spray and, subsequently, wet clothing. The Committee considered the issue of the risk posed to firefighters through incidental exposure to water containing PFOS. Of particular interest to the Committee was advice from environmental consultant Senversa in 2012 that the CFA should raise its ‘safe’ parameter for firewater from 4 micrograms per litre to 2,600 micrograms per litre. This decision was based on advice received from Dr Drew, who the CFA had contracted to review Senversa’s figures, that when PFOS is contained in water only tiny amounts are able to permeate human skin. For firefighters, therefore, the argument is that because only a very small amount of water comes into contact with the skin, the concentration of PFOS can be higher.¹³⁴¹

Ms Kristi Hanson, the Principal Risk Assessor at Senversa, added that the figure of 2,600 micrograms per litre was based on an assumption that firefighters would be involved in six training sessions every day of their careers and is therefore “... at the most conservative end of the spectrum”.¹³⁴²

¹³⁴⁰ Minister for Emergency Services, Government of Victoria, *Fiskville shut forever*, (media release, 26 March 2015)

¹³⁴¹ Mr Michael Rehfish, Senversa, *Transcript of evidence*, 19 November 2015, p.13

¹³⁴² Ms Kristi Hanson, Senversa, *Transcript of evidence*, 19 November 2015, p.15

Dr Drew confirmed his reasoning to the Committee, adding his view that the initial figure of 4 micrograms per litre was based on flawed calculations from the US EPA:

The information on the risk assessment information system from the US EPA is theoretically calculated using some of the physical and chemical properties of PFOS. PFOS and the other perfluorinated chemicals have really unusual physical properties ... [and] that theoretical calculation is demonstrably wrong. It is out, it is wrong, by, if I remember rightly, something like 125,000 times, simply because the methodology that has been used for other chemicals, such as dioxins, PCBs, chlordane et cetera - those chemicals which actually partition into the fat of our bodies - was worked out for those chemicals. PFOS does not obey those rules.¹³⁴³

FINDING 102: That the Committee does not believe that the ‘safe’ parameter for PFOS in firewater at Fiskville should have been raised to 2,600 micrograms per litre. The Committee bases its decision on the scientific uncertainty surrounding PFCs, which should have resulted in Senversa and the CFA taking a more cautious approach.

9.11.4 Soil – international comparisons

The Committee searched for data from overseas jurisdictions regarding PFCs in soil. Some examples it found include:

- The Minnesota Pollution Control Agency has determined a soil reference value of 2.1 milligrams per kilogram for both PFOS and PFOA
- The United States EPA has set these values as 6 milligrams per kilogram for PFOS and 16 milligrams per kilogram for PFOA
- The UK Environment Agency has ruled that if sewage sludge is spread on land as top-dressing, the PFOS concentration should not exceed 39 micrograms per kilogram wet-weight or 46 micrograms per kilogram dry-weight¹³⁴⁴
- In Germany, the threshold value for PFOS in soil is 30 milligrams per kilogram.¹³⁴⁵

Australia is yet to develop health screening levels for PFOS or PFOA in soil.¹³⁴⁶

The Committee discussed safe levels of PFCs in soil with a number of witnesses. Professor Priestly explained that when regulators determine safe levels they should take into account the pathways through which PFCs enter the body: “Humans, apart from maybe small children, do not eat a lot of dirt, so most of the pathways for exposure from soil to humans may involve estimates of leaching from the soil into water and then into another directly ingested material.”¹³⁴⁷

¹³⁴³ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.16

¹³⁴⁴ Department of Environment and Conservation Western Australia, ‘Firefighting foams with perfluorochemicals - environmental review’, June 2013, pp.28-29

¹³⁴⁵ ‘PFCs – contamination sites and guidelines for evaluation in Bavaria’, Presentation to the Environment, Natural Resources and Regional Development Committee, Nürnberg Airport, 2 December 2015

¹³⁴⁶ CRC Care, *Technical Report No. 32, Development of guidance for contaminants of emerging concern*, July 2014, p.13

¹³⁴⁷ Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October 2015 p.7

9.11.5 Food

PFCs can also be ingested by eating food such as crops grown in contaminated soil or animals that have eaten contaminated grass or been exposed to contaminated water (or, as discussed in Chapter 3, prepared food contaminated by dirty clothes). In Victoria, there is currently no defined maximum residue limit (MRL) for PFOS. Chapter 8 of this Final Report discusses examples of meat contaminated by PFCs and the role of PrimeSafe and the Chief Veterinary Officer regarding Fiskville.

9.11.6 Australian standards

The Committee sought the latest advice on the development of Australian standards for PFCs. It heard that the Commonwealth's Environmental Health Standing Committee, a subcommittee of the Australian Health Protection Principal Committee (AHPPC),¹³⁴⁸ met on 11 December 2015 to develop guidance statements on the potential health effects of PFC exposure. These guidance statements were provided to the AHPPC for consideration at its meeting on 18 December 2015.

On 16 March 2016, the Environmental Health Standing Committee released the document, 'enHealth guidance statements on perfluorinated chemicals', which included the following:

There is currently no consistent evidence that exposure to PFOS and PFOA causes adverse human health effects. Because these chemicals persist in humans and the environment, enHealth recommends that human exposure to these chemicals is minimised as a precaution ... In early 2016, enHealth will convene an expert group to provide advice to the Australian Health Protection Principal Committee on the development of an Australian interim health reference value for PFOS and PFOA for consistent use in the undertaking of human health risk assessments.¹³⁴⁹

The Environmental Health Standing Committee also found that '... blood tests have no diagnostic or prognostic value and are not recommended for the purpose of determining whether an individual's medical condition is attributable to exposure to PFOS or PFOA [and that] exposure reduction is the key measure to reduce any possible risks posed by PFCs'.¹³⁵⁰

FINDING 103: That standards for safe levels of PFCs in human blood, water, soil and food have not been established in Australia.

RECOMMENDATION 23: That the Victorian Government take a lead role in identifying safe levels of PFCs for water and soil in Australia.

¹³⁴⁸ Australian Government, *Australian Health Protection Principal Committee*, (www.directory.gov.au/directory?ea0_lfz99_120.&&9ad55aad-bbd8-40d4-8826-afa786b147cb), viewed 20 January 2016

¹³⁴⁹ Environmental Health Standing Committee, 'enHealth guidance statements on perfluorinated chemicals', Commonwealth of Australia, Canberra, 2016, p.3

¹³⁵⁰ *Ibid.* p.2

9.11.7 Human biomonitoring

The Committee investigated human biomonitoring as another method of gathering data and investigating the health effects of exposure to PFCs. The World Health Organization defines biomonitoring as the direct measurement of people's exposure to toxic substances via specimens such as blood or urine. The advantage of biomonitoring is that it measures exposure without being susceptible to assumptions or models.¹³⁵¹ Another important attribute of biomonitoring is that it stores data in blood and specimen banks for future use.

As a result of the narrow pool of experts relied on by authorities in Victoria, and indeed Australia, and the general lack of knowledge of PFOS and PFOA within Government Departments, Committee members travelled to Germany to seek further information. The Committee heard that Germany is a world leader in reviewing and assessing the latest data and research on the human health effects of PFCs. It met with the German Environment Agency (Umweltbundesamt) and learnt that human biomonitoring assessment values only exist for a small number of chemicals. To counter this, the Agency has developed its Human Biomonitoring Commission to broaden the range of chemicals for which such assessment values can be derived, including PFOS. For example, values such as TDIs have been translated into equivalent biomonitoring levels.¹³⁵²

The Human Biomonitoring Commission draws on data linking chemicals and populations from as recently as 2014. The Commission believes that one advantage biomonitoring has over toxicology is that establishing tolerable threshold levels and guideline values is difficult for toxicologists.¹³⁵³ It also argues that epidemiological studies cannot control side effects and confounding factors. This makes it difficult for epidemiological studies to distinguish between causation and association.¹³⁵⁴

Examples of recent biomonitoring studies related to PFOS include a study in the German city of Cologne that examined increased concentrations of PFCs in two wells used for drinking water located near fire training sites. PFOS concentrations in blood samples of people drinking that water ranged from 4.8-295 micrograms per litre.¹³⁵⁵

¹³⁵¹ World Health Organisation, 'Biomarkers and human biomonitoring', [WHO Training Package for the Health Sector], October 2011

¹³⁵² J Angerer et al, 'Human biomonitoring assessment values: approaches and data requirements' (2011) 214 (5) *International Journal of Hygiene and Environmental Health* pp.348-360

¹³⁵³ Umwelt Bundesamt, *Toxicology*, (www.umweltbundesamt.de/en/topics/health/assessing-environmentally-related-health-risks/toxicology), viewed 22 April 2016

¹³⁵⁴ Umwelt Bundesamt, *Epidemiology*, (www.umweltbundesamt.de/en/topics/health/assessing-environmentally-related-health-risks/epidemiology), viewed 22 April 2016

¹³⁵⁵ Odulf Weiss et al, 'Perfluorinated compounds in the vicinity of a fire training area – Human biomonitoring among 10 persons drinking water from contaminated private wells in Cologne, Germany' (2012) 215 (2) *International Journal of Hygiene and Environmental Health* pp.212-215

Another study of interest is an Italian study which found that infertile people tended to have higher PFOS and PFOA levels than those without fertility problems. It concluded that PFOS and PFOA may be ‘reproductive and developmental toxicants’ as well as ‘endocrine disrupters’.¹³⁵⁶

BOX 9.6: Biomonitoring and other forms of health surveillance

Biomonitoring determines what foreign substances the body has been exposed to, what changes have occurred as a result, and the relationships between the exposure and the changes.

Epidemiology observes what occurs under which conditions in the population at large.

Toxicology investigates the effect of hazardous substances under controlled laboratory conditions, mostly by means of animal experiments or studies on human organs or cells.¹⁵

The Committee believes that regulators in Victoria should make more use of human biomonitoring in future health studies. For example, Recommendation 1 in the Committee’s Interim Report regarding blood tests for PFOS can be considered a form of biomonitoring.¹³⁵⁸

However, problems with PFOS and PFOA are not confined to Victoria. Both the Federal Government and a number of States are grappling with how to respond to PFOS and PFOA contamination at a number of sites. The health risks posed by PFCs require a national response.

FINDING 104: That the German Environment Agency is a world leader in researching the impact of PFC contamination on human health.

RECOMMENDATION 24: That the Victorian Government investigate the use of biomonitoring to assist with research into the health effects of exposure to PFCs. The PFC testing that has already been done at Fiskville could inform a new biomonitoring program.

RECOMMENDATION 25: That the Victorian Government take the lead at the COAG Health Council in recommending a greater use of human biomonitoring across Australia.

RECOMMENDATION 26: That the Victorian Government invite the German Environment Agency to brief Victorian health and environment regulators about the latest evidence regarding PFCs and human health.

¹³⁵⁶ Cinzia La Rocca, Eva Alessi, Bruno Bergamasco, et al, ‘Exposure and effective dose biomarkers for perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in infertile subjects: Preliminary results of the PREVIENI project’ (2012) 215 (2) *International Journal of Hygiene and Environmental Health* pp.206-211

¹³⁵⁷ Umwelt Bundesamt, *Assessing environmentally-related health risks*, (www.umweltbundesamt.de/en/topics/health/assessing-environmentally-related-health-risks/), viewed 22 April 2016

¹³⁵⁸ For the Committee’s Interim Report and the Victorian Government’s response to the recommendations see: www.parliament.vic.gov.au/enrrdc/article/2526; accessed 13 April 2016. Environment, Natural Resources and Regional Development Committee, *Inquiry into the CFA Training College at Fiskville, Interim Report*, (2015)

9.12 General agreement to no longer use PFCs

Despite the differing views on the toxicity of PFCs, the Committee heard general agreement that they should no longer be used (except for the uses listed in the Stockholm Convention). This is simply because their persistency presents a danger - the more persistent a substance is, the more it is likely to accumulate to a point where it becomes harmful or knowledge of its effects becomes more sophisticated. As such, societies should invoke the precautionary principle until evidence proves otherwise.¹³⁵⁹

Health researchers Suavé and Desrosiers explain how such a process works, using the example of lead:

As a new compound begins to cause concerns; data accumulate on its environmental chemistry, ecotoxicological and human toxicity, as well as its epidemiology. This eventually results in government action to establish environmental guidelines or criteria to ensure adequate protection. In a similar sequence, compounds that are already regulated are often re-evaluated with the addition of new data. A classic example for this might be the successive lowering of the target for safe lead level exposure in children now targeting blood lead below 5 µg Pb / dl [5 micrograms of lead / decilitre] from the previously used threshold of 10 µg Pb / dl. In the 1960s and 1970s, the accepted threshold for adverse effects in children was 60 µg Pb / dl.¹³⁶⁰

Speaking about the persistent nature of PFOS, Professor Priestly told the Committee:

We tend to be a little more wary with compounds that have that sort of property, because we know they will tend to occur throughout the population. They will occur perhaps at very low levels, but over time if we continue to use them they will probably accumulate to higher levels.¹³⁶¹

Dr Drew agreed: “I think it is an appropriate position for PFOS to be phased out, as it has been. I think that that is a good thing because it is persistent in the environment for a long time.”¹³⁶²

The Committee believes that PFCs are potentially dangerous in the human body, although at what exact level is currently unknown. However, the vast majority of current expert advice suggests that the mere presence of PFCs in the human body, even when above the average or background level, is not a guarantee of poor health.

¹³⁵⁹ Professor Jochen Mueller, University of Queensland, *Transcript of evidence*, 9 November 2015, p.12; Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November, p.19. The Committee also notes Dr Tee Guidotti's observation that the precautionary principle can stifle innovation if used unnecessarily - see Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.13

¹³⁶⁰ Sébastien Suavé and Mélanie Desrosiers, 'A review of what is an emerging contaminant' (2014) 8(15) *Chemistry Central Journal*, p.3

¹³⁶¹ Professor Brian Priestly, Australian Centre for Human Health Risk Assessment, *Transcript of evidence*, 19 October 2015, p 8

¹³⁶² Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.8

Regardless, the Committee believes that the persistent (and therefore potentially dangerous) nature of PFCs used in firefighting foams in Victoria up to 2007 means that the Victorian Government should monitor PFC levels in all firefighters in Victoria. This monitoring should be accompanied by appropriate health advice and current research on PFCs.

FINDING 105: That there is widespread agreement not to use firefighting foams containing PFCs because of their persistence in the environment, toxicity and suspected risk to human health.

FINDING 106: That although health experts remain uncertain about the exact health risks posed by PFCs most believe that exposure to PFCs should be limited as much as possible.

RECOMMENDATION 27: That the Victorian Government monitor PFC levels in all firefighters in Victoria accompanied by appropriate health advice and current research.

9.13 Thoughts on expert advice

Throughout this Inquiry, the Committee sought comment on the continued reliance of the CFA and Victorian regulators on the expert advice of Dr Roger Drew and Professor Brian Priestly. The Committee did so in the spirit of thorough investigation and does not question the qualifications of either Dr Drew or Professor Priestly.

The Committee also acknowledges that PFCs remain a niche field of study, meaning the number of experts will be low, and accepts the views of Professor Ackland who told the Committee: “We draw on these people because they are extremely well-connected individuals, and while they have incredible expertise, they also draw on epidemiological advice in the work that they do.”¹³⁶³

The Committee is not in a position to determine ‘safe’ levels for PFCs in the community, although it accepts the evidence demonstrating their toxicity. It is important that a broad range of experts are heard - in Dr Senjen’s words “a whole range of disciplines”¹³⁶⁴ - to guarantee Victorians a broad, vigorous and professional discussion that produces the safest outcome for all. As EPA Victoria’s Mr Nial Finegan told the Committee:

I have made the comment that you might need to broaden the pool of peers that you are using for peer review. Without making any comment on people, if you ask the same people the same questions all the time, as professional or as diligent as they might be, they will continue to have the same views. I think it is time for some other views to come in. It is a good governance thing.¹³⁶⁵

¹³⁶³ Professor Michael Ackland, Department of Health and Human Services, *Transcript of evidence*, 20 November 2015, p.15

¹³⁶⁴ Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.11

¹³⁶⁵ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, p.23

Dr Senjen used the example of asbestos to support her argument above for expanding the number of experts that regulators rely on, telling the Committee that laboratory tests alone have been unable to prove exactly why asbestos causes mesothelioma.¹³⁶⁶ In the same spirit, the Committee encourages regulators and policy makers in Victoria, as with other countries throughout the world, to seek out experts from a variety of backgrounds - human biomonitoring, epidemiologists, endocrinologists and genomic studies, for example - to ensure that a broad range of views are heard.

FINDING 107: That regulators in Victoria have demonstrated poor governance by consulting with a narrow group of experts and relying on the opinion of experts commissioned by the polluter.

FINDING 108: That regulators in Victoria lacked the required knowledge to deal with the PFOS and PFOA contamination at Fiskville.

FINDING 109: That regulators in Victoria should widen the range of experts they consult to further understand the properties of PFCs.

¹³⁶⁶ Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.10

10 Remediation

AT A GLANCE

Background

This Chapter provides an overview of remediation works that have occurred at Fiskville as a result of the two EPA Victoria Clean Up Notices. This overview is complemented by a discussion of projects underway in Germany and the United Kingdom to remediate sites contaminated with firefighting foam residues containing PFOS, PFOA and other chemicals. The Chapter analyses the various methods adopted to remediate and contain contamination, the most successful approaches, and the timeframes envisaged.

Conclusions are then drawn about the merits of reopening Fiskville Training College, whether remediation of the site is possible and how long work is expected to take.

This Chapter addresses Terms of Reference (4).

Key findings

- That in January 2013, EPA Victoria issued two Clean Up Notices to the CFA. These require a 53V audit and a 53X audit to be carried out on the Fiskville site.
- That the 53V audit found that the most widespread contaminants at the site are PFCs. The potential risks as a result of exposures to PFOS (and other PFCs) are low, but there are potential risks to the beneficial use of the site and surrounding area.
- That work on the 53X audit began in January 2015 and is due to be completed prior to 30 June 2017.
- That the CFA is required to submit to EPA Victoria an Environmental Audit Report prepared in accordance with section 53X of the *Environment Protection Act 1970* by an EPA-appointed Environmental Auditor, including a Statement or Certificate of Environmental Audit.
- That the Committee heard mixed views on the CFA Board's decision to close Fiskville.
- That the Committee does not recommend a future use for Fiskville, given the ongoing remediation of the site.
- That remediation of contaminated training sites is very expensive, time consuming, and does not remove all traces of PFOS and PFOA.
- That the current remediation and containment processes at Fiskville are out of date compared to processes used in Germany and by the Australian Defence Force.
- That based on similar examples it is expected that extensive remediation work at Fiskville will be recommended by the EPA Victoria 53X audit. Overseas and Australian Defence Force experiences show remediation can take many years with successful removal of contaminants such as PFOS and PFOA difficult to achieve.

10.1 Introduction

Terms of Reference (4) instructs the Committee to provide an assessment of the feasibility of remediating the Fiskville site. This assessment is dependent on what the CFA plans to use the site for in the future. This will become clearer when the second Clean Up Notice issued to the CFA by EPA Victoria is completed in June 2017. The Clean Up Notices are discussed below, along with examples of work done to remediate sites similar to Fiskville both in Australia and overseas.

It should also be noted that the Terms of Reference for this Inquiry were written before the CFA Board decided to close Fiskville in March 2015. This decision was controversial, with witnesses who gave evidence to the Committee either agreeing or disagreeing with the closure. Regardless, the decision has been made and it may be many years before Fiskville can be fully, or even partly, remediated. As mentioned, knowing what the land at Fiskville can potentially be used for will not be fully understood until June 2017.

It is imperative that the CFA and Victorian Government choose a new training site as quickly as possible, to ease the pressure on existing training resources and ensure volunteers are not required to travel long distances.

10.2 EPA Victoria's audits

In January 2013, EPA Victoria issued two Clean Up Notices to the CFA. These require a 53V audit and a 53X audit to be carried out on the Fiskville site. A 53V audit is designed to identify and remedy areas of a site that are thought to be of the most pressing concern in the short-term, whereas a 53X audit takes a more long-term approach to the remediation of a whole site. Completion of both audits also requires an approved Clean Up Plan.

Clean Up Notices are issued by EPA Victoria under the *Environment Protection Act 1970* (53V and 53X refer to sections of the Act) and typically require the recipient to remove waste, clean-up sites and / or alter the way industrial waste is stored or handled.¹³⁶⁷ The 53X audit provides a Statement or Certificate of Environmental Audit. A 'Certificate' certifies the land is available for any beneficial use, while a 'Statement' shows that the auditor believes there is some restriction on the use of the land.¹³⁶⁸

The CFA must submit to EPA Victoria a Clean Up Plan that includes the following:

- An indication of the level of waste or contaminants
- Removal of waste and removal or remediation of contaminants on, and extending beyond the boundary of, the premises

¹³⁶⁷ EPA Victoria, *Compliance and Enforcement*, (www.epa.vic.gov.au/our-work/compliance-and-enforcement/remedial-notices-and-directions), viewed 29 January 2015

¹³⁶⁸ EPA Victoria, *Submission 46*, p.4. The two Clean Up Notices are included as attachments to EPA Victoria's submission

- Restoring beneficial uses to segments where waste or contaminants are identified
- Details of mitigation measures and associated monitoring programs and reporting dates
- Reduction of risk identified in the 53V environmental audit report
- Details of clean-up measures to support the 53X audit
- The date(s) by which these will be completed.¹³⁶⁹

The CFA appointed AECOM, a registered environmental auditor, to conduct the audit of the Fiskville site focusing on the condition of the land, groundwater and surface water. Environmental audits typically focus on whether a site is suitable for ‘any beneficial use’ prescribed under the *Environment Protection Act 1970*, such as agricultural activity or the use of water for human consumption.¹³⁷⁰

FINDING 110: That in January 2013, EPA Victoria issued two Clean Up Notices to the CFA. These require a 53V audit and a 53X audit to be carried out on the Fiskville site.

10.3 53V audit

Section 53V of the *Environment Protection Act 1970* states:

An environmental audit report in relation to the risk of any possible harm or detriment to a segment of the environment caused by any industrial process or activity, waste, substance or noise must—

- Specify the industrial process or activity, waste, substance or noise in respect of which the environmental audit was conducted; and
- state the name of the person who has engaged the environmental auditor to conduct the environmental audit; and
- be signed by the environmental auditor; and
- specify the results of the environmental audit.¹³⁷¹

The 53V audit of Fiskville states that Fiskville is located around 440 metres above sea level on an undulating basaltic plateau. The site is underlain by quaternary aged newer volcanics comprising olivine basalt. This basalt is characterised by variable weathering and the depth to basalt can differ greatly. Typically, the basalt is overlain with clays. The west of the site mainly drains to Beremboke Creek, which is part of the Moorabool River Catchment, while the east drains toward Yaloak Creek, part of the Werribee River Catchment. Studies showed that there is no substantial aquifer with permanent water within 60 metres of the surface.¹³⁷²

¹³⁶⁹ AECOM, *Submission 50*

¹³⁷⁰ AECOM, *Environmental Audit Report – Risk to Land, Surface Water and Groundwater – CFA Fiskville Training College*, EPA Victoria, Melbourne, 2014, p.1

¹³⁷¹ *Environment Protection Act 1970* (Victoria), s. 53V

¹³⁷² AECOM, *Environmental Audit Report – Risk to Land, Surface Water and Groundwater – CFA Fiskville Training College*, EPA Victoria, Melbourne, 2014, pp.19, 26 and 62

The audit states that it ‘... forms an early part of a process to investigate, remediate, and verify the environmental condition of the site and its suitability for the existing and potential uses’.¹³⁷³ While the audit was being conducted the CFA also commissioned environmental consultants Cardno Lane Piper to undertake environment and health risk assessments of Fiskville. These assessments were provided to AECOM and publically released as appendices to AECOM’s report.

The main contaminants of concern listed in the 53V audit are:

- Asbestos
- BTEX (benzene, toluene, ethylbenzene, xylene)
- Dioxins
- Furans
- Metals
- PAH (polycyclic aromatic hydrocarbons)
- PFCs
- TPH (total petroleum hydrocarbons).¹³⁷⁴

The audit found that the most widespread contaminants at the site are PFCs, particularly PFOS and PFOA. The audit notes that although foams containing PFCs have not been used at the site since 2007, ‘residual concentrations’ are present in both water and sediments in the site’s dams and Lake Fiskville.¹³⁷⁵

The audit states that there were two main modes of distribution of PFCs at the site. First, the site’s water management system involved the collection of used firewater (which included foam residue) in on-site dams which flowed into the artificial Lake Fiskville. Water from the lake flowed into the local Beremboke and Eclipse Creeks during times of high rainfall.¹³⁷⁶ Second, fine mist containing PFCs produced during fire training was distributed throughout the site by wind.¹³⁷⁷

Mr Darryl Strudwick, AECOM’s Technical Director, reported to the Committee that “... the treatment system that was in place — the triple interceptor and aerators — was insufficient to treat the firewater or some of the contaminants in the firewater”.¹³⁷⁸

The audit found traces of PFOS up to 18.5 kilometres downstream from the site in Beremboke and Eclipse Creeks.¹³⁷⁹ The auditor also noted that at a test site 1.25 kilometres from Fiskville ‘... the concentration of PFOS in surface water

¹³⁷³ Ibid. p.16

¹³⁷⁴ Ibid. pp.46-47

¹³⁷⁵ Ibid. p.17

¹³⁷⁶ Ibid. p.18

¹³⁷⁷ Ibid. p.17

¹³⁷⁸ Mr Darryl Strudwick, Auditor, AECOM, *Transcript of evidence*, 25 May 2015, p.96

¹³⁷⁹ AECOM, *Environmental Audit Report - Risk to Land, Surface Water and Groundwater*, (2014), p.19

exceeds the adopted health based water quality'.¹³⁸⁰ Further, PFCs were widely identified in soils both on-site and off-site, particularly in soil near the PAD and Dam 1.¹³⁸¹

Aside from the use of foams containing PFCs, the audit notes that the following practices at the site created other potential sources of contamination:

- Live training was initially conducted on an unsealed PAD and unlined foam pits
- The burial of drums containing flammable liquids and waters
- The burial of waste in landfill sites
- The storage and management of chemicals used in live fire training
- Soil containing PFOS from the first unsealed PAD was excavated and re-used throughout the site.¹³⁸²

The audit found that soil in a number of areas at the site was contaminated with a range of materials, including brick and glass fragments, scrap metal and electrical insulators, and occasional pieces of material containing asbestos, particularly at the surface of landfill areas. The concentration of compounds found in the landfill areas exceeded the adopted ecological soil quality criteria.¹³⁸³

The audit found that in the late 1990s approximately 4,300 cubic metres of soil affected by historical fire training activities was excavated from the PAD and a further estimated 1,000 cubic metres was excavated from the foam pits. This material was placed in windrows in a soil composting area for bioremediation. In 2014, this soil was analysed for hydrocarbons and lead. The analysis found that the concentrations of both materials were acceptable for re-use on-site.¹³⁸⁴

AECOM states: 'This soil has been re-used, possibly on-site, and approximately a third of the original windrows remain.'¹³⁸⁵

The audit assessed the landfill area as posing a relatively low risk if contained and managed and recommended that an earthen cap be constructed over the landfill area to '... eliminate the exposures of waste at the surface and minimise the infiltration of rainwater into the waste mass'.¹³⁸⁶

¹³⁸⁰ Ibid.

¹³⁸¹ Ibid. p.18

¹³⁸² Ibid. p.17

¹³⁸³ Ibid. p.18

¹³⁸⁴ Ibid. p.17

¹³⁸⁵ Ibid. p.45

¹³⁸⁶ Ibid. p.18

The audit did not assess the risk of harm to human health posed by the contamination.¹³⁸⁷ However, it did refer to Cardno Lane Piper's statement: 'Based on the findings of the assessment Cardno Lane Piper concluded that there are isolated areas of soil impacts identified at the site, none of which presents an impediment to the continued use of the site for firefighting training.'¹³⁸⁸

AECOM also provided an assessment of the risk of exposure to contaminated materials in the site's soil and water:

Based on the information reviewed and verified, the Auditor considers that the potential risks as a result of exposures to PFOS (and other PFCs) at the site for the exposure scenarios assessed are low and acceptable. This conclusion is based on water from Lake Fiskville not being consumed by people as drinking water.¹³⁸⁹

While the audit found that risks of harm to human health were low, it states that '... there is potential for unacceptable ecological effects in on-site waterways and in Beremboke Creek'.¹³⁹⁰ In particular, there are potential risks to the beneficial use of the site and surrounding area for agriculture and irrigation.

The audit also notes that in response to the Joy Report¹³⁹¹ the CFA had undertaken a number of measures to mitigate the risk associated with contamination of the site, including: ceasing the use of water from the dams in live firefighting training; and capping former landfill areas to minimise the potential for rainwater to infiltrate the landfill.¹³⁹²

The section 53V audit was completed in April 2014 and produced 26 recommendations.¹³⁹³ The CFA collated these into a six-stage Clean Up Plan.¹³⁹⁴ The plan identifies the following three high priority areas:

- That works are undertaken to prevent water from the water management system from discharging to downstream waters
- That measures to ensure the quality of water discharging to protected downstream water sources meet appropriate surface water quality standards
- That action is taken to remediate the water and sediments in Dams 1 to 4 and Lake Fiskville to remove the risk of further contamination of the environment.¹³⁹⁵

Mr Strudwick also commented on the CFA's Clean Up Plan:

¹³⁸⁷ Ibid. pp.25-26

¹³⁸⁸ Ibid. p.55

¹³⁸⁹ Ibid. p.20

¹³⁹⁰ Ibid. p.21

¹³⁹¹ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012)

¹³⁹² AECOM, *Environmental Audit Report - Risk to Land, Surface Water and Groundwater*, (2014), p.22. See also: Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.12

¹³⁹³ AECOM, *Environmental Audit Report - Risk to Land, Surface Water and Groundwater*, (2014), pp.158-160

¹³⁹⁴ For the plan's actions and their status see the CFA's submission to this Inquiry: CFA, *Submission 60*, pp.39-40 and pp.55-68

¹³⁹⁵ AECOM, *Environmental Audit Report - Risk to Land, Surface Water and Groundwater*, (2014), p.180

Part of our work was to assess that the plan incorporated the requirements of the clean-up notice and also the recommendations of the 53V environmental audit and stated the proposed actions that were to be undertaken and also timelines. Overall I considered the plan appropriate and endorsed the plan according to our Clean Up Plan assessment report based on the information that was provided at the time. It is worth noting that the Clean Up Plan that was endorsed was relatively high level. Some of the outcomes were pending future investigations. Pilot trials were still necessary to be undertaken to assess the effectiveness of the various proposed technologies.¹³⁹⁶

FINDING 111: That the 53V audit found that the most widespread contaminants at the site are PFCs. The potential risks as a result of exposures to PFOS (and other PFCs) are low, but there are potential risks to the beneficial use of the site and surrounding area.

10.4 53X audit

The 53X audit can be considered as the beginning of the rehabilitation process of the Fiskville site and determining what the land can and cannot be used for. Section 53X of the *Environment Protection Act 1970* states:

An environmental audit report in relation to the condition of a segment of the environment must—

- (a) specify the segment of the environment in respect of which the environmental audit was conducted; and
- (b) state the name of the person who has engaged the environmental auditor to conduct the environmental audit; and
- (c) be signed by the environmental auditor; and
- (d) include—
 - (i) an evaluation of the environmental quality of the relevant segment of the environment; and
 - (ii) an assessment of whether any clean-up is required to that segment of the environment; and
 - (iii) if any clean-up is necessary, any recommendations relating to the carrying out of the clean-up.

Under the terms of the 53X audit, all work is to be completed prior to 30 June 2017.¹³⁹⁷ Work on the audit began in January 2015.¹³⁹⁸

Ms Anne Northway from EPA Victoria explained to the Committee that although 30 June 2017 is the due date for the 53X audit, clean-up activities are ongoing.¹³⁹⁹

¹³⁹⁶ Mr Darryl Strudwick, Auditor, AECOM, *Transcript of evidence*, 25 May 2015, p.97. See also the AECOM Australia's submission to this Inquiry: AECOM Australia, *Submission 50*, pp.5-25

¹³⁹⁷ Country Fire Authority, *Submission 60*, pp.18-21

¹³⁹⁸ Independent Monitor, CFA, *Fiskville Report - July 2015*, (2015), p.15

¹³⁹⁹ Ms Anne Northway, Principal Expert, Land and Groundwater, EPA Victoria, *Transcript of evidence*, 14 December 2015, p.21

EPA Victoria's website contains information on the 53X audit process, including:

- If the site is polluted, then a clean-up program should be developed. The consultant must liaise with the auditor to ensure an acceptable standard is reached. (The auditor must not be involved in the design or implementation of the clean-up.)
- When the clean-up is completed, the site is assessed to ensure the clean-up was effective. (The auditor or consultant may undertake this.)
- After assessing the clean-up works, the auditor will prepare an environmental audit report and determine whether a certificate or statement will be issued.¹⁴⁰⁰

The 53X audit then determines if the site has been suitably cleaned up for its proposed use.¹⁴⁰¹ The CFA is required to submit to EPA Victoria an Environmental Audit Report prepared in accordance with section 53X of the *Environment Protection Act 1970* by the EPA-appointed Environmental Auditor (AECOM), including a Statement or Certificate of Environmental Audit.¹⁴⁰²

EPA Victoria receives quarterly updates from the CFA on the progress of the 53X audit.¹⁴⁰³

The Committee has several concerns about the reliability of the EPA Victoria audits. For example, Mr Strudwick told the Committee that he was unaware of the existence of contaminated dirt piles at Fiskville which were left uncovered and may have been further contaminating a neighbouring property.¹⁴⁰⁴ Further, the audits examine past work carried out at Fiskville by consultants that, as this Final Report has shown, was at times based on misleading information provided by the CFA.

FINDING 112: That work on the 53X audit began in January 2015 and is due to be completed prior to 30 June 2017.

FINDING 113: That the CFA is required to submit to EPA Victoria an Environmental Audit Report prepared in accordance with section 53X of the *Environment Protection Act 1970* by an EPA-appointed Environmental Auditor, including a Statement or Certificate of Environmental Audit.

¹⁴⁰⁰ See: EPA Victoria, *Environmental auditing* (www.epa.vic.gov.au/our-work/environmental-auditing/types-of-environmental-audit/53x-audit-process), viewed 13 April 2016

¹⁴⁰¹ Ms Anne Northway, Principal Expert, Land and Groundwater, EPA Victoria, *Transcript of evidence*, 14 December 2015, p.21

¹⁴⁰² AECOM, *Submission 50*, p.1

¹⁴⁰³ EPA Victoria, *Submission 46*, p.6

¹⁴⁰⁴ Mr Darryl Strudwick, Auditor, AECOM, *Transcript of evidence*, 25 May 2015, p.98. The contaminated dirt piles and their off-site impact are discussed in Chapter 4

10.5 New site or remediation?

The Committee was keen to hear views on the CFA Board’s decision to close Fiskville on 26 March 2015.¹⁴⁰⁵ Considering the complexity of the issue, and the emotion involved, it is not surprising that the Committee heard mixed views.

For example, Mr Justin Justin, Fiskville’s Officer in Charge from 2011 to 2015, spoke of his own conflicting views. Mr Justin said that his “sentimental side” wanted Fiskville to stay open because of its history, yet the “business side” of him believed that Fiskville had to close permanently because of the contamination and the damage to Fiskville’s reputation.¹⁴⁰⁶

Victoria’s Emergency Management Commissioner Craig Lapsley told the Committee that he had recommended the closure of the site to the Victorian Government in mid-2013:

I have been a very strong supporter that Fiskville needed to close — very clear — and have been very strong in my leadership position to say, ‘Fiskville needed to close and should never reopen. It needs to be a site that is cleaned and used for some other purpose. We need to move away from it’ ... cultural history cannot allow you to tie you to something that has got profound OHS and environmental issues that need to be managed. The best way to manage the site is not to be there and actually make sure we go through a proper structured program of what might take a decade to clean that site.¹⁴⁰⁷

However, Mr Chris Bigham, Acting Operations Manager at Fiskville, argued that the site should remain open because of the important role it plays in training emergency services in Victoria. Mr Bigham said that his view was predicated on Fiskville being successfully remediated:

Despite the decision being made earlier this year to close the site, the staff at Fiskville believe that Fiskville remains viable and vital as a training site and should continue to fill a key role in training with the emergency management sector in Victoria if the Inquiry finds the site can be rectified and remediated. That is the proviso.¹⁴⁰⁸

Similarly, Ms Kirstie Schroder, the MFB’s Director, Operational Learning and Development, told the Committee: “If Fiskville can now be remediated and provide a safe work environment and all the key stakeholders can be given evidence that it is a safe working environment, I do not see that as a problem, personally.”¹⁴⁰⁹

Toxicologist Professor Roger Drew told the Committee that he was surprised by the decision to close Fiskville based on the PFOS findings because he believed that “... there is a very low likelihood of harm arising from exposure to PFOS on

¹⁴⁰⁵ This decision is discussed in detail in Chapter 1

¹⁴⁰⁶ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.15

¹⁴⁰⁷ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.4

¹⁴⁰⁸ Mr Chris Bigham, Acting Operations Manager, CFA, *Transcript of evidence*, 27 July 2015, pp.302-303

¹⁴⁰⁹ Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.13

the Fiskville site or originating from the site”.¹⁴¹⁰ As discussed in Chapter 1, the CFA Board decided to close Fiskville because the discovery of PFOS in parts of the site where it had not previously been found meant that the Board believed it could no longer guarantee the safety of the site.

Regardless of these views, the CFA and the Victorian Government have decided to purchase land for a new training facility in western Victoria. In April 2015, the Minister for Emergency Services, Jane Garrett, said that a new training facility would be built in the Ballan area.¹⁴¹¹

In January 2016, Minister Garrett provided an update on the situation that was reported in the *Ballarat Courier* as follows:

The facility is considered absolutely crucial to economic prosperity of the area, with the community left reeling by its shock closure ... we have almost been there on a couple of occasions, but we will just keep pressing through, but we are absolutely committed to Ballan.¹⁴¹²

The CFA’s CEO, Ms Lucinda Nolan, confirmed that the CFA is planning to build another training facility in the Ballan region. She told the Committee that although Fiskville will not be reopened as a practical training facility it still may serve some use in the future.¹⁴¹³ This use will be partly determined by the findings of the Clean Up Notices served by EPA Victoria. Ms Nolan told the Committee:

For me there is a line in the sand: Fiskville will not be reopened as a Fiskville training facility. We will be looking for incorporating another Ballan site as part of our training. But certainly any remediation and future use of Fiskville will be reliant on the results from the auditor and what is appropriate in terms of cost of further remediation about the usage of that land.¹⁴¹⁴

Commissioner Lapsley was confident that the mistakes made at Fiskville would not be repeated at a new site. His opinion was informed by a combination of the existence of tighter regulations and higher standards within the emergency services sector:

I think we are more able to be regulated today and have accountabilities and responsibilities and leadership regimes in our structures that will get it right, and we will not see another Fiskville be built because I think we are more focused on what are the consequences. Remember, we are very regulated in our lives to manage these types and rightly so. Some of us might get frustrated we are overregulated, but let us apply that.¹⁴¹⁵

¹⁴¹⁰ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.9

¹⁴¹¹ Gav McGrath, ‘Fiskville replacement likely to be in the same area’, *Ballarat Courier*, (www.thecourier.com.au/story/3038244/cfa-to-rebuild-in-area/), 27 April 2015

¹⁴¹² Matthew Dixon, ‘No step forward for new Fiskville’, *Ballarat Courier*, (www.thecourier.com.au/story/3667802/no-step-forward-for-new-fiskville/), 16 January 2016

¹⁴¹³ For example, the Committee received correspondence from the City of Ballarat suggesting the site may be suitable as a registered motor sports venue. Correspondence from General Manager, People and Communities, City of Ballarat, to Chair, Environment, Natural Resources and Regional Development Committee, received 8 March 2016.

¹⁴¹⁴ Ms Lucinda Nolan, Chief Executive Officer, CFA, *Transcript of evidence*, 29 January 2016, p.22

¹⁴¹⁵ Mr Craig Lapsley, Emergency Management Commissioner, Emergency Management Victoria, *Transcript of evidence*, 20 November 2015, p.15

The 2016 / 2017 Victorian Budget allocated \$46.2 million dollars for a new CFA training centre in the Central Highlands and to upgrade the training facility at the Huntly facility (north of Bendigo). It also allocated \$80.7 million over four years to upgrade facilities at six emergency training services and decommission and remediate the Fiskville site.¹⁴¹⁶

FINDING 114: That the Committee heard mixed views on the CFA Board's decision to close Fiskville.

FINDING 115: That the Committee does not recommend a future use for Fiskville, given the ongoing remediation of the site.

RECOMMENDATION 28: That the Victorian Government as a matter of urgency purchase a new site in the Ballan area for construction of a new firefighting training centre, managed by the CFA, with occupational health and safety compliance managed by the Emergency Management Victoria Inspectorate (in accordance with Recommendation 12 in Chapter 5).

RECOMMENDATION 29: That, in recognition of the closure of the Fiskville site and the need for a new 'spiritual home' for the CFA, the Victorian Government in consultation with CFA members fund the relocation of the firefighters' Memorial Wall at a suitable and easily accessible location.

10.6 Cost of remediation

Predicting the exact cost of remediating a contaminated site is difficult because of the wide range of factors involved, including the level of contamination and the size and geology of the site to be remediated. However, both Professor Ravi Naidu from CRC Care and Mr Nigel Holmes from the Queensland Department of Environment and Heritage Protection told the Committee that the challenges involved in destroying chemicals as stable as PFCs mean remediating sites as large as Fiskville can be very expensive, potentially costing millions of dollars.¹⁴¹⁷

As part of this Inquiry, the Committee sought evidence on the remediation of several sites contaminated in a similar way to Fiskville:

- Point Cook in Victoria
- Jersey in the United Kingdom
- North-Rhine-Westphalia, Düsseldorf and Nürnberg in Germany.

¹⁴¹⁶ Victorian Government, *Victorian Budget 16/17, Rural and Regional Budget Information Paper*, p.22

¹⁴¹⁷ Professor Ravi Naidu, CRC Care, *Transcript of evidence*, 19 October 2015, p.4; Mr Nigel Holmes, Queensland Department of Environment and Heritage Protection, *Transcript of evidence*, 19 October 2015, pp.9-10

BOX 10.7: Examples of remediation costs

In Germany,¹⁴¹⁸ the Committee was provided with the cost of several modern remediation processes. All costs are per tonne of soil and in Australian dollars.

Excavation and disposal (underground storage off-site)

- Minimum: \$144
- Medium: \$152
- Maximum: \$164

Excavation and disposal by incineration (off-site)

- Minimum: \$175
- Medium: \$182
- Maximum: \$195

NB. This was the process undertaken by the Australian Defence Force at the Point Cook airbase in Melbourne. The technology is not available in Australia meaning the ADF was required to hire equipment from overseas.

Excavation and transportation to a controlled landfill site (on-site)

- Minimum: \$55
- Medium: \$75
- Maximum: \$104

NB. This is a sealing system requiring a synthetic, non-pervious membrane base and top (that is, not concrete or clay).

10.6.1 RAAF Base Williams, Point Cook, Victoria

The Department of Defence conducted firefighting training at RAAF Base Williams, Point Cook (an outer suburb of Melbourne) from the mid-1950s to the late-1980s. Pits on-site contained flammable liquids that were used to ignite old airframes. These were then extinguished using foams. These practices contaminated soil and groundwater on the site.¹⁴¹⁹

A Department of Defence factsheet dated 1 October 2013 states:

¹⁴¹⁸ Dr Heinrich Schoger, 'Summary of the Detailed PFC-Investigation Perspectives for the Remediation of Soil & Groundwater', Presentation to the Environment, Natural Resources and Regional Development Committee, Nürnberg, 2 December 2015

¹⁴¹⁹ Department of Defence, *What's happening at RAAF Base Williams, Point Cook?*, Factsheet, available online at www.defence.gov.au/id/_Master/docs/PointCook/PointCookFAQ17February2014.pdf (viewed March 2016)

Historical fire training activities around the base involved the excavation of pits, pouring waste solvents / fuels into the pits and setting these liquids on fire. The pits were excavated into the water table, and the waste chemicals that were tipped into the pits have resulted in zones of solvent contaminated soil and groundwater under the base.¹⁴²⁰

An AECOM report for the Department of Defence in November 2010 states that the regional geology is characterised by Quaternary coastal dune systems and paludal silts and clays overlying Tertiary sands, silts and clays.¹⁴²¹

Contamination present at the site

The AECOM report identified 12 primary chemicals of interest that represented the greatest risk of potentially contaminating 'down gradient receptors', including Port Phillip Bay:

- Tetrachloroethene
- Trichloroethlyene
- 1,1,2-trichloroethane
- 1,2-dichloroethane
- 1,1,2,2 tetrachloroethane
- 1,1-dichloroethane
- Vinyl chloride
- Benzene
- Chlorobenze
- Chloroform
- Cis-1,2-dichloroethene
- Trans-1,2-dichloroethene.¹⁴²²

Other contaminants identified in an earlier report by HLA-Envirosciences included:

- Elevated hydrocarbon and metal concentrations
- High levels of concentrations of benzo(a)pyrene
- Total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH)
- Zinc
- Copper

¹⁴²⁰ Department of Defence, *RAAF Base Williams – Point Cook, Victoria*, factsheet, 1 October 2013, available online at www.defence.gov.au/id/_Master/docs/NCRP/VIC/0932RAAFBaseWilliamsPointCookVic.pdf (viewed March 2016)

¹⁴²¹ AECOM Australia Pty Ltd, *RAAF Base Williams, Pt Cook – Stage 3/4 Remediation and Validation Works – Remedial Action Plan* (November 2010), p.8

¹⁴²² *Ibid.* p.4

- Arsenic
- Chromium
- Lead
- Volatile total petroleum hydrocarbons (TPH) compounds
- Asbestos.¹⁴²³

The HLA-Envirosciences report split the site into seven separate areas.¹⁴²⁴ The report considered these areas as suitable to be used for their current purposes. Remediation was deemed necessary, however, if those purposes were to change.¹⁴²⁵

In respect of groundwater contamination, the HLA-Envirosciences report identified that groundwater quality was degraded in the south-east corner of the site due to fire training activities. Contamination of the groundwater in this area included:

- Arsenic concentrations in the downgradient marginally exceeding the Australian and New Zealand Environmental and Conservation Council (ANZECC) 1992 marine ecosystem guidelines
- Benzene concentrations increasing by 30 per cent between 1994 and 2003
- Benzene levels in the downgradient exceeded the ANZECC 2000 marine ecosystem protection criteria and the ANZECC 2000 recreational water quality guidelines
- Ethylbenzene concentrations increasing
- Toluene and xylene concentration
- Increased vinyl chloride concentrations
- Variable concentration levels of Methylene chloride.¹⁴²⁶

HLA-Envirosciences conducted a Human Health Risk Assessment in July 2007. It concluded: ‘... exposure to the chemicals of potential concern detected in the groundwater, surface water and marine biota at the Point Cook intertidal zone adjacent to the Site, are not considered to pose an unacceptable risk to human health’.¹⁴²⁷

Process for cleaning up / remediating the site

The 2010 AECOM report identified previous remedial actions of the former fire training area. The actions, which AECOM described as ‘limited’,¹⁴²⁸ included:

¹⁴²³ HLA-Envirosciences Pty Ltd, *Due Diligence Environmental Investigation RAAF Williams – Point Cook, Victoria*, 6 February 2003, pp.47-49

¹⁴²⁴ *Ibid.* p.3

¹⁴²⁵ *Ibid.* p.53

¹⁴²⁶ *Ibid.* p.51

¹⁴²⁷ HLN ENSR, *Human Health Risk Assessment Point Cook Foreshore, Former Fire Training Area, RAAF Williams, Point Cook, Victoria*, 2 July 2007, p.ES2

¹⁴²⁸ AECOM Australia Pty Ltd, *RAAF Base Williams, Pt Cook – Stage 3/4 Remediation and Validation Works – Remedial Action Plan*, November 2010, p.25

- Aeration delivery system: The purpose of the aeration delivery system was to allow aeration and enhancement of the intrinsic bioremediation capacity of groundwater that would have otherwise discharged directly into Port Phillip Bay. It also allowed the stimulation of aerobic degradation of dissolved phase organic compounds that are amenable to such degradation processes prior to groundwater migrating beyond the site's boundary¹⁴²⁹
- Cut-off wall installation: A sheet pile cut-off wall was installed to further limit the potential migration of contaminants towards the bay. The wall was keyed into the underlying clays and the sheet piles were considered sufficient to withstand the subsurface conditions for up to ten years¹⁴³⁰
- Chemical oxidation trial¹⁴³¹
- Shoreline regression protection.¹⁴³²

A factsheet produced by the Department of Defence indicates that further remediation was provided by 'thermal desorption' off-site, which involves direct and / or indirect heating of contaminated soil to destroy the contaminants of concern. There is no discharge of contaminants to the environment with this process and it results in material being suitable for re-use on the site as backfill.¹⁴³³

The Department of Defence's submission to the Commonwealth's 'Public Works Committee hearing into remediation works at RAAF Base Williams, Point Cook, Victoria' provides greater detail on this method of remediation:

The excavation and ex-situ thermal desorption method of remediating the contaminated solid and DNAPL [*dense non-aqueous phase liquid*] is the preferred option. The cost and time of this approach is broadly comparable with other proposed methodologies but the method offers a higher degree of certainty in achieving the necessary level of remediation. This method of remediation also has a proven track record in Australia compared with the other options considered and large scale projects have been successfully undertaken by industry in NSW and Victoria.¹⁴³⁴

At paragraphs 42-43, the project scope is described as follows:

The remediation involves the excavation of contaminated soil and removal of approximately 950,000 litres of DNAPL and the subsequent thermal treatment of the material at a temporary built facility, utilising heat to break down the contaminants to acceptable levels. Once treated, the validated soil will be returned to the ground and the area rehabilitated.¹⁴³⁵

1429 Ibid.

1430 Ibid.

1431 Ibid. p.26

1432 Ibid.

1433 Department of Defence, *What's happening at RAAF Base Williams, Point Cook?*, Factsheet, available online at www.defence.gov.au/id/_Master/docs/PointCook/PointCookFAQ17February2014.pdf (viewed March 2016)

1434 Department of Defence, Submission No. 1 to Parliamentary Standing Committee on Public Works, *Contamination Remediation Works Former Fire Training Area RAAF Base Williams, Point Cook, Victoria*, June 2011, pp.7-8

1435 Ibid. p.10

In a community consultation flyer released in May 2015 the soil and groundwater treatment was deemed to be completed. Plant and equipment associated with the remediation of the training site was in the process of being removed.¹⁴³⁶

The remediation project treated approximately 40,000 cubic metres of soil and 15,000 kilolitres of groundwater affected by contamination. The Department of Defence stated that further monitoring of groundwater conditions at the training site would take place to ensure the success of the remediation works. Additionally, future groundwater monitoring works will continue to be assessed by environmental scientists and technical advisors, including an EPA Victoria-accredited auditor.¹⁴³⁷

Cost of remediation

According to the Department of Defence's submission to the Public Works Committee, the estimated cost of the project was \$27.3 million. This includes remediation works costs, laboratory validating costs, management fees, and technical expertise costs and contingencies.¹⁴³⁸ According to the EnviroPacific Services website, the project cost \$32 million.¹⁴³⁹

10.6.2 Jersey Airport, United Kingdom

In 1993, tests on the island of Jersey discovered that activities at a fire training ground at Jersey Airport had contaminated groundwater in surrounding properties.¹⁴⁴⁰ The sources of the contamination were PFOS in firefighting foam manufactured by 3M and contaminants from waste oil and other combustible fuels burned during firefighting training¹⁴⁴¹ and transported by rainwater.¹⁴⁴² The contaminants were a combination of inorganic, organic and microbiological materials (such as nitrates, pesticides and E. coli).¹⁴⁴³

In September 2000, 3M met with States of Jersey officials and Members of the Jersey Harbours and Airport Committee. During the meeting Jersey's Medical Officer of Health obtained information on the foam's effect on human health, animal health and aquatic life.¹⁴⁴⁴ Shortly after 3M ceased making PFOS and stopped supplying its foam to airports (see also Chapter 9).

¹⁴³⁶ Department of Defence, *What's happening at RAAF Base Williams, Point Cook?*, Factsheet, May 2015

¹⁴³⁷ Department of Defence, *What's happening at RAAF Base Williams, Point Cook?*, Factsheet, August 2012

¹⁴³⁸ Department of Defence, Submission No. 1 to Parliamentary Standing Committee on Public Works, *Contamination Remediation Works Former Fire Training Area RAAF Base Williams, Point Cook, Victoria*, June 2011, p.14

¹⁴³⁹ EnviroPacific Services, *Award Success for Point Cook*, www.enviropacific.com.au/october-2015/ (viewed 24 February 2016)

¹⁴⁴⁰ States of Jersey, *Jersey Airport: Fireground Remediation – Deed of Settlement*, Jersey, 19 October 2004 (this Deed of Settlement was put to the vote in the States Assembly on 18 January 2005 and passed), paragraph [3.1]

¹⁴⁴¹ Ibid. Paragraphs [7.1] – [7.2]

¹⁴⁴² Ibid. Paragraph [4.5]

¹⁴⁴³ Ibid. Paragraph [3.4]

¹⁴⁴⁴ Ibid. Paragraph [4.2]

The States of Jersey devised a remediation plan, including cleaning the contaminated shale and soil in the training ground and ensuring that water could no longer run through it and contaminate surrounding areas.¹⁴⁴⁵ It was also discovered that the majority of the foam which had dissolved into groundwater and rainwater had travelled under a sea wall and onto the nearby beach.¹⁴⁴⁶ Unburnt fuel, partially burnt fuel and heavy metals remained in the shale.¹⁴⁴⁷

Following this a four-part scheme was put in place to build a new fire training ground involving:

- Remediating the site by lifting around two metres of contaminated shale / rock, putting it on an impermeable base, covering it with soil and grass, and leaving it as a protective bund on the outside edge of the training ground
- Inserting a deep concrete wall to prevent groundwater running through the training ground
- Placing a concrete cap on top of an impermeable base
- Installing a new fire training rig based on gas or oil.¹⁴⁴⁸

The final phase was completed in September 2004.¹⁴⁴⁹ The States of Jersey also provided bottled water to residents,¹⁴⁵⁰ then connected affected households to a new water main.¹⁴⁵¹

The total cost of remediation and building the new fire training ground was £6.4 million (\$12.5 million), of which £2.6 million (\$5.1 million) was offset by a settlement from 3M.¹⁴⁵²

Testing from across the island revealed PFOS contamination in the drinking water of between below 1 microgram per litre and 98 micrograms per litre. Although the levels varied they remained consistent over time, confirming the persistent nature of PFOS¹⁴⁵³ (see also Chapter 9).

Knapton and Cook argue that the major innovative feature of the new training ground is the way in which it combines several technologies to ensure that water is stored beneath the ground during winter in an ‘Evaporative Storage Cell’ and

¹⁴⁴⁵ Ibid. Paragraph [4.8]

¹⁴⁴⁶ Ibid. Paragraph [4.5]

¹⁴⁴⁷ Ibid. Paragraph [4.6]

¹⁴⁴⁸ Ibid. Paragraph [4.8]. Dr Roger Klein gave the Committee an overview of this process during a public hearing: Dr Roger Klein, *Transcript of evidence*, 19 June 2015, p.253

¹⁴⁴⁹ Ibid. Paragraph [5.2]

¹⁴⁵⁰ Dr Roger Klein, *Transcript of evidence*, 19 June 2015, p.254; WRc Swindon, *Survey of the prevalence of perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) and related compounds in drinking water and their sources*, WRc, Swindon UK, 2008, p.16

¹⁴⁵¹ Ibid. Paragraph [6.1]

¹⁴⁵² Ibid. Paragraph [6.1]. Dr Roger Klein informed the Committee that “very unusually, the States of Jersey published in the State gazette the Deed of Settlement which outlined the cost of all the remediation strategies”: Dr Roger Klein, *Transcript of evidence*, 19 June 2015, p.252

¹⁴⁵³ WRc Swindon, *Survey of the prevalence of perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) and related compounds in drinking water and their sources*, WRc, Swindon UK, 2008, p.16

then used for training or evaporated during summer.¹⁴⁵⁴ (During winter the water level in the storage cell rises because rainfall outweighs evaporation.¹⁴⁵⁵) These technologies include water handling systems, lining systems, control systems and construction materials as well as proof testing.¹⁴⁵⁶

Essentially, the new ground is divided into two ‘zones’, with Knapton and Cook noting that ‘fire training takes place in the inner zone and the outer zone acts principally as the evaporative cell’.¹⁴⁵⁷ This means that the new training ground is ‘water neutral’ — rainwater is harvested for fire training, as the water drains through permeable pavers lining the training ground, and then either evaporates or is cleaned and discharged into the public sewer if used during training.¹⁴⁵⁸

10.6.3 PFC contamination in the Möhne and Ruhr rivers, North Rhine-Westphalia, Germany

As outlined in Chapter 2, the Committee travelled to Germany between 30 November and 4 December 2015.¹⁴⁵⁹ The purpose of the trip was to learn from German authorities about how they have responded to PFC contamination and best practice approach to remediation.

One of the sites the Committee visited was the region around the Möhne and Ruhr rivers in the state of North Rhine-Westphalia. In this region in 2006, industrial waste with a high concentration of PFOA was manufactured into a fertiliser by a recycling company. This fertiliser was then used by farmers on agricultural land near the Möhne River.¹⁴⁶⁰

PFCs in drinking water

A University of Bonn study traced the pollution back to a field near the town of Brilon where the contaminated fertiliser had been used.¹⁴⁶¹ The PFOA found its way into the water cycle after rain washed the topsoil into two creeks which flow into the Möhne River.¹⁴⁶² According to the study, this led to ‘... the consecutive pollution of Lake Möhne and the Ruhr River and of corresponding drinking waters’.¹⁴⁶³

1454 Knapton J and Cook I, *Innovative features of Jersey airport’s new fire training ground*, paper presented to 8th International Conference on Concrete Block Paving, 6-8 November 2006, San Francisco, USA, p.109

1455 Ibid.

1456 Ibid. p.103

1457 Ibid. p.109

1458 Ibid. p.103

1459 Further details about this study tour are provided in Appendix 3

1460 Michael Wilhelm et al. ‘Assessment and management of the first German case of a contamination with Perfluorinated Compounds in the region Sauerland, North Rhine-Westphalia’ (2008)(71) *Journal of Toxicology and Environmental Health, Part A*, p.725

1461 Skutlarek, Exner and Farber, ‘Perfluorinated Surfactants in Surface and Drinking Waters’ (2006)(13) *Environmental Science and Pollution Research Journal*, p.304

1462 Ibid.

1463 Ibid.

The Ruhr and its tributaries supply drinking water for approximately 4.6 million people.¹⁴⁶⁴ In 2006, the German Drinking Water Commission published guidelines on levels of PFOS and PFOA in drinking water, giving a value of 0.3 micrograms per litre as the life-long safe level of exposure.¹⁴⁶⁵ The University of Bonn study found PFOA contamination at several times these levels in the drinking water of towns and cities along the affected length of the Ruhr.¹⁴⁶⁶ The drinking water of the town of Arnsberg, near the source of the contamination was found to have particularly high levels of PFOA.¹⁴⁶⁷

A human biomonitoring study with mother-child pairs and men revealed that increased PFOA exposure via drinking water led to four-to-eight times higher PFOA levels in plasma compared to non-exposed groups.¹⁴⁶⁸ This contamination was at a level considered unsafe and in July 2006, infants and pregnant women were supplied with bottled drinking water.¹⁴⁶⁹

Remediation

The Committee visited the water works at Möhnebogen, which partly supplies drinking water for the town of Arnsberg. The Committee was told that remediation work began in 2006 and focussed primarily on lowering PFOA levels in the drinking water. This was achieved through a process known as ‘activated carbon filtration’, where unprocessed drinking water is pumped through tanks containing activated carbon granules. ‘Activated’ refers to the increased surface area of the carbon. As the water passes through the carbon, PFC molecules are absorbed due to the carbon’s large surface area.¹⁴⁷⁰

The Committee was told that this approach has reduced the amount of PFOA entering people’s systems through drinking water. A 2008 study showed a decrease in blood plasma levels among the same people previously measured. The study noted:

PFOA concentrations of residents markedly decreased within the two years between the blood examinations in Arnsberg as well as in the reference areas ($p < 0.001$). In 2008, mean PFOA plasma levels of residents in Arnsberg were 2.9 (children)

¹⁴⁶⁴ Ruhrverband, *About us, facts and figures* (www.ruhrverband.de/en/ueber-uns/zahlen-fakten/) viewed 26 February 2016

¹⁴⁶⁵ Drinking Water Commission of the German Ministry of Health at the Federal Environment Agency, *Provisional evaluation of PFT in drinking water with the guide substances (PFOA) and (PFOS) as examples*, (statement, 21 June 2006), p.5 (available online at: www.umweltbundesamt.de/sites/default/files/medien/pdfs/pft-in-drinking-water.pdf) Viewed 26 February 2016)

¹⁴⁶⁶ Skutlarek, Exner and Farber, ‘Perfluorinated Surfactants in Surface and Drinking Waters’ (2006)(13) *Environmental Science and Pollution Research Journal*, p.303 (Table 7)

¹⁴⁶⁷ *ibid*

¹⁴⁶⁸ Michael Wilhelm et al. ‘Assessment and management of the first German case of a contamination with Perfluorinated Compounds in the region Sauerland, North Rhine-Westphalia’ (2008) (71) *Journal of Toxicology and Environmental Health, Part A*, p.725

¹⁴⁶⁹ Paul Krofges et al, ‘PFOS/PFOA contaminated megasites in Germany polluting the drinking water supply of millions of people’ (2007) (69) *Organohalogen Compounds*, p.879

¹⁴⁷⁰ This process is explained in: Parsons Brinckerhoff, *Stage 3 Risk Assessment and Remediation Design at Army Aviation Centre Oakey Remediation Action Plan, Perfluorocarbons in Groundwater*, Department of Defence (2013), p.25

5.0 (mothers) and 3.8 (men) times higher compared with the control groups. For comparison, in 2006 the PFOA concentrations in Arnsberg were 4.5-8.3 times higher compared with controls.¹⁴⁷¹

10.6.4 Düsseldorf

In Germany, the Committee met with German agencies to further explore concerns around PFOS and PFOA and also see first-hand the more advanced remediation programs in place at a number of airports. As in Australia, most contamination in Europe is the result of airport fire training. Aeroplane fires cannot be extinguished by water alone because of fuels and other chemicals that drive the fire (see Chapter 4). Fire training drills include firefighting foams and the Committee learnt that there is a requirement to release some foam from trucks regularly to ensure the equipment is in full working order.

The Committee travelled to Düsseldorf to hear about how authorities have dealt with PFC contamination at several sites across the city, in particular at Düsseldorf Airport and at the site of a fire in the suburb of Gerresheim.

Düsseldorf Airport

The Committee visited Düsseldorf Airport to learn about the efforts to remediate two fire training areas and the site of an aircraft accident where firefighting foam was used. The city of Düsseldorf has identified three major contamination plumes in the groundwater emanating from these sites, with the largest from the fire station merging with another plume from the firefighting training area. In the worst affected area, the PFC contamination in the groundwater was between 10,000-20,000 nanograms per litre.¹⁴⁷² This has resulted in the City of Düsseldorf prohibiting the use of groundwater in the area for irrigation and the consumption of fish from Lake Kaiserswerth, a lake in the affected area.¹⁴⁷³

The Committee was informed that remediation work has included the deconstruction of the firefighting training area. This involved:

- Removal of the concrete slab
- Removal of up to two metres of topsoil
- Placement of a plastic barrier in the soil to help prevent further spread of groundwater contamination.

¹⁴⁷¹ Brede et al, 'Two-year follow-up biomonitoring pilot study of residents' and controls' PFC plasma levels after PFOA reduction in public water system in Arnsberg, Germany' (2010) (213), *International Journal of Hygiene and Environmental Health* 217, p.220

¹⁴⁷² City of Düsseldorf Environmental Office, *PFC Groundwater Contamination Lohausen / Kaiserswerth (airport)*, Presentation to the Environment, Natural Resources and Regional Development Committee, Düsseldorf, 4 December 2015

¹⁴⁷³ City of Düsseldorf, *Prohibition of groundwater promotion and use in some areas of Düsseldorf Lohausen/ Kaiserswerth, as well as the prohibition of the use of water from the Kaiserswerth Lakes for irrigation purposes*, (www.duesseldorf.de/stadtrecht/1/19/19_310.shtml), viewed 8 March 2016

Groundwater remediation has also taken place with the installation of a groundwater treatment plant. The Committee was told that the contaminated groundwater travels through a number of stages. Firstly, the water is pumped through a gravel filter, then through an ‘ion exchange resin’, which works by passing water through synthetic beads with an open molecular structure. Exchanging ions disrupts the structure of contaminants such as PFOS and PFOA.¹⁴⁷⁴ Finally, the water is put through an activated carbon filter and returned to a local water source. The Committee was told that an estimated 90 per cent of PFCs were eliminated through this process.¹⁴⁷⁵

The remediation work is ongoing and the City of Düsseldorf continues to monitor PFC levels in the affected areas.

Gerresheim

In 2001, a large fire at a warehouse in the Düsseldorf suburb of Gerresheim was extinguished with firefighting foam containing PFOS and PFOA. The foam leached into the groundwater, which travelled through the topsoil causing a large plume of pollution. A paper from 2010 outlined the pollution at the site as follows:

A contamination of the groundwater with PFCs is already verified for a distance of up to 400 metres from the former storage depot. The level of contamination is as high as 89,000 nanograms per litre and thus drastically exceeding the discussed generic precautionary value of 100 nanograms per litre for drinking water.¹⁴⁷⁶

Tests were also conducted on fruits and vegetables grown near to the site. It was found that they had absorbed PFCs through the contaminated groundwater and contained PFC residues of up to 32 micrograms per kilogram.¹⁴⁷⁷ The German Federal Institute for Risk Assessment has a guideline for daily tolerable intake of PFOS and PFOA as 0.1 micrograms per kilogram of bodyweight per day.¹⁴⁷⁸ As a precautionary measure, the City of Düsseldorf banned the extraction of groundwater and its use for irrigation in the affected area.¹⁴⁷⁹

The Committee was told that preliminary remediation work on the site has begun. This involves digging wells and pumping the contaminated groundwater through an activated carbon filter. The remediated water is then discharged into the sewer system.¹⁴⁸⁰

¹⁴⁷⁴ David Alchin and Heather Wansbrough, *Ion Exchange Resins*, New Zealand Institute of Chemistry (1998), p.1

¹⁴⁷⁵ City of Düsseldorf Environmental Office, *PFC Groundwater Contamination Lohausen / Kaiserswerth (airport)*, Presentation to the Environment, Natural Resources and Regional Development Committee, Düsseldorf, 4 December 2015

¹⁴⁷⁶ Weber et al, ‘PFOS and PFC pollution from use of fire fighting foam in a major fire in Düsseldorf/Germany—human exposure and regulatory actions’, (2010) *Organohalogen Compounds*, p.3

¹⁴⁷⁷ Ibid.

¹⁴⁷⁸ German Federal Institute for Risk Assessment, *High levels of perfluorinated organic surfactants in fish are likely to be harmful to human health*, 2006, p.2. An English summary of the Guidelines is available online at: www.bfr.bund.de/en/press_information/2006/21/high_levels_of_perfluorinated_organic_surfactants_in_fish_are_likely_to_be_harmful_to_human_health-8172.html viewed 24 February 2016

¹⁴⁷⁹ City of Düsseldorf Environmental Office, *PFC Groundwater Contamination Lohausen / Kaiserswerth (airport)*, Presentation to the Environment, Natural Resources and Regional Development Committee, Düsseldorf, 4 December 2015

¹⁴⁸⁰ City of Düsseldorf Environmental Office, *PFC Soil and groundwater contamination in Düsseldorf Gerresheim - Current state of Progress*, Presentation to the Environment, Natural Resources and Regional Development Committee, Düsseldorf, 4 December 2015, p.15

10.6.5 Nürnberg

The Committee also visited Nürnberg Airport where it met with Dr Heinrich Schoger, a Consulting Engineer at Gibs Geologists and Engineers. Dr Schoger delivered a presentation on the rehabilitation process at the airport.¹⁴⁸¹ The following information is based on Dr Schoger's presentation.

This process began by testing soil and groundwater for PFCs. The testing regime was extensive with samples taken from the fire PAD, the water pit and soil throughout the site, including the substrata. A total of 102 permanent monitoring wells were built as part of this process.

The sampling is continuing and the results contribute to a database to track the movement, changing properties and, it is hoped, a reduction in PFC contamination. In addition, topographical maps are used to analyse the course of contamination, through wind and water run-off. Once the data is evaluated a course of action is then determined with options including:

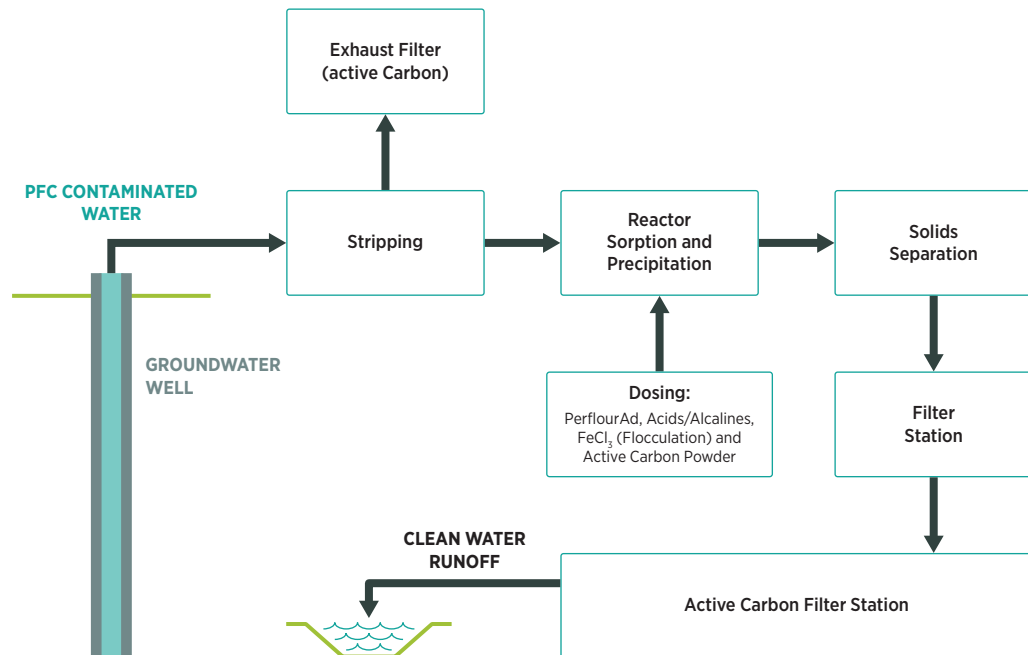
- Controls on the agricultural products that can be grown in the area
- Testing and controls on mushrooms and berries in the adjoining forest
- Isolating polluted grass so it cannot enter the food cycle by being eaten (this is a precautionary containment measure rather than a response to a proven problem)
- Ongoing soil improvement by mulching.

It was determined that urgent remediation of Nürnberg Airport was required, with groundwater and sludge a priority. PFCs are removed via an on-site water treatment system, a complex and expensive process costing around €280 (around \$430) per tonne of sludge. However, there has not been a concerted effort to clean-up soil at Nürnberg Airport. The land is not used for farming or any other purpose, although contamination has spread to the adjoining forest.

The Committee was interested in Dr Schoger's views on containing contaminated soil with a clay cap of top soil and vegetation. He replied that in his opinion this approach, which he associates with techniques common in the 1970s, does not work.

¹⁴⁸¹ Dr Heinrich Schoger, 'Summary of the Detailed PFC-Investigation Perspectives for the Remediation of Soil & Groundwater', Presentation to the Environment, Natural Resources and Regional Development Committee, Nürnberg, 2 December 2015

Figure 10.1 PFC groundwater treatment at Nürnberg Airport



FINDING 116: That remediation of contaminated training sites is very expensive, time consuming, and does not remove all traces of PFOS and PFOA.

FINDING 117: That the current remediation and containment processes at Fiskville are out of date compared to processes used in Germany and by the Australian Defence Force.

FINDING 118: That based on similar examples it is expected that extensive remediation work at Fiskville will be recommended by the EPA Victoria 53X audit. Overseas and Australian Defence Force experiences show remediation can take many years with successful removal of contaminants such as PFOS and PFOA difficult to achieve.

AT A GLANCE

Background

This Chapter commences with a discussion about the need for justice for those that have been aggrieved by the unsafe operations at the CFA Training College at Fiskville. It then explores what justice means for those affected and how it can be achieved.

The next part of the Chapter deals with existing avenues of compensation (workers' compensation legislation and common law negligence) and explains why these are inadequate. It then discusses how existing workers' compensation legislation might be extended to make specific provision for firefighters, known as presumptive legislation.

The last part of the Chapter looks at the need for a redress scheme in the absence of adequate existing legal avenues. It explores the various principles and practicalities to be considered when constructing such a scheme.

This Chapter addresses Terms of Reference (5).

Key findings

- That people who have been harmed by unsafe training practices at Fiskville have a right to justice.
- That 'justice' for Fiskville's victims means something different to each person, but in most cases is more than monetary compensation.
- That Fiskville contamination affects a broader category of people than those who were engaged in firefighting training.
- That the current Victorian proclaimed disease schedule has not been updated in more than half a century.
- That existing avenues of compensation are inadequate for most Fiskville-affected persons.
- That countries throughout the world have introduced firefighter presumptive legislation to provide workers' compensation for firefighters that contract particular diseases.
- That in Victoria, all major political parties support the introduction of presumptive legislation, thereby accepting that exposure to chemicals in fires can cause certain illnesses.

11.1 Justice for Fiskville's victims

Terms of Reference (5) requires the Committee to make 'recommendations as necessary to mitigate ongoing harm and to provide justice to victims and their families'. This Chapter addresses that requirement.

Over many years the CFA allowed contamination of the Fiskville training site even though it was aware of the dangers and problems. One of the ways the CFA became aware of the problems was through commissioning reports by technical consultants. Repeatedly, inaccurate information was provided to regulators and no information was provided to those that were being exposed. It is clear that Board members and senior executives knew of the contamination but did nothing (see Chapter 6). Seemingly, it was not considered an important issue and no questions were asked (for example, when AirServices Australia withdrew from an undertaking to invest a considerable amount of money in infrastructure at Fiskville).

The link between cancers and other illnesses and chemical exposure in populations is always a difficult one - particularly proving the link. This takes time as the effects of chemicals on the human population begin to emerge. Evidence is needed and this is often only found after many years through observation in epidemiological studies rather than proof in a laboratory. Such a link was made in the Monash University Fiskville Firefighters' health study (discussed in Chapter 9).

The link between cancers and other illnesses and chemical exposure in individuals is more difficult to establish. Under current law the individual must provide evidence of causation - that is, that exposure to a particular chemical occurred at a particular time and place, and that this resulted in the cancer they have been diagnosed with.

The need to overcome these problems has been recognised in other circumstances. For example, people exposed to asbestos receive a letter of 'possible exposure to asbestos' and can go on a register that provides the evidence in a future compensation case.

In the case of Fiskville the fact that the CFA has no records of the chemicals used or when they were used means individuals cannot provide the 'proof' of exposure and cannot get over the first hurdle of a claim. The CFA's conduct should not prevent individuals receiving redress, which is why the Committee has explored options to provide redress that overcome the evidentiary challenges associated with existing avenues of compensation.

FINDING 119: That people who have been harmed by unsafe training practices at Fiskville have a right to justice.

11.2 What is justice?

'Justice' is defined in the Macquarie Dictionary as 'moral rightness' or 'equitableness'. People are treated justly if they are given what they deserve in accordance with appropriate moral standards. However, the Committee considers that 'justice' for Fiskville's victims will mean something different to each of them.

Many of the witnesses were expressly asked what justice meant to them. Not surprisingly, the responses varied. The evidence regarding justice to victims fell into four broad categories:

- A direct personal response that acknowledges the differing needs of those who seek redress from the CFA
- Access to appropriate health treatment (physical and mental)
- A financial payment
- The CFA taking responsibility for its actions and acknowledging that its actions and past wrongs have caused harm.¹⁴⁸²

Mr Michael Whelan, who worked for the CFA between 1978 and 1994 and had dealings with the CFA Board and senior management about Fiskville in his capacity as a UFU representative, told the Inquiry that he "... would just like the CFA to wear some pain in relation to the rest of it, and probably as much as anything I think an apology".¹⁴⁸³ However, in answering a question from the Chair, Mrs Diane Potter, whose husband Brian died as a result of cancers that she attributes to his time at Fiskville as an instructor, questioned the value of an apology at this time:

The CHAIR—Have you had an apology from the CFA?

Mrs POTTER—That does not mean anything.

The CHAIR—You have or you have not?

Mrs POTTER—No, and I would not expect that, so, no.¹⁴⁸⁴

Mrs Potter wants acceptance by the CFA that "... there is a problem [at Fiskville] and Brian was right".¹⁴⁸⁵

Others, like Mr David Card who was at the Fiskville State School in the 1970s and now has testicular cancer, are seeking answers:

The things that I would like to see, not just on my own behalf but on everyone's behalf are: that if there is a link between the time spent at Fiskville and any illnesses of any nature, the inquiry provides those people with justice and answers ...¹⁴⁸⁶

¹⁴⁸² Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.1 and 5

¹⁴⁸³ Mr Michael Whelan, *Transcript of evidence*, 15 June 2015, p.217

¹⁴⁸⁴ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.24

¹⁴⁸⁵ *Ibid.* p.20

¹⁴⁸⁶ Mr David Card, *Transcript of evidence*, 18 May 2015, p.47

A number of witnesses thought that Fiskville victims should receive financial compensation but found it difficult to quantify the amount. Mr Kevin Etherton, a live-in instructor at Fiskville between 1985 and 1988, whose wife has breast cancer, said:

You mentioned compensation. How do you put a value on compensation? People have suffered fatalities within their families. I know in our own family we have excessive costs in travel, in medical and in surgical. We need some form of compensation to cover us for those cost[s]. We are out of pocket. I do not know how you would put a figure on it or what form of compensation it would be, but surely all the people who have been exposed to these substances, which it is evidence it has been covered up, are eligible for some sort of compensation.¹⁴⁸⁷

Mrs Deborah Etherton told the Committee that she was disappointed that the CFA had not provided information about contamination to people at Fiskville:

The CFA became aware of possible health risks in the early 1990s and did not take any proactive measure to notify staff past and present, volunteers and/or their families. If action had have been forthcoming, perhaps this inquiry would be unnecessary. Had the CFA displayed a negligence and a failure of duty of care? I believe yes, by not passing on information obtained in the early 1990s.¹⁴⁸⁸

The Committee has been left with a clear sense that life-long members of the 'CFA family' now feel betrayed by the CFA, not only because of what they were exposed to at Fiskville but because of the CFA's failure to inform them when it had relevant information.¹⁴⁸⁹

FINDING 120: That 'justice' for Fiskville's victims means something different to each person, but in most cases is more than monetary compensation.

Fiskville-affected persons

As part of the Inquiry, the Committee received the advice of Mr Alan Clayton, an independent workers' compensation expert, who produced a report titled, 'Justice for Fiskville-affected persons: Approaches and options'.¹⁴⁹⁰

The Committee heard evidence from people within the following categories regarding how the CFA training operations affected them. Mr Clayton's report uses these categories to identify who could be termed 'Fiskville-affected persons':

- Volunteer firefighters who provided training to others and engaged in training
- Paid firefighters who provided training to others and engaged in training
- Employees of private companies who provided training to others and engaged in training

¹⁴⁸⁷ Mr Kevin Etherton, *Transcript of evidence*, 18 May 2015, p.37; see also Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.77 and Dr John Ferrier, *Transcript of evidence*, 25 May 2015, p.104

¹⁴⁸⁸ Mrs Deborah Etherton, *Transcript of evidence*, 18 May 2015, p.35

¹⁴⁸⁹ See generally Chapter 5

¹⁴⁹⁰ Mr Clayton also gave evidence at a public hearing on 28 January 2016

- Employees of other government agencies who provided training to others and engaged in training
- Families of firefighters who lived at Fiskville
- Landowners and others who lived in the vicinity of Fiskville
- People who attended Fiskville State School.¹⁴⁹¹

Any person in one of these categories who can demonstrate that they have suffered harm of some kind because of Fiskville deserves justice.

Presumptive legislation for firefighters would only cover some Fiskville-affected persons on the list above. That is, it would be limited to firefighters and not cover others, such as families of firefighters and neighbouring landowners.

FINDING 121: That Fiskville contamination affects a broader category of people than those who were engaged in firefighting training.

11.3 Existing avenues of compensation

Under existing Victorian law, people at Fiskville may be entitled to justice at least in the form of financial compensation to cover medical expenses and lost income. However, many face insurmountable obstacles that may mean existing avenues of compensation are inadequate. The Committee has concluded that existing avenues are inadequate to provide real justice to Fiskville's victims.

People who provided or received training at Fiskville and now suffer from ill health which they attribute to their time at the site face a number of obstacles in seeking financial compensation under the existing law. To understand why this is the case, it is necessary to analyse the applicable legal rules.

There are two relevant avenues through which compensation is potentially available to some of Fiskville's victims.¹⁴⁹² The first is under the statutory workers' compensation system; the second is to bring a claim in common law alleging negligence. Each is considered in turn.

11.3.1 Workers' compensation

Victorian workers' compensation law dates back well before 1971.¹⁴⁹³ When Fiskville commenced operating the applicable law was the *Workers Compensation Act 1958*. In 1985, that Act was largely replaced by the *Accident Compensation Act 1985* which was, in turn, largely replaced with effect from 1 July 2014 by the *Workplace Injury Rehabilitation and Compensation Act 2013*. For the purposes of

¹⁴⁹¹ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.1

¹⁴⁹² That is, those who fall within categories (1)-(5) of Mr Clayton's categories of 'Fiskville-affected persons' above

¹⁴⁹³ The first such statute was the *Workmen's Compensation Act 1914* (Victoria)

this Final Report, the basic features of these various statutes are largely identical and therefore reference is made to the *Workplace Injury Rehabilitation and Compensation Act 2013* as it is current.

Under the *Workplace Injury Rehabilitation and Compensation Act 2013*, a 'worker' is entitled to be compensated if they have suffered an 'injury' and that injury arises 'out of or in the course of employment'.¹⁴⁹⁴ If a worker sustains an injury which 'results in or materially contributes to the death of the worker', the worker's dependants are entitled to be compensated under the *Workplace Injury Rehabilitation and Compensation Act 2013*.¹⁴⁹⁵

'Worker' is defined as a person who performs work for an employer at the employer's direction whether under a contract of employment or otherwise or is deemed to be a worker under the Act.¹⁴⁹⁶ This would cover anyone who was paid to work at Fiskville; there is a real question about whether it would cover volunteers because of uncertainty about the meaning of 'or otherwise'. The case law about whether a person working in a voluntary capacity is entitled to workers' compensation if injured is complex.¹⁴⁹⁷

'Injury' includes 'a disease contracted by a worker in the course of the worker's employment'.¹⁴⁹⁸ 'Disease' in turn means 'any physical or mental ailment, disorder, defect or morbid condition whether of sudden or gradual development'.¹⁴⁹⁹ This would include cancer and many other conditions suffered by those that worked and trained at Fiskville.

The *Workplace Injury Rehabilitation and Compensation Act 2013* makes special provision for compensation in cases where a worker suffers a disease due to the nature of their employment. Under s. 50(1), a worker who suffers a disease 'due to the nature of any employment in which the worker was employed' is entitled to compensation and, if the disease causes or materially contributes to the worker's death, their dependents are entitled to be compensated.¹⁵⁰⁰ However, s. 50(2) provides that a disease is only considered to be compensable if 'the nature of the employment gave rise to a significantly greater risk of the worker contracting the disease than had the worker not been employed in employment of that nature'.¹⁵⁰¹

This aspect of workers' compensation law has given rise to a deal of litigation and the questions of whether a 'disease' is due to the nature of a person's employment gives rise to complex medical and legal issues.¹⁵⁰² As with all other aspects of workers' compensation law (such as whether the person claiming is a

¹⁴⁹⁴ *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria), s. 39(1). The equivalent provision in the *Accident Compensation Act 1985* (Victoria) was s. 82

¹⁴⁹⁵ *Ibid.* s. 39(2)

¹⁴⁹⁶ *Ibid.* s. 3 and Schedule 1

¹⁴⁹⁷ See, for example, *Teen Ranch Pty Ltd v Brown* (1987) 87 IR 308; *Dietrich v Dare* (1980) 54 ALJR 388

¹⁴⁹⁸ *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria), s. 3

¹⁴⁹⁹ *Ibid.*

¹⁵⁰⁰ *Ibid.* s. 50(1); see also *Accident Compensation Act 1985* (Victoria), s. 86

¹⁵⁰¹ There was no equivalent of s. 50(2) of the *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria) in the earlier statutes. This may be very significant for Fiskville workers as the current Act is limited to employment post 1 July 2014 - see *Workplace Injury Rehabilitation and Compensation Act 2013*, (Victoria), s. 7(1)

¹⁵⁰² See Richard Johnstone, Liz Bluff and Alan Clayton, *Work Health and Safety Law and Policy* (Thomson Reuters, 3rd edition, 2012), pp.857-869

'worker'), the burden of proof rests on the worker to establish, on the balance of probabilities (that is, more likely than not), that they have suffered a disease 'due to' their employment. Where the relevant exposure occurred many years ago, a claimant will be entirely reliant on the records of their (former) employer to prove the causation aspects of the case. In the absence of records, this will often be impossible. As has been noted in Chapters 3 and 4 of this Final Report, the CFA has no records of what it burnt at Fiskville in the 1970s and 1980s.

The practical difficulties of proving causation are demonstrated by the case of the late Mr Brian Potter. Mrs Diane Potter gave evidence that her late husband had "... put in two compensation claims through CFA's insurers, which were both declined".¹⁵⁰³ At the date of giving her evidence (18 May 2015), Mrs Potter had submitted her own independent claim and was waiting for that "... to be knocked back as well".¹⁵⁰⁴

The Committee gained an insight into the basis upon which Mr Potter's claim was rejected from the minutes of a CFA Board meeting held on 9 October 2012. At that meeting, the Acting CEO of the CFA gave the following report to the Board:

On 6 January 2012, Brian Potter lodged a WorkCover compensation claim via his solicitors Maurice Blackburn. This was submitted to CFA's Workcover Claims Agent, CGU. The assessment process undertaken by CGU included information from Mr Potter's treating doctors and two independent medical examinations. CGU has advised that the independent medical examination reports indicate that there is no relationship between the conditions suffered by Mr Potter either because of his occupation as a firefighter or solvent exposure. On this basis, CGU has denied liability.¹⁵⁰⁵

Although it is impossible to be certain, the Committee concludes that the reference to 'solvent exposure' is a reference to Mr Potter's time at Fiskville as an instructor.

Presumptive legislation: disease schedules

Mr Clayton explained how parliaments have attempted to ameliorate the difficulties faced by workers trying to prove that their diseases are work-related:

From early in the twentieth century, workers' compensation schemes attempted to deal with the difficulties for workers in demonstrating causation in relation to many occupational diseases by legislating disease schedules. These listed a number of diseases in one column and the form of workplace activity or process with which such a disease was closely associated in an adjacent column (for instance, anthrax and wool combing). If a worker contracted a disease that was listed on the schedule and worked in the associated industry then this reversed the burden of proof so that there was set up a presumption that the disease was work related. This presumption could be rebutted by an employer or insurer adducing evidence that could convince the trier of fact that there was a more likely (non-work related) cause of the disease.¹⁵⁰⁶

¹⁵⁰³ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.16

¹⁵⁰⁴ *Ibid.*

¹⁵⁰⁵ Acting CFA CEO Mr Euan Ferguson's report dated 2 October 2012 to CFA Board Meeting on 9 October 2012

¹⁵⁰⁶ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.7

The relevant Victorian provision to this effect is s. 58(1) of the *Workplace Injury Rehabilitation and Compensation Act 2013*, under which the Governor in Council, after consultation by the Minister with the Victorian Workcover Authority, may proclaim 'diseases in relation to places, processes or occupations for the purpose of this section'. The remainder of s. 58 has the effect described above by Mr Clayton.¹⁵⁰⁷

Mr Clayton explains that these disease schedules have been 'one of the more sclerotic features of Australian worker's compensation' and that Victoria's current disease schedule is 'one of the more primitive' in this country.¹⁵⁰⁸ He explains that:

The prime reason for the abject neglect in reviewing and updating disease schedules in Australian workers' compensation schemes is the lack of any process, mechanism or triggering feature for requiring and undertaking such a review.¹⁵⁰⁹

According to Mr Clayton, Victoria's current disease schedule (along with the schedules in place in some other Australian jurisdictions) is '... generally reflective of the International Labour Organisation's List of Occupational Diseases under Convention 42 created in 1934'.¹⁵¹⁰ However, he points out that '... the Victorian schedule has not been updated in more than half a century'.¹⁵¹¹

The Northern Territory has quite recently modernised its schedule based on the more up-to-date 2002 List of Occupational Diseases produced by the International Labour Organisation.¹⁵¹²

Mr Clayton points out the recent work of Professor Tim Driscoll, one of Australia's leading epidemiologists, for Safe Work Australia, which resulted in a report published in August 2015.¹⁵¹³ The resulting proposed list of deemed diseases covers 47 diseases within seven disease classes. Mr Clayton suggests that:

The process and mechanisms for reviewing and updating the disease schedules in Australian workers' compensation should, ideally be entrenched at the national level. The logical choice for a body to be vested with the responsibility is [Safe Work Australia].¹⁵¹⁴

Mr Clayton referred to the Safe Work Australia list as being "... some light on the hill [because] there is a whole range of other conditions which are seen to have that link between occupational exposure and the condition".¹⁵¹⁵

¹⁵⁰⁷ *Workplace Injury Rehabilitation and Compensation Act 2013* (Victoria), s 51(2) and (3). The equivalent provision in the *Accident Compensation Act 1985* (Victoria) was s. 87

¹⁵⁰⁸ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), pp.7-9

¹⁵⁰⁹ Ibid. p.9

¹⁵¹⁰ Ibid. p.7. International Labour Organisation Convention No. 42 is entitled *Convention concerning Workmen's Compensation for Occupational Diseases*

¹⁵¹¹ Ibid. p.7

¹⁵¹² See Regulation 5AB and Schedule 2 to the *Return to Work Regulations* (NT) made pursuant to s. 4(6)(a) of the *Return to Work Act* (NT)

¹⁵¹³ Safe Work Australia, *Deemed Diseases in Australia*, (August 2015). Professor Driscoll's work was peer reviewed by Monash University's Professor Malcolm Sim

¹⁵¹⁴ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.10

¹⁵¹⁵ Mr Alan Clayton, *Transcript of evidence*, 28 January 2016, p.3

FINDING 122: That the current Victorian proclaimed disease schedule has not been updated in more than half a century.

RECOMMENDATION 30: That the Victorian Government update the proclaimed disease schedule in light of changes in disease schedules that have been made in other jurisdictions.

Volunteers

As noted above, a person must fall under the definition of a 'worker' to be able to access workers' compensation ('a person who performs work for an employer under a contract of employment or otherwise'). A CFA volunteer firefighter does not work under a 'contract of employment' with the CFA. However, it is arguable that a volunteer 'performs work' for the CFA 'otherwise'.

Whether that is the case or not, there are statutory provisions that make special provision for compensating volunteers who suffer injuries in the course of their work with the CFA. Section 63(1)(a) of the *Country Fire Authority Act 1958* enables 'a casual firefighter' to be compensated if they suffer personal injury 'by accident arising out of or in the course of firefighting at any fire'. This provision has no application to a volunteer who becomes ill as a result of exposure to chemicals while training at Fiskville because training does not fall under the definition of 'firefighting' in section 62 of the *Country Fire Authority Act 1958*. Further, it is not clear that a disease is a 'personal injury' for the purposes of the *Country Fire Authority Act 1958*.¹⁵¹⁶

Section 63(1)(b) of the *Country Fire Authority Act 1958* makes similar provision for a 'volunteer auxiliary worker' who suffers personal injury 'by accident arising out of or in the course of the performance of any authorised activity'. A 'volunteer auxiliary worker' means a person appointed as such by the secretary of the brigade to which they belong.¹⁵¹⁷

The Committee has no evidence of who has been appointed in this way. Assuming for the sake of this Final Report that volunteers who trained at Fiskville were so designated, and subject to the caveat around the meaning of 'personal injury' discussed above, they may be entitled to compensation under the *Country Fire Authority Act 1958* provided that training at Fiskville falls under the definition of 'authorised activity'. That term is defined in s. 3 of the *Country Fire Authority Act 1958* as any 'activity performed for the welfare of a brigade ... and authorised by the secretary of the brigade'.

Once again, assuming that this criterion is satisfied (along with all of the others that have been discussed), a volunteer will be entitled to be paid compensation at the discretion of the CFA, the decision of which is 'final and without appeal'.¹⁵¹⁸ The evidence before the Committee from a law firm with experience representing claimants is that the mechanism is far from ideal from the viewpoint of a claimant as:

¹⁵¹⁶ Section 62 provides that 'personal injury' includes death

¹⁵¹⁷ *Country Fire Authority Act 1958* (Victoria), s. 17A

¹⁵¹⁸ *Ibid.* s. 63(5)

...the two issues we have found in relation to these claims are that, first of all, there is a lack of transparency, in our view, about how the process will operate, given that the provision provides essentially a fairly general authority for the CFA to respond how it deems appropriate, and secondly, there are still those causation issues in relation to the way the workers' compensation operates.¹⁵¹⁹

Conclusion: workers' compensation

In the absence of an expanded disease schedule, employee firefighters who worked at Fiskville and have contracted cancer or other serious illnesses face significant obstacles in obtaining compensation under workers' compensation legislation. The principal obstacle is proving that their illness was caused by their exposure at Fiskville. Although the Committee is not privy to the reason why the late Mr Potter's claim was rejected by the CFA, it is likely that he was unable to prove this causation requirement.

These concerns are far from theoretical. Mr Andrew Baker, a Senior Associate at Slater and Gordon Lawyers, informed the Committee that he had analysed workers' compensation claims made by 27 firefighters of whom 23 were current or former employees of the MFB, three were current or former employees of the CFA and one was a former volunteer firefighter. Of the 27 claims, only four were accepted; of the 23 that were rejected, approximately three-quarters were lodged by firefighters suffering from cancers with a confirmed association with firefighting.¹⁵²⁰

A volunteer who trained at Fiskville and is now ill will face that obstacle of causation and, as discussed above, a number of additional obstacles in seeking compensation under the *Country Fire Authority Act 1958*.

11.3.2 Common law negligence

In theory, a firefighter, or other person, who trained at Fiskville and has suffered illness can bring a claim at common law for damages alleging negligence on the part of the CFA. To be successful, the person would have to prove:

- That they were owed a duty of care by the CFA
- That the CFA breached that duty of care
- That they suffered damage that was caused by that breach of duty
- That the damage suffered was the reasonably foreseeable result of the breach of duty and was not too remote.¹⁵²¹

However, such a person will face the same principal obstacle discussed above in proving that their illness was caused by exposure to chemicals at Fiskville. In addition, it will be necessary for the person to prove that their illness was caused by negligence on the part of the CFA.

¹⁵¹⁹ Mr Andrew Baker, Senior Associate, Slater and Gordon, *Transcript of evidence*, 28 January 2016, p.5

¹⁵²⁰ Slater and Gordon, *Submission 417*, p.15

¹⁵²¹ See generally Carolyn Sappideen and Prue Vines, *Fleming's Law of Torts* (10th edition, 2011), Chapters 6-13 and 24

It is against that background understanding of the many obstacles that lie in the way of a Fiskville-affected person obtaining compensation under existing law that it is necessary to consider an alternative means by which justice can be provided.

FINDING 123: That existing avenues of compensation are inadequate for most Fiskville-affected persons.

11.4 Presumptive legislation for firefighters

Mr Clayton points out in his report to the Committee that ‘... the notion of presumptive cancer legislation [for firefighters] is simply a more particularised application of the deemed diseases arrangements’.¹⁵²² The Committee considers this to be important - the statutory mechanism is already in place; it merely needs to be extended.

Presumptive legislation for firefighters was pioneered in North America. The most notable developments have been in Canada where the work of Dr Tee Guidotti was very influential. A 2002 report co-authored by Dr Guidotti¹⁵²³ led to the enactment of Canada’s first presumptive cancer legislation for firefighters later that year in Manitoba.¹⁵²⁴ The Manitoba statute lists non-Hodgkin lymphoma, leukaemia, and brain, bladder, kidney, ureter, colorectal and lung cancers as conditions presumed to be work-related for firefighters.¹⁵²⁵ Other Canadian provinces subsequently enacted similar legislation.¹⁵²⁶

The first such Australian legislation was enacted by the Commonwealth in 2011.¹⁵²⁷ It applies to injuries sustained on or after 4 July 2011.¹⁵²⁸ The table in section 7(8) of the *Safety, Rehabilitation and Compensation Amendment Act 2011* (Cth) identifies 12 cancers and for each specifies a ‘qualifying period’.¹⁵²⁹

The cancer types and their qualifying periods are:

¹⁵²² Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.10

¹⁵²³ Tee Guidotti and David Goldsmith, *Evaluating Causation for Occupational Cancer Among Firefighters: Report to the Workers’ Compensation Board of Manitoba* (2002)

¹⁵²⁴ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.11

¹⁵²⁵ Ibid.

¹⁵²⁶ For example, Saskatchewan, British Columbia, Alberta and Nova Scotia

¹⁵²⁷ *Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (Cth), which inserted sub-sections (8)-(10) into s. 7 of the *Safety, Rehabilitation and Compensation Amendment Act 2011*

¹⁵²⁸ *Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (Cth), Schedule 1, clause 3

¹⁵²⁹ The initial federal Bill provided for a presumptive regime that would operate in respect of seven primary site cancers. Following a report from the Senate Standing Legislation Committee on Education, Employment and Workplace Relations, this was extended to 12 primary site cancers: see Senate Standing Legislation Committee on Education, Employment and Workplace Relations Legislation Committee, *Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Bill 2011 [Provisions]* (2011)

Table 11.1 Presumptive legislation cancer types and qualifying periods

Item	Disease	Qualifying period
1	Primary site brain cancer	5 years
2	Primary site bladder cancer	15 years
3	Primary site kidney cancer	15 years
4	Primary non-Hodgkin lymphoma	15 years
5	Primary leukaemia	5 years
6	Primary site breast cancer	10 years
7	Primary site testicular cancer	10 years
8	Multiple myeloma	15 years
9	Primary site prostate cancer	15 years
10	Primary site ureter cancer	15 years
11	Primary site colorectal cancer	15 years
12	Primary site oesophageal cancer	25 years

An example of how the 'qualifying period' applies is as follows: Section 7(8) provides that if a firefighter has brain cancer and has worked for five years and has been exposed to 'the hazards of a fire scene', it is to be presumed that their employment contributed to a significant degree to the contraction of the disease, thus entitling the firefighter to compensation under the scheme.

South Australia, Tasmania, Western Australia, Queensland and the Northern Territory have all enacted presumptive legislation for firefighters.¹⁵³⁰ Wording differs between the jurisdictions, but they have all adopted the Commonwealth list of cancers and applicable qualifying periods.

Table 11.2 below provides the name of the relevant legislation, the date it commenced application (that is, people diagnosed from this date are covered if they meet the other criteria specified in the legislation) as well as whether it applies to volunteer firefighters or not.

In Victoria, the *Accident Compensation Legislation (Fair Protection for Firefighters) Bill 2011* was introduced into the Legislative Council on 7 December 2011. The Bill sought to introduce s. 86A into the *Accident Compensation Act 1985* as well as amending the *Workers Compensation Act 1958* and the *Country Fire Authority Act 1958*. Had it been enacted, the Bill would have introduced into Victorian law similar compensation arrangements to those in the Commonwealth Act but extending to volunteer firefighters and to those that were exposed during the operation of earlier legislation (that is, the *Workers Compensation Act 1958* which continues to apply to exposures prior to 1985 when the *Accident*

¹⁵³⁰ For a summary discussion of the different provisions, see Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), pp.12-15

Compensation Act 1985 became operative). The Bill was withdrawn by order of the President of the Legislative Council on the grounds that it offended s. 62(1) of the *Constitution Act 1975*.¹⁵³¹

Table 11.2 Presumptive legislation in Australian jurisdictions

Jurisdiction	Name of legislation	Date of application	Application to volunteers
Commonwealth	<i>Safety, Rehabilitation and Compensation Amendment Act 2011</i>	4 July 2011 ^(a)	No ^(b)
South Australia	<i>Return to Work Act 2014</i>	1 July 2013 ^(c)	Yes for a period of ten years after ceasing employment ^(d)
Tasmania	<i>Workers Rehabilitation and Compensation Act 1988</i>	21 October 2013	Yes provided they have attended at least 150 events and for a period of ten years after ceasing employment ^(e)
Western Australia	<i>Workers' Compensation and Injury Management Act 1981</i>	13 November 2013	No (worker must be a permanent member on date of injury ^(f))
Northern Territory	<i>Return to Work Act</i>	4 July 2011 ^(g)	Yes provided they have attended at least 150 events and have been a firefighter for five years if diagnosed with brain cancer or leukaemia, or ten years for other cancers ^(h)
Queensland	<i>Workers' Compensation and Rehabilitation Act 2003</i>	15 July 2015	Yes ⁽ⁱ⁾

- (a) *Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (Cth), Clause 3
 (b) Australian Government, *Review of the Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (2013), p.7
 (c) *Return to Work Act 2014*, (SA), Schedule 3, s. 1(2)(c)(i)
 (d) *Ibid.* Schedule 3, s. 2(3)(c)(ii)
 (e) *Workers Rehabilitation and Compensation Act 1988* (Tas), s. 27
 (f) *Workers' Compensation and Injury Management Act 1981* (WA), s. 49B(b)
 (g) *Return to Work Act* (NT), s. 50A(1)(d)
 (h) *Return to Work Act* (NT), s. 50A(3) read in conjunction with Regulation 5C of the *Return to Work Regulations*.
 (i) *Workers' Compensation and Rehabilitation Act 2003* (Qld), s. 36B(c)

Prior to the 2014 Victorian election the Labor Party pledged to introduce presumptive legislation that included the same cancers covered and timeframes for duty of service as in the Tasmanian legislation.¹⁵³²

There have been no moves to introduce presumptive legislation in either New South Wales or the ACT.¹⁵³³

¹⁵³¹ Section 62(1) of the *Constitution Act 1975* (Victoria) provides that an appropriation bill must originate in the Legislative Assembly

¹⁵³² Australian Labor Party Victoria, *Extra firefighters and more support under Labor*, (Media Release, 18 November 2014)

¹⁵³³ See: Cancer Council Australia, *Firefighters' compensation and presumptive legislation* (www.cancer.org.au/health-professionals/know-cancer-risks-at-work/firefighters-compensation-and-presumptive-legislation.html) viewed 14 October 2015

11.4.1 Coverage of diseases

There is a current consensus in Australia that presumptive legislation for firefighters is limited to cancer. Specifically, it is limited to the 12 specified cancers and their relevant qualifying periods that were listed above in the discussion of the Commonwealth legislation. Two jurisdictions (Commonwealth and Western Australia) also have a provision that recognises the future addition of other cancers.¹⁵³⁴

The Committee notes that the list of cancers in the presumptive legislation for firefighters around Australia does not include melanoma (nor did the Victorian Bill). The significance of this for Fiskville is that the Monash University Fiskville study (see Chapter 9) found:

- An overall significantly increased risk of brain cancer and melanoma among Fiskville firefighters as a whole
- A statistically significant higher than expected cancer rate of melanoma and cancer of the testis among the 'high risk group'.¹⁵³⁵

A recent review of the Tasmanian presumptive legislation for firefighters referred to the Monash University study and recommended that the Tasmanian government consider including melanoma in the prescribed list of cancers in the Tasmanian legislation.¹⁵³⁶ Mr Clayton also argued in light of the Monash University research findings that there is a case for the Victorian Government to widen the coverage of cancers covered by any future presumptive entitlement to include melanoma.¹⁵³⁷

A review of the Commonwealth legislation considered whether lung cancer should be included in the prescribed list.¹⁵³⁸ It noted that some Canadian provinces cover lung cancer for non-smokers.¹⁵³⁹ However, ultimately the review recommended that the Terms of Reference for a further review in five years consider the matter further.¹⁵⁴⁰

For Fiskville-affected firefighters one of the advantages of the coverage of diseases in presumptive legislation is that it does not need to be established whether the cancer was caused by time spent at Fiskville or whether it was caused by time spent in operational firefighting. If a person has one of the prescribed cancers, and meets the other criteria in the legislation, they would be entitled to compensation.

¹⁵³⁴ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.13

¹⁵³⁵ Melanoma is also included in the list of disease prepare by Dr Guidotti using his 'weight of evidence' methodology in the second category, that is, 'conditions for which elevated risk of firefighters is suggested by the current weight of evidence; but which require qualification in a recommendation on general causation' – see Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), pp.19-20

¹⁵³⁶ Karen Cutter and Mimi Shepherd, Finity Consulting, *Review of the Workers Rehabilitation and Compensation Act 1998*, (2015), pp.10-11

¹⁵³⁷ *Ibid.* p.13

¹⁵³⁸ Australian Government, *Review of the Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (2013), pp.22-24

¹⁵³⁹ *Ibid.* pp.22-23

¹⁵⁴⁰ *Ibid.* Recommendations 6 and 7

Weight of evidence

An alternative approach to considering the coverage of diseases by presumptive legislation for firefighters is to use the 'weight of evidence framework' developed by Dr Guidotti. This would expand the legislation beyond cancer.

Mr Clayton writes that although there are several approaches to analysing evidence that could be taken when developing presumptive legislation:

... the Guidotti weight of evidence framework probably has the greatest promise for providing an evidence-based tool that can provide the basis for, where necessary, a scheme that can cater for elements of differentiated access to redress scheme benefits. Importantly, it also deals with a range of conditions beyond cancers.¹⁵⁴¹

In 2013, the Commonwealth Department of Veterans' Affairs contracted Dr Guidotti to carry out a literature review of the current risks and health outcomes associated with firefighting. Dr Guidotti's report to the Department ranked risk according to what he has defined as 'weight of evidence' (as opposed to scientific certainty). The Committee spoke with Dr Guidotti about his work for the Department and he explained that the weight of evidence in the literature shows an elevated risk for a wide range of cancers and other diseases.¹⁵⁴²

Dr Guidotti classified the health risks faced by firefighters into four categories as outlined below:

1. Conditions demonstrating elevated risk among firefighters, weight of evidence sufficient to make a recommendation on general causation

- Heart attacks following an alarm or knockdown by up to 24 to 72 hours, resulting in disability.
- Acute respiratory failure and decompensation within 24 hours of an event (toxic inhalation, pulmonary edema), resulting in disability.
- Asthma, irritant induced (associated with a particularly intense event or exposure history).
- Bladder cancer.
- Kidney cancer.
- Testicular cancer.
- Lymphoma (diffuse large B-cell lymphoma and follicular cell lymphoma; others unclear and require individual analysis).
- Leukaemia (acute myeloid leukaemia).
- Brain cancers (glioma is most likely to be related to firefighting).
- Lung cancer in a firefighter with little or no smoking history.
- Mesothelioma.

¹⁵⁴¹ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.21

¹⁵⁴² Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.4

- Cancer of the lip.
 - Breast cancer among males.
 - Amyotrophic lateral sclerosis.
 - Noise-induced hearing loss.
 - Post-traumatic stress disorder and reactive depression (requires compatible history and diagnosis).
- 2. Conditions for which elevated risk of firefighters is suggested by the current weight of evidence but which require qualification in a recommendation on general causation**
- Accelerated decline in lung function in a non-smoker usually not associated with impairment; history of inadequate respiratory protection).
 - Asthma, irritant-induced (sufficient to cause respiratory impairment).
 - Chronic obstructive airways disease with minimal or no smoking history (fixed airways obstruction, not 'chronic obstructive pulmonary disease' as the term is generally understood).
 - Colon cancer (for individuals with a low *a priori* risk).
 - Melanoma (taking into account sun protection, lifestyle and location).
 - Myeloma (overall, cannot differentiate by type at the present time).
 - Parotid gland tumours (suggest case-by-case evaluation).
 - Nasal sinus cancer (in the absence of other exposures).
 - Traumatic injury resulting in impairment leading to disability (must be individually considered).
 - Musculoskeletal disorders (chronic) resulting in impairment leading to disability (must be individually considered).
- 3. Conditions for which evidence of elevated risk of firefighters is not sufficient to make a provisional recommendation on general causation – individual evaluation is recommended**
- Sarcoidosis.
 - Thyroid cancer.
 - Oesophageal cancer.
 - Basal and squamous cell carcinomas (taking into account sun protection, lifestyle, and location).
 - Laryngeal cancer.
 - Prostate cancer (below age 60).
 - Infectious disease.

4. **Conditions for which evidence of elevated risk of firefighters is not sufficient to make a provisional recommendation on general causation but association is unlikely – individual evaluation is recommended**
- Prostate cancer (above age 60).
 - Glomerulonephritis.
 - Infertility and birth defects in offspring (particular reference to heat exposure during pregnancy).¹⁵⁴³

11.4.2 Coverage of firefighters

The Committee believes the emergent Australian consensus is that presumptive legislation should extend to both career and volunteer firefighters. However, as discussed in Chapter 9, the issue of ‘an exposure event’ is not entirely straightforward, particularly in relation to volunteer firefighters in Victoria. Mr Clayton writes:

The wide extent of dry sclerophyll forests and the nature of summer weather patterns in Victoria are two features that mean that the State is prone to major wildfires. This can mean that firefighters, in situations such as Ash Wednesday and Black Saturday, can be engaged in continuous firefighting operations for many days on end. It would be unfair that such continuous operations would be counted as one exposure event. Accordingly, there would be a need (as eventually occurred in Tasmania) to designate every day of firefighting operations as a separate exposure event.¹⁵⁴⁴

Dr Guidotti explained that exposure to an acute fire event can damage human cells as much as cumulative exposure, such that: “I do not think we know enough toxicologically to be able to say whether one big exposure is equal to x number of small exposures...”.¹⁵⁴⁵ However, Dr Guidotti did draw a distinction between bushfires and structural fires:

Cellulose, however, does not produce the same carcinogens or the same degree of carcinogens as you get in a structural house fire or a fire in an industrial zone. Generally speaking, burning wood is less carcinogenic in terms of its total potency than chemicals that might be found inside a burning building, as a broad generalisation.¹⁵⁴⁶

In the case of the training conducted at Fiskville there is no need to debate the issues around exposure to structural versus bushfires because firefighters at Fiskville were exposed to the hazards of structural fires.

¹⁵⁴³ Dr Tee Guidotti, A report prepared for the Department of Veterans' Affairs, Commonwealth of Australia, *Health Risks and Occupation as a Firefighter*, (2014), pp.7-9

¹⁵⁴⁴ Ibid. p.14

¹⁵⁴⁵ Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.12

¹⁵⁴⁶ Ibid. p.14

11.4.3 Retroactivity

Of particular significance for Fiskville's victims is the question of whether legislation operates retroactively. Each of the various enactments discussed above only applies to firefighters whose cancers are diagnosed after the commencement (or date of assent) of the particular enactment.

All current presumptive legislation has some degree of retroactivity, though usually this is to the date that the legislation was introduced into Parliament rather than the date upon which it received Royal Assent. For example, under the Commonwealth legislation only firefighters who developed cancer on or after 4 July 2011 are able to claim the benefit of the presumption. This means that firefighters who sustained their cancer prior to that date will only be entitled to compensation if they can establish the causal link on the normal evidentiary basis.¹⁵⁴⁷

The Northern Territory provides the greatest period of retroactivity in Australia. Presumptive legislation for firefighters in the Northern Territory commenced on 1 July 2015, but it covers those who were diagnosed from 4 July 2011. This can be compared to some Canadian jurisdictions with ten years' retroactivity.¹⁵⁴⁸

Mr Clayton informed the Committee that a major concern frequently raised in relation to allowing open retroactivity of presumptive entitlement is that of cost. However, he states that '... on the available evidence, such a concern appears to be highly overplayed'.¹⁵⁴⁹

Mr Clayton pointed out that:

... in terms of a justice perspective, no or limited retrospectivity leaves those firefighters who have already diagnosed cancer (of a type recognised in the legislation), the diagnosis of which occurred before the commencement date of the legislation, out in the cold.¹⁵⁵⁰

These observations are relevant to many of the witnesses who appeared before the Committee. The Committee believes that a lack of retroactivity challenges the idea of justice for Fiskville-affected people.

Mr Clayton did recognise that a major concern about enacting retroactive presumptive legislation is the potential cost. However, legislative reviews indicate that the costs - at least in the Commonwealth and Tasmania - have not been prohibitive. The findings are in Table 11.3 below:

¹⁵⁴⁷ Slater and Gordon Lawyers, *Submission 417*, p.18

¹⁵⁴⁸ For example, Nova Scotia

¹⁵⁴⁹ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.14

¹⁵⁵⁰ *Ibid.* p.14

Table 11.3 Costs of retroactive presumptive legislation - Commonwealth and Tasmania

Jurisdiction	Date of review	Comments about costs
Commonwealth	2013 review of the 2011 amendments	There have been a total of eight claims for compensation for occupational cancers made by firefighters since that date. Three of those claims were accepted because of the firefighter provisions. Two of the claims that did not qualify for the presumption in the firefighter provisions were accepted under other provisions of the SRC [Safety, Rehabilitation and Compensation] Act. The final three claims that were rejected did not qualify for compensation under the firefighter provisions (two employees were diagnosed before the date of manifestation and the other did not meet the relevant qualifying period), and nor were they accepted under other provisions of the SRC Act. That data necessarily relates to claims made during a short period of time (some 24 months). ^(a)
Tasmania	2015 review of the 2013 amendments	Since the commencement of the presumptive legislation for firefighters diagnosed with certain cancers, we understand that there has been only one claim made under this provision. The claimant was diagnosed with bladder cancer late in 2013, and is a male aged 57 at the date of diagnosis. As at 30 June 2014, claim payments of \$66,000 had been made (\$31,400 of weekly benefits, \$20,200 of medical costs and \$14,400 of defendant legal and investigation costs). The total estimated cost of the claim is \$500,000. ^(b)

(a) Australian Government, *Review of the Safety, Rehabilitation and Compensation Amendment (Fair Protection for Firefighters) Act 2011*, (2013), p.10

(b) Karen Cutter and Mimi Shepherd, Finity Consulting, *Review of the Workers Rehabilitation and Compensation Act 1998*, (2015), p.9

11.4.4 Need for periodic review

An important component of a modern presumptive legislation scheme is a fixed process for periodic review of scientific research and knowledge around firefighters and cancer.¹⁵⁵¹ Mr Clayton told the Committee:

I think you would provide in the legislation that there had to be a review at x number of years apart in which there would be a comprehensive review of the scientific literature ... and on that basis you could add to the list, so it is rigorously scientifically based.¹⁵⁵²

Jurisdictions around Australia have chosen different timeframes for periodic review. For example, in Tasmania the legislation is reviewed annually,¹⁵⁵³ whereas in Western Australia and South Australia review is prescribed every five years.¹⁵⁵⁴

Dr Guidotti explained that in his experience most bodies responsible for presumptive legislation have access to a scientific advisory service that evaluates evidence and then presents options. He added that regulation should be flexible enough so that changes - including tightening the legislation - are possible without great expense or disruption.¹⁵⁵⁵

1551 Ibid. p.15

1552 Mr Alan Clayton, *Transcript of evidence*, 28 January 2016, p.5

1553 *Workers Rehabilitation and Compensation Act 1998* (Tas), s. 28

1554 *Workers' Compensation and Injury Management Act 1981* (WA), s. 49E; *Return to Work Act 2014* (SA), s. 68

1555 Dr Tee Guidotti, *Transcript of evidence*, 29 January 2016, p.14

The Committee considers that presumptive legislation for firefighters in Victoria must incorporate a review mechanism.

11.4.5 Committee's view

The introduction of presumptive legislation for firefighters is an important part of providing justice for some Fiskville-affected persons and their families. Importantly, however, presumptive legislation would only cover some Fiskville-affected persons on the list provided at the start of this Chapter. The legislation would be limited to firefighters, and not cover others, such as families of firefighters and neighbouring landowners.

Among the category 'firefighters' there are also limitations as to who would be covered. For example, unless such legislation is retroactive it will not provide justice for those that already have cancer and other illness, and their coverage is also dependent on who is defined as a 'worker'. As such, it is not the only answer.

This Chapter demonstrates that justice must be provided in different ways, such as an apology from the CFA and a tailored redress scheme (discussed below). However, presumptive legislation would go some way to righting some of the wrongs suffered by some firefighters at Fiskville.

FINDING 124: That countries throughout the world have introduced firefighter presumptive legislation to provide workers' compensation for firefighters that contract particular diseases.

FINDING 125: That in Victoria, all major political parties support the introduction of presumptive legislation, thereby accepting that exposure to chemicals in fires can cause certain illnesses.

11.5 Why is a tailored redress scheme for Fiskville's victims needed?

Analysis of existing avenues of compensation demonstrates that while workers' compensation schemes may respond well to specific injuries that are clearly caused by an incident while working, they generally do not cope well with occupational diseases that emerge gradually over time.¹⁵⁵⁶

Mr Baker argued that the problem with workers' compensation schemes is that there is "... incomplete and complex scientific evidence in relation to medical and causation issues".¹⁵⁵⁷

¹⁵⁵⁶ Ibid. p.7

¹⁵⁵⁷ Mr Andrew Baker, Senior Associate, Slater and Gordon, *Transcript of evidence*, 28 January 2016, p.2

The Committee learnt that a number of firefighters associated with Fiskville have lodged compensation claims with the CFA.¹⁵⁵⁸ In addition, up to 200 former CFA staff and volunteers have engaged Slater and Gordon to consider their options for accessing compensation for health impacts they allege stem from their time at Fiskville.¹⁵⁵⁹

Mr Baker informed the Committee that Slater and Gordon is not currently involved in class action litigation regarding Fiskville, although it has been providing advice to people who believe their health was harmed by attending Fiskville. Mr Baker said that no decision has been made about whether a class action, or any other form of action, will be pursued.¹⁵⁶⁰

The Committee also notes evidence received by Slater and Gordon regarding the time limits outlined in the *Accident Compensation Act 1985* and the *Limitation of Actions Act 1958*. These limits make it difficult for firefighters dealing with the legacy issue associated with serious diseases, especially cancer; that is, these Acts may not cover firefighters and associated workers whose diseases take many years to develop.¹⁵⁶¹

According to Mr Clayton, the advantages of a specific or tailored redress scheme are that it:

- Can be designed in consultation with stakeholders, institutions that will provide redress, and legal and advocacy groups that may assist people to claim redress¹⁵⁶²
- Avoids a number of the 'anti-therapeutic consequences' of the civil justice system, including delay, cost, formality and adversarial processes such as cross-examination
- Has the potential to allow greater flexibility of outcomes, offering a broad range of needs-based benefits beyond financial compensation, such as counselling and an acknowledgment of or apology for any harm suffered
- Acknowledges that claimants often seek more than just a financial payment
- Can respond to a wider range of affected persons and harms than traditional legal processes.¹⁵⁶³

¹⁵⁵⁸ Slater and Gordon Lawyers, *Submission 417*

¹⁵⁵⁹ Slater and Gordon Lawyers, *CFA Fiskville claims*, (<https://www.slatergordon.com.au/class-actions/current-class-actions/cfa-fiskville-claims>), viewed 29 January 2016

¹⁵⁶⁰ Mr Andrew Baker, Senior Associate, Slater and Gordon, *Transcript of evidence*, 28 January 2016, p.8

¹⁵⁶¹ Slater and Gordon Lawyers, *Submission 417*, p. 12

¹⁵⁶² Mr Clayton told the Committee that involvement of those affected is a "prime element" of a redress scheme. See Mr Alan Clayton, *Transcript of evidence*, 28 January 2016, p.6

¹⁵⁶³ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.5

11.6 Fiskville redress scheme

Mr Clayton opined that redress or compensation schemes have to address three questions: who is covered; for what; and in which circumstances. The parameters of a Fiskville redress scheme would need to be determined by policy decisions about: whether any precursor conditions for a 'Fiskville affected person' to gain access to the redress scheme exist; and, then, which triggering conditions will determine what level of access to which benefits of the scheme.¹⁵⁶⁴

11.6.1 Universal or conditional access

According to Mr Clayton, decisions would need to be made in relation to the level of access to a Fiskville redress scheme. For example, would the scheme apply to a pupil at the Fiskville State School who contracted a condition that would trigger coverage within the scheme if that pupil had attended the school for only one day?

The Committee notes that there is no pre-ordained, 'correct' decision to such a question. Rather clear lines have to be drawn as to 'who' is entitled to access 'what'. However, as Mr Clayton points out, it is important to note that there can be fluidity in the application of definitional criteria. For instance, there may be a case for granting universal access (including to the former school child who has attended the school for one day) to some level of benefit (for instance, counselling, care or treatment) regardless of the degree of exposure and likelihood of causation.¹⁵⁶⁵ This means that, for example, medical screening could be made available to all Fiskville-affected persons, while financial payment is only to be provided to the most seriously ill.

Mr Clayton explained this concept further to the Committee using the example of the British nuclear tests carried out in Australia in the 1950s:

The whole question of epidemiology is what is happening at the population level may not necessarily be at the individual level and vice versa, so one of the issues in fashioning arrangements, particularly on a redress basis, is that, particularly with regard to ongoing health benefits and the like, you provide ready access. With the Australian participants in the British nuclear tests, if you were in any way, for ten minutes or whatever or one day at Monte Bello, Emu Field or Maralinga between these particular dates and you contract any cancer, you are entitled to a repatriation white card and your cancer will be treated, so you get away from having [to investigate] in every individual case. But you might then say, 'For other benefits we will provide some form of risk rating' either to access it or the level of access that you might do. It is really trying to devise what is a just system.¹⁵⁶⁶

¹⁵⁶⁴ Ibid. p.16

¹⁵⁶⁵ Ibid. p.5

¹⁵⁶⁶ Mr Alan Clayton, *Transcript of evidence*, 28 January 2016, pp.6-7

Mr Clayton explained that there are two major situations in which the issue of differential categorisation of scheme participants becomes pressing. The first is where there is a threshold that needs to be crossed in order to access scheme benefits. The second is where the scheme provides a calibrated monetary benefit of differing amounts.¹⁵⁶⁷

11.6.2 Need for a register of Fiskville-affected persons

Mr Clayton proposed that a register that encompasses anyone who has had an association with Fiskville needs to be created as an administrative prerequisite for the operation of any potential Fiskville redress scheme. This would include the Fiskville-affected persons listed above.¹⁵⁶⁸

Some of the witnesses supported the idea of a register of everyone associated with Fiskville. Mr Gavan Knight worked as the lead prosecutor for the former Department of Primary Industries and trained officers of the Department, and others, at Fiskville between 2001 and 2008. Mr Knight, who estimates that he trained “probably close to a thousand people”,¹⁵⁶⁹ told the Committee that he had collected records of who was trained at Fiskville. He stated: “I do not know whether there are going to be any consequences [for those people from being at Fiskville] but I felt it important to get it on the record that those people were there”.¹⁵⁷⁰

Mr Tony Ford, who has had a life-long association with the CFA and was an instructor at Fiskville, told the Committee that he had made a submission to the Inquiry:

...with two main hopes. One, that all employees, volunteers, visitors who have been exposed to Fiskville are recorded for their own protection in the years to come. I strongly believe that any person who suffers an illness as a result of exposure to Fiskville should be eligible for compensation regardless of when they attended....¹⁵⁷¹

11.6.3 Access to treatment, care and support

One negative aspect of the civil justice system that a redress scheme can address is that of delay (an ‘anti-therapeutic consequence’ referred to above). This is especially important in dealing with the immediate medical and support needs of those affected by diseases and the strain this places on their families. Such early support can be established by way of a non-liability response.

¹⁵⁶⁷ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.5

¹⁵⁶⁸ *Ibid.* p.7

¹⁵⁶⁹ Mr Gavan Knight, *Transcript of evidence*, 18 May 2015, p.49

¹⁵⁷⁰ *Ibid.* p.50

¹⁵⁷¹ Mr Tony Ford, *Transcript of evidence*, 25 May 2015, p.122

If there was a decision in a Fiskville redress scheme to allow non-liability medical treatment and other support for a Fiskville-affected person, and perhaps their families, decisions would need to be made about the boundaries and conditions of such an element. Questions to be considered would include:

- What medical conditions are covered and what is the selection basis for coverage?
- Is there any limit on the number of treatment services and / or the duration of such services?
- Is the level of access to such a non-liability scheme element the same for everyone designated as a Fiskville-affected person or is there differential access according to a grouping criteria?¹⁵⁷²

The Committee notes the work already begun in this area by the CFA's health check and surveillance programs (see Chapter 9). A redress scheme would be able to build on that work without duplicating it.

The Committee also notes that presumptive legislation for firefighters around Australia associates certain cancers with firefighting, and there is justification for adding melanoma to this list (as discussed above). A Fiskville redress scheme should also be developed by reference to this legislation and the weight of evidence framework developed by Dr Guidotti.

11.6.4 Financial compensation

Monetary payments are a tangible way of recognising a wrong that has been committed. Several inquiry participants raised the issue of financial compensation with the Committee.¹⁵⁷³ For some, compensation for the costs of medical treatment would constitute at least partial justice. The Committee heard that the CFA's health programs do not include payment for extra expenses, such as medical costs, which in some cases have been significant.¹⁵⁷⁴

Mr Kenneth Lee told the Committee:

... I would like to see that they see fit to announce some form of compensation to cover the out-of-pocket medical expenses at least. In my case it is approximately \$10,000 after Medicare and private health insurance were taken out. I know this would be only a small part of providing justice for the victims and their families.¹⁵⁷⁵

The Committee also heard arguments for a more comprehensive compensation payment for those who have suffered serious illnesses. Mr Alistair Allan, who has been successfully treated for melanomas, called for compensation to be paid to others who had not been so fortunate:

¹⁵⁷² Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), pp.22-23

¹⁵⁷³ For example, see Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.293, Mr Ian Ireland, Ballan Fire Brigade, *Transcript of evidence*, 27 July 2015, pp.271-272 and Mr Michael Whelan, *Transcript of evidence*, 15 June 2015, pp.216-217

¹⁵⁷⁴ Mr Michael James, United Firefighters Union of Australia, *Transcript of evidence*, 15 June 2015, p.181

¹⁵⁷⁵ Mr Kenneth Lee, *Transcript of evidence*, 25 May 2015, p.77

I am okay now; the melanomas that I had removed were deemed to be early-stage melanomas and so they got it all, they dug it all out; I have been fortunate in that regard — however, the people who are in my position and who have melanomas and other various cancers that have been identified and it is too late to have them taken out, they should be compensated I think to the extent necessary. Obviously I cannot put a figure on it and I do not know if you can put a figure on it, but ‘to the extent necessary’ I think is a good starting point. What the end point will be, I do not know.¹⁵⁷⁶

Monetary payments in a redress scheme are *ex gratia* in nature; that is, they are made regardless of any legal liability to make a payment. If some form of monetary *ex gratia* payment were to form part of a Fiskville redress scheme, decisions would need to be made on a number of matters, including:

- What qualifying criterion or criteria (if any) would need to be satisfied as a prerequisite for accessing the monetary payment?
- Would there be a single level payment for all who meet the prerequisite conditions or payments of different levels?
- If the latter, on what basis would such differential access occur?
- What would the level or levels for the monetary payment(s) be?¹⁵⁷⁷

The Committee also heard that victims should receive compensation through the introduction of presumptive legislation for firefighters in Victoria. Presumptive legislation was discussed earlier in the Chapter.

11.6.5 Effect on land use and land value

The Committee believes that the Victorian Government should also consider a special monetary payment for landowners who can demonstrate that they have been adversely affected, and suffered economic loss, as the result of their land being contaminated by chemicals discharged from the Fiskville site. This loss may result from an inability, or reduced ability, to sell crops or stock grown or raised on that land as well as an overall devaluation of their property. A mechanism would need to be established to determine the value of any such economic loss. Questions include:

- Should there be provision for a payment for economic loss for landowners affected by contamination of their land by discharge from Fiskville?
- What types of loss should be covered by such a payment?
- What limits (if any) should be placed on the amount of such payments?
- What mechanism should be devised to establish the extent of any type of economic loss covered by the scheme?¹⁵⁷⁸

¹⁵⁷⁶ Mr Alistair Allan, *Transcript of evidence*, 18 May 2015, p.32

¹⁵⁷⁷ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), pp.23-24

¹⁵⁷⁸ *Ibid.* p.24

11.6.6 Apology from the CFA

The Committee notes that there have been calls for the CFA to apologise to those negatively affected by their time at Fiskville.¹⁵⁷⁹ The CFA's formal response to the Joy Report accepted that mistakes had been made but did not offer an apology.¹⁵⁸⁰

For a number of participants in this Inquiry, a meaningful apology, in which the CFA acknowledged that harm was caused by past practices and was still being felt, was seen as the first step in receiving justice. For example, Mr Michael Whelan, who trained at Fiskville, told the Committee: "It is a really sad situation that some of those individuals will never get justice because they are no longer with us. But an apology is the first thing and it should have been made. That does not cost anyone anything."¹⁵⁸¹

Similarly, Mr Colin Cobb stated: "An apology would be good for a start."¹⁵⁸²

Mr Clayton informed the Committee that apologies have positive psychological and physical health benefits. In order for an apology to have validity and authenticity as a form of redress, it must involve a sincere acknowledgment, by a senior officer, of the gravity of the events for the people affected, an acceptance of responsibility and the expression of regret.¹⁵⁸³

According to Mr Clayton, the New South Wales Ombudsman has summarised the elements that collectively make up the basis of an effective public apology into the 'Six Rs':

- **Recognition:** including a description and recognition of the wrong and an acknowledgement of the harm caused
- **Responsibility:** an acceptance of responsibility
- **Reasons:** an explanation of the cause
- **Regret:** an expression of sincere sympathy, sorrow, regret, remorse and / or contrition
- **Redress:** an indication of the action taken, proposed or offered to address the problem and a promise that it will not reoccur
- **Release:** a request for forgiveness (optional but important).¹⁵⁸⁴

¹⁵⁷⁹ For example, Pat Nolan, 'Just say sorry: Firefighter's son blames Fiskville for his father's death', *Ballarat Courier*, (<http://www.thecourier.com.au/story/356535/just-say-sorry-firefighters-son-blames-fiskville-for-his-fathers-death/>), viewed 24 February 2016

¹⁵⁸⁰ Country Fire Authority, *Response to the Professor Joy Report of the Independent Investigation into the CFA Facility at Fiskville*, Country Fire Authority, Melbourne, 2012

¹⁵⁸¹ Mr Michael Whelan, *Transcript of evidence*, 15 June 2015, p.216

¹⁵⁸² Mr Colin Cobb, *Transcript of evidence*, 25 May 2015, p. 90

¹⁵⁸³ Alan Clayton, Bracton Consulting Services, *Justice for Fiskville-affected persons: approaches and options*, (2015), p.21

¹⁵⁸⁴ *Ibid.* pp. 21-22

The CFA issued an apology in its second submission to this Inquiry. It states: 'The CFA is sorry to those whose trauma, sickness or injury was caused by their time at Fiskville.'¹⁵⁸⁵ The submission was signed by Mr Peter Stewart of the Victorian Government Solicitor's Office.

For some involved in this Inquiry, 'justice' includes holding the CFA as an organisation and / or those found to be responsible for contamination at Fiskville 'accountable'. Mr Gary Mynes stated in a submission: 'I hope that through this Inquiry the people who have been negligent will be held accountable for their action.'¹⁵⁸⁶ Further, as has been shown throughout this Final Report, it is difficult to specify exactly what suffering was caused and by what actions. Chapter 9 discussed this, in terms of the difference between causation and association and the challenge of determining if a certain disease has been caused by chemical contamination arising from a safety breach at Fiskville. This is also discussed above regarding the inadequacy of existing avenues of compensation.

The Committee believes that in the case of Fiskville accountability means the CFA should support the development of a redress scheme for Fiskville-affected persons. It has already taken some responsibility, through its health check and surveillance programs that, by their very design, accept that absolute scientific proof is not possible (see also the discussion on 'weight of evidence' above). The Committee believes that the CFA must continue to work with the Victorian Government to ensure justice is done. The Committee's view is that this should be in the form of a redress scheme.

For a further discussion on justice see the Family and Community Development Committee's extensive analysis of justice that formed a key part of its *Inquiry into the Handling of Child Abuse by Religious and other Non-Government Organisations*.¹⁵⁸⁷

11.7 Key components of a Fiskville redress scheme

Mr Clayton identified three key components of a Fiskville redress scheme: it must be appropriate, adequate, and proportionate to need.

11.7.1 Appropriate

For a redress scheme to be appropriate for Fiskville-affected persons it has to address occupational and environmental risks, both on the Fiskville site and surrounding properties. It also has to address the uncertainty around chemicals found on-site and diseases.¹⁵⁸⁸

¹⁵⁸⁵ CFA, *Submission 60*, supplementary submission, p.2

¹⁵⁸⁶ Mr Gary Mynes, *Submission 199*, p.2

¹⁵⁸⁷ Family and Community Development Committee, *Betrayal of Trust: Inquiry into the Handling of Child Abuse by Religious and Other Non-Government Organisations*, Parliament of Victoria, Melbourne (2013), Chapter 5 'Achieving justice'

¹⁵⁸⁸ *Ibid.* pp.2-3. Again, causation and association as discussed in Chapter 9

11.7.2 Adequate

A redress scheme is adequate when it has listened to, and responded to, the expressed desires of those affected by the activities at Fiskville.¹⁵⁸⁹

11.7.3 Proportionate to need

A Fiskville redress scheme should perform a complementary role to existing compensation schemes through filling in gaps or dealing with unique issues that have arisen through a particular event or series of events at Fiskville.¹⁵⁹⁰

To these the Committee would add a fourth component: that the scheme must be run by someone other than the CFA. This is not a slight on the administrative abilities of the CFA, rather an acknowledgement that an organisation that has caused harm will have lost the trust of the people it has harmed. Evidence throughout this Inquiry supports that statement. (The issue of trust is also discussed in Chapter 5.)

Mr Clayton informed the Committee about redress schemes in the United States that are run by an independent administrator. He said:

So it is really up to the architects of such a scheme to say, 'All right, we want it structured in this way with these type of appeal rights' or whatever rather than having it necessarily administered by the body who is seen to have caused the injury or by an external body who is seen to be a contracted element to that or whatever.¹⁵⁹¹

Similarly, Mrs Deborah Etherton told the Committee that she believes the Victorian Government should create a body:

... totally independent of the CFA, staffed by people who have nothing to do with the CFA and who can guarantee a level of comfort for people who wish to discuss their problems. I think that would be a great beginning and from that it could lead to other things.¹⁵⁹²

11.8 Structure and administration of a Fiskville redress scheme

A Fiskville redress scheme would need to define the following structural issues:

- Who it covers and the various rights and entitlements accruing to those covered
- The level, duration and other conditions of such entitlements
- The nature and mechanism of how the scheme would be funded

1589 Ibid. p.4

1590 Ibid.

1591 Mr Alan Clayton, *Transcript of evidence*, 28 January 2016, p.6

1592 Mrs Deborah Etherton, *Transcript of evidence*, 18 May 2015, p.37

- The manner in which it would be administered
- The question of appeal rights.

11.8.1 Administrative arrangements

In designing a Fiskville scheme the Victorian Government would need to decide whether to create a new administrative unit or engage an existing body with the requisite skills and capacity to adequately provide the range of services mandated by the redress scheme.

11.9 Committee's view

The Committee considers there to be ample justification for a dedicated redress scheme and makes the following recommendation.

RECOMMENDATION 31: That the Victorian Government establish a dedicated redress scheme for Fiskville-affected persons and ensure:

- That a register of Fiskville-affected persons is created
- That the scheme is developed in consultation with Fiskville-affected persons
- That a timeline for implementation is developed
- That there is broad eligibility including people from neighbouring properties and other nearby sites
- That there is a low evidentiary requirement so that it is not onerous for people to access, reflecting the fact that supporting records may be difficult for some people to produce
- That a range of redress options exist, such as access to health services, a financial payment, and / or a meaningful apology
- That there is robust administration of the scheme independent of the CFA
- That the CFA's required operational capacity is not affected by any redress scheme.

Committee Room, 9 May 2016

Case Study 1

Mr Brian Potter

Overview

Mr Brian Potter played a key role in raising concerns about contamination and possible health risks at Fiskville. The *Herald Sun* first reported on possible links between activities at Fiskville and severe illnesses in December 2011. Media coverage focused particularly on the experience of Mr Potter, who had suffered from multiple cancers and an autoimmune disease for 15 years. Mr Potter had spent 25 years at the CFA and was a former Chief Officer and instructor at Fiskville where he lived from 1978-1980. Mr Potter died in February 2014.

This Case Study is included as a recent example of the way in which the CFA responded to concerns raised internally.

Main issues

Mr Potter's wife, Mrs Diane Potter, spoke with the Committee in May 2015. She told the Committee that Mr Potter had prepared research on what he believed to be health risks posed by Fiskville that he intended to present to the CFA. In June 2011, Mrs Potter arranged a meeting with a CFA Board member, Mr David Gibbs, however that meeting never happened. The research was handed to the *Herald Sun* in December 2011 and contributed to the original story.¹⁵⁹³

Mr Gibbs told the *Herald Sun* that he had cancelled the meeting with Mr Potter due to reasons beyond his control. He had tried to arrange a second meeting but was unable to do so because Mr Potter was in hospital at the time.¹⁵⁹⁴

Mrs Potter said that Mr Potter was disappointed that the meeting never happened, as he had been willing to see Mr Gibbs even in hospital.¹⁵⁹⁵ Mr Potter was equally upset at the fact that the CFA did not attempt to contact him between June 2011 and 6 December 2011 when the *Herald Sun* story was published.¹⁵⁹⁶

The CFA's then Chief Executive Officer, Mr Mick Bourke, and then Chief Officer, Mr Euan Ferguson, visited Mr Potter on 7 December 2011. Mr Bourke told the Committee: "We went there because we felt that Brian deserved that

¹⁵⁹³ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, pp.15, 17 and 19. See also, Ruth Lamperd, 'Cancer town', *Herald Sun*, 6 December 2011, p.1

¹⁵⁹⁴ Stephen Drill, 'CFA was told', *Herald Sun*, 24 December 2011, p.2

¹⁵⁹⁵ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15

¹⁵⁹⁶ *Ibid.* p.17

sort of respect and we should have a discussion and understand where it was coming from. We had a good discussion, a polite discussion and a decent one with Brian.”¹⁵⁹⁷

Mr Bourke said that he had not been aware of Mr Potter’s illness until the publication of the *Herald Sun* article on 6 December 2011.¹⁵⁹⁸

Speaking to the Committee, Mrs Potter quoted from a note that Mr Potter had written in 2013 expressing his disappointment at the CFA’s response to his concerns:

The reaction by the CFA was remarkable. It first sought to discredit me and my colleagues by insisting there was no link and then commissioned an expensive report which was skewed to ignore any related fire training activities at Fiskville since 1999. The word ‘cancer’ was not mentioned anywhere in the report.¹⁵⁹⁹

The report referred to is the Joy Report.¹⁶⁰⁰ Mr Potter had questioned the independence of the Joy Report because Mr Bourke and Professor Joy had worked together at EPA Victoria. Mr Potter was also critical of the Joy Report’s timeline ending in 1999, as he believed it should have examined the practices at Fiskville up to and including 2011 when Mr Bourke was the CFA’s CEO.¹⁶⁰¹

Mrs Potter told the Committee that Mr Potter had expressed his thoughts to Mr Bourke.¹⁶⁰² When the Committee raised this with Mr Bourke, he replied: “First I have heard of it.”¹⁶⁰³

Conclusion

Mrs Potter agreed with Mr Potter’s criticism of the CFA’s response to his concerns. She said:

The CFA handling of the whole thing has been the biggest disappointment to a lot of people. It is hard to believe that a chairperson and a CEO of such a large fire service could treat people like they have over this whole tragic event. Every time anything came up about Fiskville, I felt when Mick Bourke referred to the historical time at Fiskville he was saying Brian Potter was a liar. I even put a call in to the chairperson of the CFA to ask, ‘Would you ask him to show a bit of compassion?’, as it was distressing to hear his denial, as you would expect someone in that position would be supporting and not be trying to dispute the allegation.¹⁶⁰⁴

¹⁵⁹⁷ Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.10

¹⁵⁹⁸ *Ibid.* p.9

¹⁵⁹⁹ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15

¹⁶⁰⁰ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012)

¹⁶⁰¹ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15 The Committee’s views about these matters are discussed in Chapter 3

¹⁶⁰² *Ibid.*

¹⁶⁰³ Mr Mick Bourke, *Transcript of evidence* 21 December 2015, p.10

¹⁶⁰⁴ Mrs Diane Potter, *Transcript of evidence*, 18 May 2015, p.15

Mr Potter had two workers' compensation claims declined by the CFA's insurers. At the time of preparing this Final Report, Mrs Potter had another claim still pending.¹⁶⁰⁵

Mrs Potter also referred to Mr Alan Bennett's health concerns (see Case Study 2), which may have been caused by toxic materials stored in drums at Fiskville. She told the Committee that the CFA should have told everyone involved in moving the drums at the time about the risk to their health posed by Fiskville. Mrs Potter said:

The hardest part for me here is to find out when the story went to the media that the CFA in 1991 had been told to warn the people who had lived at Fiskville that they had been exposed to dangerous chemicals. To think that somewhere the powers that be had hidden that information. It may not have saved my beautiful man or our other friends who were living there who have either died or been very sick, but no-one had the right to withhold that information.¹⁶⁰⁶

The Committee believes that, considering the seriousness of Mr Potter's concerns and his many years of service, senior management at the CFA should have been aware of Mr Potter's concerns and ensured that a meeting happened. It is a slight on the CFA that Mr Potter felt that he had no other option but to turn to the media.

1605 Ibid.

1606 Ibid. p.14

Case Study 2

Mr Alan Bennett

Overview

Mr Alan Bennett began working at the CFA in 1969 and became an instructor at Fiskville in September 1978. In early 1979, Mr Bennett and several colleagues observed that drums holding donated fuels were in a dangerous state and were stored inappropriately. However, the drums could not be moved off-site as the fuels' low flash point made them too dangerous. This was recorded in a CFA Memorandum signed by Mr Bennett on 12 January 1982.¹⁶⁰⁷

The condition of the drums deteriorated over time and in December 1982 some caught fire. After the fire was extinguished Fiskville staff buried the drums. During this process Mr Bennett was overcome by chemical fumes emitted from the drums and collapsed.

This Case Study is included, firstly, as an example of the way in which the CFA has responded to concerns raised by its employees, and secondly, to outline what the Committee considers the poor treatment of Mr Bennett by the CFA.

Main issues

In a CFA Memorandum dated 29 December 1982, Mr Bennett wrote:

Some 30 drums had been moved when a badly corroded drum collapsed releasing an unknown liquid, which, on mixing with other fluid which had leaked on the ground released a large quantity of fumes. S/O Norley and myself were both overcome and required oxygen, however no ill-effects persisted. The content of the drums are unknown ... Myself and S/O Norley were equipped with Splash Suit, protective goggles, gauntlets and boots, however the high concentration of vapour penetrated our up-wind position.¹⁶⁰⁸

A Fiskville Station Officer also wrote to Assistant Chief Officer McIntosh to report the incident, stating:

Personnel not wearing Breathing Apparatus were working upwind preparing drums for pick-up. At approximately 16.54 hours whilst I was driving the tractor, transferring drums to the Fiskville Utility I observed Regional Officer Bennett rolling a drum to a

¹⁶⁰⁷ CFA Memorandum from Mr Alan Bennett to Acting Officer in Charge, 12 January 1982

¹⁶⁰⁸ CFA Memorandum from Mr Alan Bennett to Acting Officer in Charge, 29 December 1982

position to be picked up. I noticed that a black substance had begun to leak from the end and was spilling onto the ground. Regional Officer Bennett at this stage appeared to be in a daze and collapse appearing imminent.

Regional Officer Stephens arrived on the scene carrying the Oxy-Viva and proceeded to administer Oxygen via the therapy mask ... After a short period of treatment Regional Officer Bennett appeared to have fully recovered. I consider that the operations at the time were carried out safely and that undue risks were not being taken.¹⁶⁰⁹

Mr Bennett was transferred to another CFA brigade in 1983. Several years later his health began to deteriorate, including dizzy spells and hearing problems.¹⁶¹⁰

In his evidence to the Committee, Mr Bennett explained:

In March of 1987, I became ill at work and went on sick leave. I had no idea what was wrong. I went to a number of doctors, had a number of tests and no-one could determine anything. In May of that year, on the 28th, I returned to work. I had had a clearance from the doctors, and I determined that I felt well enough to go back to work. I lasted at work for probably four working days, and the senior officer of the area said that I was not fit to go back to work, that I could not be there on an administrative basis and I was to return to sick leave and to get a certificate for that particular reason.¹⁶¹¹

On 16 September 1987, Mr Bennett wrote to the Chairman of the CFA advising that ‘... the Specialist is keen to seek details of any chemicals I have been exposed to’. Mr Bennett also stated: ‘The identification of these chemicals may well have a great bearing on the diagnosis and treatment of my disorders, and my subsequent recovery.’¹⁶¹²

Having received no reply, in a further letter to the CFA dated 20 October 1987, Mr Bennett requested a reply to the letter of 16 September 1987 ‘... as my specialist is keen to further pursue the matter’.¹⁶¹³

Section 21(2)(e) of the *Occupational Health and Safety Act 2004* imposes on an employer a duty to provide to its employees such information as is necessary to enable the employees to perform their work in a way that is safe and without risks to health.

Section 22 (1) of the *Occupational Health and Safety Act 2004* is also relevant. It states:

- (1) An employer must, so far as is reasonably practicable—
 - (a) monitor the health of employees of the employer; and
 - (b) monitor conditions at any workplace under the employer’s management and control; and

¹⁶⁰⁹ Letter from Fiskville Station Officer to Assistant Chief Officer W.J. McIntosh, 30 December 1982

¹⁶¹⁰ Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.5

¹⁶¹¹ Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.5-6

¹⁶¹² Correspondence to CFA Chairman from Mr Bennett dated 16 September 1987

¹⁶¹³ Correspondence to CFA Chairman from Mr Bennett dated 20 October 1987

- (c) provide information to employees of the employer (in such other languages as appropriate) concerning health and safety at the workplace, including the names of persons to whom an employee may make an enquiry or complaint about health and safety.

A duty on an employer to provide information relevant to the health and safety of employees has been part of Victorian law since 1981.¹⁶¹⁴

A CFA Memorandum headed ‘A. Bennett - Exposure to Chemical Fumes’ dated 20 October 1987 and authored by Regional Officer Pearce noted that ‘... to the best of my knowledge there were no ‘nasties’ i.e. hazardous materials that would have caused injuries to firefighters if any vapours were inhaled’.¹⁶¹⁵

On 22 October 1987, a letter was sent by the Deputy Chief Officer of the CFA to the Officer in Charge of the CFA’s Training Wing requesting information about actions resulting from the report submitted by Mr Bennett at the time of the incident.¹⁶¹⁶ In a subsequent Memorandum dated 6 November 1987, the Deputy Chief Officer (Operations) stated: ‘... in view of the lengthy time involved since the incident, I do not believe that any further information will be obtained’.¹⁶¹⁷

The then CFA Chairman, Mr Raymond Greenwood, wrote to Mr Bennett on 9 November 1987, saying:

I have requested the Deputy Chief Officer Operations to have the incidents fully investigated, and to report in due course. When this is received, you will naturally be advised further, as we are also keen that you receive the best possible medical treatment.¹⁶¹⁸

Despite this, in a letter to Mr Bennett from the Manager of Personnel Resources dated 12 November 1987, Mr Bennett was informed that ‘... in view of the lengthy time involved since the incident and short of digging up the drums to have them chemically analysed which may prove fruitless, I do not believe that any further information will be obtained’.¹⁶¹⁹

Mr Bennett told the Committee: “On 8 October 1987, I received a letter from the ESSS [Emergency Services Superannuation Scheme] ... stating that the [CFA] advised them I was unfit for duty and wished to apply for a disability pension. I must confess it came as rather a shock to me.”¹⁶²⁰

¹⁶¹⁴ See Chapter 1

¹⁶¹⁵ Memo from Regional Officer (Staff) J.W. Pearce to Deputy Chief Officer (Operation) dated 20 October 1987

¹⁶¹⁶ Letter to Officer in Charge, training Wing, from I.J. Johnson, Deputy Chief Officer (Operations), 22 October 1987, regarding fire in drum storage area at Fiskville

¹⁶¹⁷ Memo from Deputy Chief Officer (operations) to Supervisor, Personnel Services, 6 November 1987, Subject: R.O.A. Bennett - Exposure to Chemical Fumes

¹⁶¹⁸ Memo from CFA Board Chairman Greenwood to Mr Alan Bennett, 9 November 1987

¹⁶¹⁹ Letter to Mr Alan Bennett from Personnel Resources Manager Bare, 12 November 1987, regarding exposure to chemical fumes

¹⁶²⁰ Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.6; Letter from Emergency Services Superannuation Scheme to Mr Alan Bennett, 8 October 1987

On 22 January 1988, the United Firefighters Union (UFU) wrote to the CFA about Mr Bennett, referring to his involvement in an incident in December 1982 ‘... involving drums that contained chemical residue of which to this date is a [sic] unknown composition’. The letter noted that the member was ‘... having difficulty in being treated for a medical condition that we believe is a result of that incident. The identification of those chemicals are [sic] essential if he is to obtain treatment to relieve his condition.’ It further stated: ‘Your urgent attention to the identification of the chemicals involved would be appreciated.’¹⁶²¹

In 1988, the CFA commissioned engineering firm AS James Geotechnical Pty Ltd to dig up the drums for testing. (Professor Joy suggests this was done following pressure from the UFU.¹⁶²²) On 10 February 1988, CFA Chairman Mr Greenwood told the UFU that the CFA would take the following action:

- (a) To ascertain the extent and nature of all data in Authority on the drums and their contents;
- (b) To ascertain whether or not the buried drums are an immediate danger to health through their contents leaking into the soil;
- (c) To ascertain the contents of the drums;
- and (d) To receive expert advice on whether or not they can be safely stored at Fiskville. If they are unable to be safely stored the Authority will attempt to make alternative arrangements for their storage.¹⁶²³

The AS James report indicated that the tests it had performed on the chemical residues in the drums in May 1988 revealed traces of mostly aromatic compounds, including resins and solvents, which may have included benzene, toluene, xylene and phenol.¹⁶²⁴ Benzene is a known carcinogen.¹⁶²⁵ These results were obtained despite the earlier advice provided to Mr Bennett that testing the drums was unlikely to reveal any information.

On 23 July 1990, having not received from the CFA a satisfactory response to his, his doctor’s and his union’s requests for information directly relevant to his health, Mr Bennett again requested a report of the analysis of chemicals buried at Fiskville.¹⁶²⁶ He was finally provided with a description of the principle contaminants noted in the report in a letter from the CFA dated 24 August 1990 – more than three years after the first request from his doctor.¹⁶²⁷

In October 1990, Mr Bennett met with the CFA’s Chairman, the Chief Officer, and staff from the CFA’s human resources department. A file note of the meeting states:

¹⁶²¹ Letter from United Firefighters Union to Greenwood, Chairman of the CFA Board, 22 January 1988

¹⁶²² Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, CFA, Melbourne, 2012, p.113

¹⁶²³ Correspondence from Raymond Greenwood, Chairman of the CFA Board, to United Firefighters Union, dated 10 February 1988

¹⁶²⁴ Correspondence from Mr John Kirkpatrick, Human Resources Manager, CFA to Mr Alan Bennett, 24 August 1990

¹⁶²⁵ See Chapter 9

¹⁶²⁶ Correspondence from Mr Alan Bennett to Mr Kevin Shea, Chairman, CFA, 23 July 1990

¹⁶²⁷ Correspondence from Mr John Kirkpatrick, Human Resources Manager, CFA to Mr Alan Bennett, 24 August 1990

As regards Alan's second inquiry, I informed him that the Chairman was currently having what [sic] documentation reviewed by a contact of his who is a senior employee in of [sic] a large chemical company. I informed Alan that when further information as to the nature of the compounds and treatment of these products was available, we would be talking to him on this matter.¹⁶²⁸

On 29 October 1990, the CFA's Human Resources department provided Mr Bennett with sections of the AS James report of the analysis of compounds buried at Fiskville that had previously not been provided to him.¹⁶²⁹ The reason given to Mr Bennett for the CFA not providing this information earlier was that '... we believed at the time that the only information of consequence to yourself was the actual nomination of compounds (as broad as these categories may be), buried at Fiskville'.¹⁶³⁰

Mr Bennett noted in his evidence to the Committee that the CFA sent him the report selections on the proviso that only Mr Bennett and his specialist make use of them. Mr Bennett said that he wanted other employees who were exposed to the same chemicals to be provided with this information. In his evidence to the Committee, Mr Bennett noted that he had discussed with the CFA:

... the necessity for them to, please, let the other people who had served, worked and gone through Fiskville know, to at least give them some advice, because I knew full well that those little items that they had sampled - and I already had my suspicions - were not healthy at all.¹⁶³¹

Further, in a letter from Mr Bennett to the CFA dated 13 November 1990, he stated: '... should there be the likelihood of a health risk from the buried deposits, there were others involved who I felt should warrant advice along with myself'.¹⁶³²

Mr Bennett again wrote to the CFA's Chief Officer on 21 January 1991 noting that he had undergone a series of medical tests revealing reactions to petro-chemicals and phenol and that '... whilst further tests are available to gauge more precise details of the reactions, I have, quite frankly, had enough at this time, both physically and financially'.¹⁶³³ He also requested a meeting with the Chief Officer.

On 17 February 1991, Mr Bennett again wrote to the Chief Officer: 'As to date I have received no reply to this correspondence [the letter of 21 January 1991], I would be pleased if you could advise a suitable time and date for me to meet with you to discuss the contents of this letter.'¹⁶³⁴

1628 CFA File note by Mr John Kirkpatrick, 15 October 1990

1629 Correspondence from Mr John Kirkpatrick, Human Resources Manager, CFA, to Mr Alan Bennett, 29 October 1990

1630 Ibid.

1631 Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.8

1632 Correspondence from Mr Alan Bennett to Mr John Kirkpatrick, Human Resources Manager, CFA, 13 November 1990

1633 Correspondence from Mr Alan Bennett to Mr Brian Potter, Chief Officer, CFA, 21 January 1991

1634 Correspondence from Mr Alan Bennett to Mr Brian Potter, Chief Officer, CFA, 17 February 1991

Mr Bennett sent a further letter to the CFA's Human Resources department on 28 October 1991, noting that he had had surgery but his hearing remained damaged. He stated:

... when I was recently speaking with Laurie Thomason, a CFA Board Member, he informed me that the previous Chairman led him to believe that the chemicals at Fiskville had been removed. I believe that this is not the case, and I would be pleased if you could provide me with any further information in this regard.¹⁶³⁵

The Committee notes that a memorandum from the Acting Chief Officer to the Deputy Chief Officer (Operations Services) on 8 September 1988 titled, 'Waste Disposal Site: Fiskville' recommended that the buried material be left in the ground.¹⁶³⁶ Furthermore, the memorandum made reference to the material in a consultant's report, presumably the AS James report, which recommended that the drums be removed as they posed a risk of groundwater contamination.¹⁶³⁷ The CFA did not remove the buried drums until January 1991 (as outlined in Chapter 5).

In November 1991, the CFA advised Mr Bennett that the drums had been removed in January of that year by the firm Waste Processors.¹⁶³⁸ However, in a letter from Mr Bennett to the CFA dated 11 December 1991, Mr Bennett noted: '... in a previous letter from the Authority (29th October 1990) an assurance was given that should the chemicals be moved, analysis would be made and the results passed on to me. I would be grateful if these details could be provided.'¹⁶³⁹

A letter from the CFA to Mr Bennett dated 8 January 1992 advised:

... when the chemicals were removed from Fiskville, the soil and drums were in such a state that it was difficult to make any further analysis than had previously been carried out. I am therefore unable to supply you with any further chemical analysis of the materials removed. However, I recall that the analysis previously taken was, under the circumstances fairly comprehensive.¹⁶⁴⁰

On 7 December 1992, Mr Bennett received a termination letter from the CFA and a cheque for \$20,951.08. The letter was signed by Mr Russell Walker, Health and Safety Co-ordinator.¹⁶⁴¹

In his submission to the Committee, Mr Bennett says that the CFA:

... failed in their duty of care by denying any knowledge of use, storage and burying of such substances when there was evidence to support this, and that they failed to accede to my request to inform Fiskville staff and others involved at Fiskville of the risk of exposure to such substances despite giving its assurance it would do so.¹⁶⁴²

¹⁶³⁵ Correspondence from Mr Alan Bennett to Mr John Kirkpatrick, Human Resources Manager, CFA, 28 October 1991

¹⁶³⁶ CFA Memo from the Acting Chief Officer to the Deputy Chief Officer (Operations Services), 8 September 1988

¹⁶³⁷ Ibid.

¹⁶³⁸ Correspondence from Mr John Kirkpatrick, Human Resources Manager, CFA, to Mr Alan Bennett, 12 November 1991

¹⁶³⁹ Correspondence from Mr Alan Bennett to Mr John Kirkpatrick, Human Resources Manager, 11 December 1991

¹⁶⁴⁰ Correspondence from Mr John Kirkpatrick, Human Resources Manager, CFA, to Mr Alan Bennett, 8 January 1992

¹⁶⁴¹ Correspondence from Mr Russell Walker, Health and Safety Co-ordinator, CFA, to Mr Alan Bennett, 7 December 1992

¹⁶⁴² Mr Alan Bennett, *Submission 453*, 27 May 2015, p.2

CFA knowledge of acute incidents

The Joy Report states that no occupational health and safety record of the incident in which Mr Bennett collapsed exists.¹⁶⁴³ This is relevant because the CFA's response to the Joy Report makes reference to the absence of occupational health and safety records of acute incidents involving chemical spills at regional training grounds:

In view of the tens of thousands of people who trained on the flammable liquids PAD between its completion in 1974 and its closure in 1996, it is surprising that only three acute incidents involving exposure to chemicals have been identified. This is despite an exhaustive search of CFA's OHS records and over 300 interviews. No record of acute incidents involving exposure to chemicals has been found at the six RTGs [Regional Training Grounds].¹⁶⁴⁴

The Committee agrees with the CFA that the lack of records of acute incidents involving chemical spills at the regional training grounds is 'surprising'. This is because the evidence is clear that such acute incidents did in fact occur. The Committee believes that the lack of records of acute incidents is an indictment of the CFA's attitude to occupational health and safety during the 1980s and 1990s.¹⁶⁴⁵

Professor Joy also reveals that in 1989 the then Chairman, Mr Kevin Shea (he is not named in the Joy Report), argued to the CFA Board for the drums' removal. However, the Board disagreed and, as stated, the drums were not removed until January 1991 at the behest of Mr Shea.¹⁶⁴⁶ In *State of Fire: A history of volunteer firefighting and the CFA*, Murray and White reveal that Mr Shea's Chairmanship was dogged by personality clashes with several board members and senior officers. In June 1991, the Board voted by a majority of nine to three that it had no confidence in Mr Shea. Mr Shea was replaced by Mr Len Foster in July 1991.¹⁶⁴⁷

Mr Raymond Greenwood was Chairman of the CFA board from 1 November 1984 to 14 July 1989. He told the Committee that he was unaware of any correspondence between Mr Bennett and the CFA. However, a letter dated 9 November 1987 was sent to Mr Bennett and was signed on behalf of Mr Greenwood by Mr John Thurlow, the head of personnel at the time. Mr Greenwood explained: "It was not uncommon practice that even very routine and mundane letters that were addressed to the Chairman would be responded to by the Chairman or on the Chairman's behalf and I believe that is what happened on this occasion."¹⁶⁴⁸

¹⁶⁴³ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.112

¹⁶⁴⁴ CFA, *Response to the Professor Joy Report of the Independent Investigation into the CFA Facility at Fiskville*, 2012, p7

¹⁶⁴⁵ See also Case Study 3 about Mr David Clancy

¹⁶⁴⁶ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, CFA, Melbourne, 2012, p.115. This issue is discussed further in Chapters 8 and 9 of the Joy Report

¹⁶⁴⁷ Robert Murray and Kate White, *State of Fire: A history of volunteer firefighting and the Country Fire Authority in Victoria*, (1995) Hargreen Publishing Company, pp.308-309

¹⁶⁴⁸ Mr Raymond Greenwood, *Transcript of evidence*, 14 December 2015, p.5

The Committee is disappointed that Mr Bennett's health, and potentially the health of others similarly exposed, was considered 'routine and mundane'.

The letter of 9 November 1987 stated that the Deputy Chief Officer Operations was to '... have the incidents fully investigated and to report in due course'. However, Mr Greenwood, who was working part-time as the CFA Chairman during this period, did not recall the Board seeing a report and did not believe the Board should have because, in his opinion, the unsafe storage and burial of drums was an isolated incident. Mr Greenwood told the Committee: "If there had been similar accidents or other people had said, 'Yes, I remember that; I was injured as well', we would have immediately taken a wider action."¹⁶⁴⁹

Again, the Committee believes that, with such poor record keeping, it cannot be said with any confidence that Mr Bennett's acute exposure to the chemicals in the drums was an isolated incident.

Mr Greenwood added that in his opinion everyone affected by the drums should have been told of the health risks they faced. He said:

In September 1988, and apparently acting on EPA advice, the decision was made to keep the drums buried. At this stage I consider in retrospect that the actions taken were appropriate; however, I would have preferred more prompt action being taken on the receipt of the James report, including seeking a medical opinion on the dangers posed by the drum contents and a response prepared for Mr Bennett. If the contents were considered to have implications to the other staff, then they too should have been informed.¹⁶⁵⁰

Mr Foster, who as stated above replaced Mr Shea as CFA chairman in July 1991, told the Committee that, despite starting his period of employment at this time, he was not aware of Mr Bennett's health problems until questioned by Professor Joy in 2012. When asked who would have authorised the payment to Mr Bennett in 1992, Mr Foster replied: "A settlement like that I expect should have gone to the Board. I have no recollection of it, and I have not seen any minute to the fact that it did ...".¹⁶⁵¹

In his evidence to the Inquiry, Mr Bennett suggested that the CFA should explain to every other person affected by the drums why no action was taken at the time to inform them of the chemicals to which they may have been exposed. Mr Bennett also argued that these people deserve financial compensation.¹⁶⁵²

Mr David Clancy, who served as a fire officer instructor at Fiskville between 1993 and 1996, told the Joy Report investigators that the CFA restricted access to the AS James report, which he refers to as the 'Alan Bennett inquiry'. He stated that, although Fiskville staff were aware of the report, '... no one was allowed to have it'.¹⁶⁵³

¹⁶⁴⁹ Ibid. p.9

¹⁶⁵⁰ Ibid. pp.7-8

¹⁶⁵¹ Mr Len Foster, *Transcript of evidence*, 14 December 2015, p.19

¹⁶⁵² Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.13

¹⁶⁵³ David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.109

Mr Clancy recalled:

We knew about it ... but it was one of those things that wasn't talked about and you're never, ever going to find out about it. So everyone - everyone could say, "Oh, look, we had this incident," because we - we were essentially looking for buried drums. Ah, why were we looking for buried drums? Because they'd been buried because there was an incident. We knew that.¹⁶⁵⁴

Mr Clancy also believed that the CFA's failure to inform everyone involved in the Bennett incident of the risk to which they had been exposed was a breach of the *Occupational Health and Safety Act 1985*:

For my profession, it says the alarm bells are that CFA failed in its duty in relation to section 21 of the OHS Act ... because it... did not provide information... where it had information available.¹⁶⁵⁵

The Board's knowledge of occupational health and safety issues at Fiskville is discussed in Chapter 6.

Conclusion

On 16 September 1987, Mr Bennett began requesting information from the CFA Board Chairman, Mr Greenwood, about the chemicals that he had been exposed to when the drums were moved in 1982. The CFA received the AS James report on 1 July 1988. Despite evidence that the CFA Board was aware of Mr Bennett's request for information, he did not receive a description of the chemicals found in the drums until 24 August 1990. Moreover, the CFA did not provide Mr Bennett with a copy of the relevant sections of the report until 29 October 1990. This indicates that there was a gap of more than two years between the CFA acquiring information about the chemicals and it providing information to Mr Bennett (even then he did not receive the full report - only an extract).

Not only did the CFA take no responsibility for exposing Mr Bennett to hazardous materials that may have caused his illnesses, it also, in his view, terminated his employment and his livelihood as a result of those illnesses.

¹⁶⁵⁴ David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.111

¹⁶⁵⁵ *Ibid.* See also the Case Study on Mr David Clancy.

Timeline

Date	Occurrence
1969	Mr Bennett commences employment with the CFA.
22 December 1982	A fire destroys drums containing flammable liquids with the remainder being buried.
23 December 1982	Mr Bennett is exposed to chemicals while moving drums, causing him to lose consciousness.
March 1987	Mr Bennett becomes unwell and goes on sick leave. ^(a)
16 September 1987	Mr Bennett writes to the Chairman of the CFA Board (Mr Raymond Greenwood) requesting information from the CFA about the chemicals he was exposed to at Fiskville.
20 October 1987	Mr Bennett writes to the Chairman of the CFA Board reiterating the request made on 16 September 1987 for information about the chemicals he was exposed to.
22 January 1988	The United Firefighters Union writes to the CFA on behalf of Mr Bennett noting the importance of the identification of the chemicals he was exposed to.
1 July 1988	AS James Geotechnical Pty Ltd provides a report to the CFA based on testing conducted in May 1988. The report includes details about the contaminants found in samples dug up at Fiskville.
23 July 1990	Mr Bennett writes to the CFA to request a copy of a 1988 report about the chemicals buried at Fiskville.
24 August 1990	The CFA provides Mr Bennett with general information about the chemicals found in soil testing that is based on samples taken in May 1988.
29 October 1990	Mr Bennett is provided with a section of the AS James report, but is asked to keep it confidential. He is also assured that when the materials are moved again he will be given further details.
13 November 1990	Mr Bennett expresses concern (in correspondence to the CFA) that others should be told of outcome of testing.
Mid-January 1991	Drums containing chemicals are removed.
12 November 1991	Mr Bennett is informed that the drums had been removed in January 1991 but he is not given any further analysis.
7 December 1992	The CFA terminates Mr Bennett's employment.

(a) The indication that this occurred in March comes from the transcript of Alan Bennett's evidence to the Committee, see Mr Alan Bennett, *Transcript of evidence*, 27 July 2015, p.285

Case Study 3

Mr David Clancy

Overview

Mr David Clancy was a recruit at Fiskville from 3 June to 25 August 1985 and served as a fire officer instructor and Health and Safety Representative at Fiskville between 15 November 1993 and 19 October 1996. He also worked at various fire stations around Victoria (including Ballarat, Colac and Morwell) and worked at the CFA's head office in an occupational health and safety role from 2002 to 2006, before resigning to work as an occupational health and safety risk consultant. Mr Clancy returned to the CFA's head office in 2010.¹⁶⁵⁶

In May 1996, Mr Clancy prepared an audit entitled, *Report: Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*. This report is commonly referred to as the 'Clancy Report'. It listed a number of serious occupational health and safety concerns, particularly in relation to the storage of dangerous goods. After the report was submitted, the CFA commissioned several consultants to undertake further environmental audits of the site.

Mr Clancy was interviewed in 2012 for the Joy Report,¹⁶⁵⁷ in which he discussed the occupational health and safety culture of the CFA and CFA management's response to his report. The interview provides an insight into the CFA's attitudes towards occupational health and safety culture and environmental concerns in the 1990s.

This Case Study is included as an example of the CFA's approach to occupational health and safety.

Main issues

Occupational health and safety culture and management views

Mr Clancy made a number of observations about the occupational health and safety culture at Fiskville in the mid-1990s. He told the Joy Report interviewer that his appointment as the Health and Safety Representative in 1993 was the catalyst for the audit that he undertook in 1996.¹⁶⁵⁸ Mr Clancy was of the opinion that his appointment and his own increasing awareness of occupational

¹⁶⁵⁶ Mr David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, pp.2-4

¹⁶⁵⁷ Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012)

¹⁶⁵⁸ Mr David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.87

health and safety issues meant that he "... started to look at things a little bit differently".¹⁶⁵⁹ He also believed that his appointment encouraged individuals at Fiskville to voice their concerns.

The Health and Safety Organisation (a predecessor of WorkSafe) served a legal notice on Fiskville in 1993, which Mr Clancy claimed was not actioned.¹⁶⁶⁰ A Health and Safety Organisation officer inspected Fiskville in 1996 and asked Mr Clancy about the 1993 notice. Mr Clancy recalled that he had no knowledge of the notice prior to this point, although another Fiskville staff member was aware of it:

... there was a legal notice from the Health and Safety Organisation served on Fiskville that was never actioned ... it was sitting un-, and when I - when [the officer] came down and he gave us a prohibition notice, he asked us about this. I went, 'What are you talking about?' And [another staff member] said, 'Oh, yeah. I know all about that.' It was sitting on his bloody shelf ... They just got it and - because there was no health and safety culture.¹⁶⁶¹

Mr Clancy told the Joy Report interviewer that the way in which fuels were stored at Fiskville prompted him to look into safety practices at Fiskville:

The catalyst to me working on this project was, ah, me watching, um, people pouring fuel out of 44 gallon drums into pits, ah, and saying, "What's in those?" and they said "We don't know." And, ah, "Where did they come from?" Um - and I think, ah, from memory, um - um, I can probably tell you because it will be in here. There are - it was a ??? or one of those ones.¹⁶⁶²

Mr Clancy stated that he "... started digging [and] started asking questions and it became clear that there were a range of other issues".¹⁶⁶³

In Mr Clancy's view, there was an attitude at Fiskville that the site was not required to comply with the *Occupational Health and Safety Act 1985*:

I remember having a ... discussion with a senior officer at the time ... I now said, 'We are in breach of the *Occupational Health and Safety Act 1985*.' I made it very clear ... that we were in breach and what we were in breach of and I was very clearly told, um, that, ah, we don't have to comply with that. We're the CFA, ah, to which my response was - and it always has been when I get told this - um, you show me in the legislation where it says CFA is exempt ... but that was the attitude ... and we're talking ... eight to nine years after that legislation came into play.¹⁶⁶⁴

1659 Ibid.

1660 Ibid. p.91

1661 Ibid.

1662 Ibid. p.88

1663 Ibid. pp.90 and 93

1664 Ibid. p.92

Mr Clancy explained that many Fiskville staff members had experience in the agricultural sector and he believed that the attitude in this sector "... certainly wasn't, ah, compliance with OHS legislation".¹⁶⁶⁵ He believed that "... it was a sign of the times in a sense too that people made do with what they had. So they - if - if - if they fixed things or they could make them, they made things."¹⁶⁶⁶

In Mr Clancy's view, decisions at Fiskville were driven by constraints in the CFA budget, arguing that "... the culture of the organisation was you beg - beg, borrow or steal to get whatever you needed, so - because, you know, the funding just wasn't there, um, it wasn't a well-funded organisation".¹⁶⁶⁷

One consequence of this lack of funding was that Fiskville was under strong commercial pressure. The financial self-sufficiency of Fiskville, and the 'commercialisation' of the site, was seemingly prioritised over occupational health and safety. As an example, Mr Clancy argued that management did not close the flammable liquid PAD after Mr Clancy's audit, as this would have led to a loss in business: "That was one of the biggest criticisms that I came into contact with or what I came under fire for in - in '96 in relation to my report was we can't close the PAD because we've got all these commercial clients: we have to make money."¹⁶⁶⁸

Mr Clancy added that he had had a conversation about closing the PAD with Fiskville's Business Manager, but the conclusion was: "We can't close the PAD because we won't make money."¹⁶⁶⁹

Mr Clancy told the Joy Report interviewer that his concerns about lack of compliance with a range of regulations were not of interest to senior management in the CFA. He said that management "... certainly spoke to me, but they, at the time, probably weren't 100 per cent interested, and they weren't interested until they saw the final report and saw the ramifications".¹⁶⁷⁰

Mr Jeff Green, who was appointed as the CFA's Workplace Health and Safety Manager in 1994, told the Committee that he had only become aware of Mr Clancy's recommendations recently and did not recall being advised about them at the time.¹⁶⁷¹

¹⁶⁶⁵ Ibid. p107

¹⁶⁶⁶ Ibid. p.108. The culture of the CFA is discussed in Chapter 5

¹⁶⁶⁷ Ibid. p.88

¹⁶⁶⁸ Ibid. p.64

¹⁶⁶⁹ Ibid. pp.119-120

¹⁶⁷⁰ Ibid. p.127

¹⁶⁷¹ Mr Jeff Green, Manager, Workplace Health and Safety, CFA, *Transcript of evidence*, 21 December 2015, p.11. This is discussed further in Chapter 5

Recommendations and follow-up action

Mr Clancy produced 44 recommendations relating to dangerous goods, occupational health and safety practices, and environmental concerns. In particular, the report identified serious concerns in relation to the storage of dangerous goods. For example:

- It was found that there were two underground tanks that required attention, one in particular that was decommissioned because it had a leakage. The manner in which those two tanks were dealt did not comply with dangerous goods storage and handling regulations.¹⁶⁷²
- The sewerage treatment plant at Fiskville was not operating to its design specifications, due to subsidence of the tank [...] the period of time that the sewage treatment plant had been in this condition was uncertain, but the legal and occupational health and safety considerations were reportedly serious. It was thought that Fiskville, as an operation, could be closed should this plant be investigated by the Health and Safety Organisation.¹⁶⁷³

Mr Clancy recommended the continued assessment of environmental site contamination. He supported the removal and treatment of all contaminated soil at Fiskville in line with advice provided by an earlier consultant's report written by Minenco Pty Ltd¹⁶⁷⁴ and recommended that the 'toxic quality of the water in Dam 1' be examined.¹⁶⁷⁵ He noted that his recommendations could not be formalised until the extent of the contamination was known.¹⁶⁷⁶

Mr Clancy also made multiple occupational health and safety recommendations. For example:

That all relevant staff undertake Plant Safety Training (undertaken 22/05/96) and that regular updates and refresher courses be undertaken to maintain competencies and ensure safe working practices.¹⁶⁷⁷

In his interview for the Joy Report, he noted that he was pushed to 'dig his heels in' because he believed that there had been 'significant breaches' of the legislation.¹⁶⁷⁸

After Mr Clancy's report was submitted, EPA Victoria undertook a site inspection which indicated that '... the site is likely to be contaminated due to poor practices in the past. This is supported by the results of the initial site investigation commissioned by the CFA.'¹⁶⁷⁹

¹⁶⁷² David Clancy, *Country Fire Authority Training College, Fiskville. Dangerous Goods Occupational Health & Safety Environmental Audit*, (1996), p.19

¹⁶⁷³ Ibid. p.29

¹⁶⁷⁴ Ibid. p.42. The Minenco Environmental Services CFA Site Visit was undertaken in May 1996 before Mr Clancy's report was released. Minenco made multiple observations in relation to site contamination and remediation

¹⁶⁷⁵ Ibid. p.40

¹⁶⁷⁶ Ibid. p.42

¹⁶⁷⁷ Ibid. p.39

¹⁶⁷⁸ Mr David Clancy, *Independent Fiskville Investigation interview transcript*, 13 March 2012, p.129

¹⁶⁷⁹ Correspondence and attached report from Mr Paul Day, South West Region, EPA, to Mr David Clancy, Fire Officer, CFA, 21 August 1996. EPA Victoria's role at Fiskville is examined in Chapter 8

EPA Victoria recommended:

Further site investigations should be carried out, in-line with that suggested in the consultant's report [and] The CFA should consider retaining the services of a consultant with specific expertise in groundwater investigation.¹⁶⁸⁰

The CFA commissioned a number of environmental consultants throughout 1996 in response to recommendations made by Mr Clancy and EPA Victoria regarding soil and water contamination. For example, the Diomides-Environmental Site Assessment (June 1996) undertook soil sampling, sediment sampling and surface water sampling. Coffey-Field Site Appraisal and Sampling looked at contamination in the fire pits (August 1996), as well as sediment and surface water sampling (October 1996).

The Diomides-Environmental Site Assessment found that hydrocarbon contamination was affecting water quality in Dam 1 and Dam 2.¹⁶⁸¹ This issue was also raised in CRA-ATD's *Review of Site Investigations at Fiskville* (November 1996), which noted that once improvements were made and hydrocarbons were intercepted and removed from surface waters, Dam 1 would have been able to have been rehabilitated.¹⁶⁸² These investigations followed the recommendations made by Mr Clancy in relation to water contamination.¹⁶⁸³

As a result of these reports, the CFA Board became aware of the environmental and health and safety concerns at the site (as discussed in Chapter 6).

The CFA's 1996 Annual Report states:

During the year a review of CFA's current occupational health and safety accident and incident reporting procedures produced a comprehensive reporting format. This will ensure accurate and useful information is recorded for incident analysis, evaluation and accident data.¹⁶⁸⁴

The redevelopment of the PAD at Fiskville in the late 1990s (see Chapter 4) addressed environmental, health and safety issues identified by these reports. However, the Joy Report concluded: '... a fundamental, lasting cultural shift to considering health safety and environment issues in planning and operational training practice does not appear to have occurred'.¹⁶⁸⁵

1680 Ibid.

1681 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), Appendix D, p.18

1682 Ibid. Appendix D, p.21

1683 Water quality is examined in Chapter 4

1684 CFA, *CFA Annual Report 1996*, (1996), p.34. CFA Board knowledge of contamination at Fiskville is discussed in Chapter 6

1685 Professor Robert Joy, *Understanding the Past to Inform the Future: Report of the Independent Fiskville Investigation*, (2012), p.14

Conclusion

The Clancy Report is a key moment in the history of Fiskville. Prior to the report, occupational health and safety standards at Fiskville, and throughout the CFA according to Mr Clancy, were very poor. This is despite occupational health and safety legislation in Victoria having been in place since 1985, at the latest.

There were certainly some improvements made at Fiskville in the years following the Clancy Report. However, as the Joy Report, and this Final Report,¹⁶⁸⁶ have found, these improvements did not go far enough. Occupational health and safety concerns remained at Fiskville for a number of years until its closure, for safety-related reasons, in March 2015.

¹⁶⁸⁶ See particularly Chapter 5

Case Study 4

Mr Matthew and Mrs Beccara Lloyd

Overview

Mr Matthew and Mrs Beccara Lloyd purchased their property Hamills Lane, which borders Fiskville, in 1997 and live there with their family. The Lloyds developed a successful business breeding prime lambs, reaching a flock of 1,200 breeding ewes, and a farm gate business called Field to Fridge.¹⁶⁸⁷ Water and soil on their property was contaminated by run-off from Fiskville. This caused health concerns for the Lloyds and their animals.

This Case Study is included as an example of the way in which the CFA has interacted with its neighbours at Fiskville.

Main issues

The CFA first became aware of PFOS¹⁶⁸⁸ and PFOA¹⁶⁸⁹ contamination at Fiskville when AirServices Australia wrote to the CFA's then CEO Mr Mick Bourke on 29 April 2010 (as detailed in Chapter 6). The Committee has no evidence that the CFA contacted the Lloyds, or other neighbouring property owners, to assess whether the contamination had spread to their properties. The Committee considers that the CFA should have done so.

Mr Lloyd rang Fiskville management in 2012 after he had viewed media coverage of the site's contamination and noticed warning signs hung on the fence bordering his property. The CFA advised the Lloyds about the contamination in September 2012. The Lloyds immediately ceased trading in their Field to Fridge business so as not to risk selling potentially unsafe meat. The CFA arranged testing of the Lloyds' sheep, which revealed levels of PFOS in the animals. The data was provided to the Department of Environment and Primary Industries (DEPI) and on 25 September 2012 a Stock Contamination Notice was issued. The Notice was rescinded on 27 September 2012 (see below).¹⁶⁹⁰

¹⁶⁸⁷ Mr Matthew and Mrs Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.63

¹⁶⁸⁸ Perfluorooctane sulfonate

¹⁶⁸⁹ Perfluorooctanoic acid

¹⁶⁹⁰ Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.4

The Lloyds told the Committee that at a meeting during this process, Mr Michael Wootten, the then acting CEO of the CFA, offered \$350,000 for their stock.¹⁶⁹¹ Mr Wootten, however, told the Committee that while an offer was made to replace the stock, the amount of \$350,000 was never mentioned. He added that an offer was also made to connect the Lloyds to mains water, remediate a dam and install fencing around their property.¹⁶⁹² The CFA also arranged for the Lloyd family to be tested for PFOS (see below).

It was also Mr Wootten's evidence that at no stage were the Lloyds given a date by which they must accept the offer or have it withdrawn.¹⁶⁹³

The Lloyds sought legal advice about how best to proceed. This decision was based on advice received from Ms Sherry Herman, who was then working for the CFA. Ms Herman told the Committee that she recommended this action because the Lloyds "... were in enormous distress. It was a very difficult thing to see - very, very difficult."¹⁶⁹⁴

The CFA and the Lloyds met several times at the end of September 2012. Also at these meetings were: the CFA's Mr Lex De Man and Mr Martyn Bona; Dr Roger Drew and Dr Michael Sargeant (both of whom had been hired by the CFA); and several representatives from DEPI.¹⁶⁹⁵

Mr Wootten's offer to purchase the stock was withdrawn by Mr Mick Bourke, who at this time had returned from leave.¹⁶⁹⁶ Mr Bourke told the Committee that the offer was withdrawn because Mr Wootten had not followed the required public sector process.¹⁶⁹⁷ Mr Bourke added that the Victorian Government had wanted to reach a "reasonable compensation" with the Lloyds via mediation but that the mediation never happened.¹⁶⁹⁸

Mr Bourke denied withdrawing the offer because the Lloyds had sought legal advice. At a public hearing on 21 December 2015, Mr Bourke also denied withdrawing the offer via a text message to the Lloyds.¹⁶⁹⁹ However, on 28 January 2016 the Committee showed Mr Bourke a copy of a text he had sent to Mr Lloyd on 5 August 2013 which stated: 'Hi Mat given the Slater and Gordon correspondence I am not in a position to speak to you as planned. Thanks Mick.'

The Lloyds understood this text to mean Mr Bourke was withdrawing the offer because of the Lloyds' decision to seek legal advice.¹⁷⁰⁰

1691 Mr Matthew and Mrs Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.65. Mr Mick Bourke, the CEO, was on leave at the time

1692 Mr Michael Wootten, *Transcript of evidence*, 28 January 2016, pp.11; 31

1693 *Ibid.* p.32

1694 Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.13

1695 Mr Matthew and Mrs Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.68

1696 *Ibid.* p.71

1697 Mr Mick Bourke, *Transcript of evidence*, 21 December 2015, p.8

1698 *Ibid.* p.9

1699 *Ibid.* p.18

1700 Mr Matthew and Mrs Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.71

Mr Bourke told the Committee that when first questioned about the text he could not recall sending it. He then further explained that the meaning of the text was that he (Mr Bourke) could no longer speak to the Lloyds as the matter was now in the hands of legal counsel. He stated that the text did not mean that the offer was being withdrawn because the Lloyds had sought legal advice.¹⁷⁰¹

Mr Bourke reiterated that Mr Wootten's original offer "... had not cleared the public sector processes that it needed to clear, and in going through those processes it was required that I revoke the offer".¹⁷⁰²

Mr Wootten confirmed that he had made the offer without seeking approval from the Victorian Government, as he felt it was the right thing to do. He told the Committee:

When I discussed the offer and confirmed it in writing I had not sought government approval. That was something I did under my own position as Acting Chief Executive Officer in good faith. I did that because I felt it was the right thing to do at the time. I did not seek anyone's approval in terms of doing it.¹⁷⁰³

Mr Bourke added his view that "... it was very disappointing not be able to make this happen in some reasonable way".¹⁷⁰⁴

Ms Herman also told the Committee that she had advised the CFA to provide a media adviser to the Lloyds. The Lloyds had earlier told the Committee that they thought this had been done in order for them to present the CFA and its activities at Fiskville in the best light possible.¹⁷⁰⁵ Ms Herman said that she now regrets the decision to provide a media adviser to the Lloyds. However, she stressed that it was a "genuine offer" at the time based on wanting to help the Lloyds. Ms Herman was motivated by concern, as she had observed that the Lloyds were nervous about having to speak to the media about the risks posed by the contamination of their stock.¹⁷⁰⁶

Stock Contamination Notice

In Victoria, the power to issue a Stock Contamination Notice is contained in the *Agricultural and Veterinary Chemical (Control of Use) Act 1992*. The Act defines 'contaminated' as meaning the presence of a chemical in livestock or livestock produce in excess of the maximum residue limit. If there is no maximum residue limit, as is the case with PFOS, it references compliance or otherwise with the *Food Act 1984*.¹⁷⁰⁷

¹⁷⁰¹ Mr Mick Bourke, *Transcript of evidence*, 28 January 2016, p.3

¹⁷⁰² *Ibid.* p.4

¹⁷⁰³ Mr Michael Wootten, *Transcript of evidence*, 28 January 2016, p.11

¹⁷⁰⁴ Mr Mick Bourke, *Transcript of evidence*, 28 January 2016, p.5

¹⁷⁰⁵ Mr Matthew and Mrs Beccara Lloyd, *Transcript of evidence*, 18 May 2015, pp.68-69

¹⁷⁰⁶ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.17

¹⁷⁰⁷ Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.4

Dr Tony Britt from the Department of Economic Development, Jobs, Transport and Resources (the Department that assumed DEPI's responsibilities following the 2014 Victorian election) told the Committee:

The issue at the time was the status of the livestock relating to the *Food Act* and the *Food Standards Code*, and the doubt that existed about whether the livestock that were present on the farm indeed were compliant with the *Food Standards Code* and the *Food Act* or not.¹⁷⁰⁸

On 25 September 2012, when the Stock Contamination Notice was issued, the Lloyds met with DEPI's Dr Cameron Bell and Mr Gordon Nash and confirmed that they did not plan to sell their stock until December that year.¹⁷⁰⁹ However, the Committee learnt that Stock Contamination Notices are still issued even in the absence of plans to sell stock. This is to ensure that owners are aware of their legal responsibilities.¹⁷¹⁰

At the time the Stock Contamination Notice was issued, four of the Lloyds ewes had been tested for PFOS (a pilot study conducted in August 2013). The PFOS concentrations in these ewes ranged from 19 to 56 ng/mL, with the average 35 ± 18 .¹⁷¹¹

Dr Britt signed the revoking of the Stock Contamination Notice on 27 September 2012. He told the Committee that his decision had been based on advice received in writing from the then Chief Health Officer, Dr Rosemary Lester, that the lambs presented no health risk.¹⁷¹² As discussed in Chapter 8, DEPI had received advice from the Chief Health Officer that there was no risk to food safety *prior* to issuing the Notice.

Dr Lester confirmed to the Committee that she had formed that view based on testing carried out by Dr Drew which had revealed that "... there was negligible risk with this livestock entering the food chain and I provided that advice to the Department of Environment and Primary Industries, which then rescinded the Notice".¹⁷¹³

The Stock Contamination Notice is discussed in more detail in Chapter 8.

Follow-up testing

Following the rescinding of the Stock Contamination Notice, the CFA, DEPI and the Department of Health agreed that more testing should be done on the Lloyds and their property, including their soil, grass, water and animals. The results were analysed by Dr Drew, who concluded that although PFOS was present on the property, it was not present in high enough levels as to be a threat to human

1708 Ibid. p.5

1709 Dr Charles Milne, Chief Veterinary Officer, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.7

1710 Ibid. p.11

1711 Email from Mr Tony Britt to Mr Russell McMurray (DEPI), 13 November 2013

1712 Dr Tony Britt, Manager, Major Projects, Department of Economic Development, Jobs, Transport and Resources, *Transcript of evidence*, 23 November 2015, p.12

1713 Dr Rosemary Lester, *Transcript of evidence*, 14 December 2015, p.3

health. According to Dr Drew, more than 90 samples of soil and grass were taken of the Lloyds' property, all of them returning PFOS concentrations at 1,000 times less than the United States Environmental Protection Agency's level for safe residential land.¹⁷¹⁴

The testing of the Lloyds' water was divided into two components: water from a water tank and taps around the Lloyds' home, which found no PFCs present; and water in the Lloyds' dam.¹⁷¹⁵ Dr Drew explained that as the water in the dam is non-potable, drinking water guidelines do not apply. He said:

The dose the animals would get from the dam water is much less than the dose which causes no effect in the experimental animals and that is supported by the fact that the sheep who drank that water, while having increased concentrations of PFOS in their blood, they were concentrations that were very low and in fact similar to the background concentrations that you and I have in our blood at the moment.¹⁷¹⁶

In relation to the extended study of sheep in October 2013:

- Milk samples were taken from 6 ewes
- Ten lambs were euthanised for tissue testing
- Serum samples were taken from 30 ewes.

The results were as follows:

- Ewe serum 19 ± 12 ng/mL
- Lamb serum 37 ± 24 ng/mL
- Lamb muscle 4.2 ± 2.8 ng/g
- Lamb liver 95 ± 57 ng/g
- Lamb kidney 28 ± 15 ng/g.¹⁷¹⁷

Dr Drew added that even applying the most conservative assumptions the level that would be ingested from eating the animals would be much lower than the tolerable daily intake level established by the European Food Safety Authority as being safe.¹⁷¹⁸

Overall, Dr Drew told the Committee that the testing of the Lloyds' farm was "... one of the most comprehensive investigations that has been undertaken for environmental contamination of this nature".¹⁷¹⁹

Ms Herman added that the CFA advised other farms and properties in the area of the potential for their dam water to be contaminated by PFOS. She explained:

¹⁷¹⁴ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.5. See also: Country Fire Authority, *Submission No. 60*, pp.42-43

¹⁷¹⁵ *Ibid.*

¹⁷¹⁶ *Ibid.* p.6

¹⁷¹⁷ Report by Dr Graham Mitchell, Chief Scientist, to Department of Environment and Primary Industries, 21 January 2014

¹⁷¹⁸ Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.6

¹⁷¹⁹ *Ibid.* p.5

With regard to the water, it was considered that no-one would be drinking that water, but even so we had to advise the downstream community not to drink it, so we did. If you look at an aerial map of the zone between Fiskville and the Moorabool River, there are some 20-odd properties on either side. We identified every one of those and a member of my team personally went and doorknocked every one of them and put flyers into mailboxes and so on.¹⁷²⁰

Health checks

In August 2013, the CFA contracted Dr Michael Sargeant to speak with the Lloyds about their blood tests. Dr Sargeant told the Committee that he attended the Lloyds' property on 2 September 2013 to discuss how their results compared to background levels and 'safe' and 'dangerous' levels. Dr Sargeant based his advice on information provided by Dr Drew, which was that although the Lloyds' levels were above background levels they fell below those considered a risk to human health. Dr Sargeant did not leave any written results with the Lloyds.¹⁷²¹

When asked about the Lloyds' results Dr Drew explained to the Committee: "There is a big difference between the serum no-effect level in humans and the concentrations that were measured."¹⁷²²

The Committee is aware that Dr Drew told a Victorian Government interagency meeting on 15 November 2013 that the Lloyds' property presented no health or food safety risk. Further, Dr Drew briefed the Victorian Chief Scientist, Dr Graham Mitchell, on 16 December 2013 about the test results.

(See Chapter 9 for a discussion on the health effects of PFOS.)

The Committee also spoke to Dr Sargeant about confusion that had arisen around the Lloyds' ability to access their results and all documents associated with them. Dr Sargeant told the Committee that when he spoke with the Lloyds on 2 September 2013 he discussed their results with them, but did not give them a National Medical Institute pro forma used to collate the data.¹⁷²³ As is good practice, Dr Sargeant retained the Lloyds' medical results and the CFA has never held them.¹⁷²⁴

On 5 December 2013, Slater and Gordon, representing the Lloyds, wrote to Mr Bourke requesting all documents related to the blood tests. Despite not holding the blood test results, the CFA indicated that they would provide them, but there would be ongoing delays. On 17 December 2013, the results were promised by 27 December, and on 9 January 2014 it was claimed that the Christmas / New Year period had delayed the results. On 28 March 2014, Slater and Gordon again wrote to Mr Bourke requesting the documents.

1720 Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.19

1721 This is what Dr Sargeant described as the "the actual pro forma back from the National Medical Institute": Dr Michael Sargeant, *Transcript of evidence*, 23 November 2015, p.3

1722 Dr Roger Drew, Principal Consultant, ToxConsult, *Transcript of evidence*, 23 November 2015, p.7

1723 Dr Michael Sargeant, *Transcript of evidence*, 23 November 2015, p.3

1724 Ibid.

The Lloyds and Dr Sargeant made several unsuccessful attempts to meet in late 2013 and early 2014. On 2 May 2014, the Lloyds wrote to Dr Sargeant requesting all documents related to their tests. However, Dr Sargeant told the Committee he never received this letter. Dr Sargeant said that Mrs Lloyd phoned him in early 2015, while Dr Sargeant was on leave, asking for the documents. Dr Sargeant told Mrs Lloyd to put her request through the CFA, as although they did not hold any medical records they had engaged Dr Sargeant.¹⁷²⁵

Dr Sargeant told the Committee that he did not know if the Lloyds made a request through the CFA. However, he also told the Committee that soon after the phone conversation with Mrs Lloyd he was contacted by Mr James Fox from the CFA “... saying that he had a request for copies of the results”.¹⁷²⁶

Dr Sargeant’s advice was that the documents should be provided but that, in his opinion, a doctor should be present to explain the data. On 7 July 2015, Dr Sargeant received an email from Dr Simon Slota-Kan from the Department of Health and Human Services saying Dr Slota-Kan had been contacted by Mr Fox about the Lloyds’ records. Dr Sargeant said he tried to contact Dr Slota-Kan several times to obtain a consent form to release the records but had been unable to contact him.¹⁷²⁷

Freedom of Information request

Due to the difficulties experienced accessing their test results (their own blood test results¹⁷²⁸ and results from tests of their livestock and property) the Lloyds lodged a Freedom of Information (FOI) request on 20 January 2014. The Lloyds were then forced to appeal to the Victorian Civil and Administrative Tribunal (VCAT) when the FOI request was unsuccessful, as they explained to the Committee:

Mrs LLOYD—As soon as we got lawyers, which we had to, they will not give us any of our test results of the second lot of blood tests that we have had done.

Mr LLOYD—We are going to VCAT on Wednesday to try to get our second lot of blood tests and sheep tests. It has been a fighting battle every time we try to get anything off them.

Mrs LLOYD—We are entitled to our results.¹⁷²⁹

The Lloyds’ legal representative provided the Committee with the following background to the VCAT proceedings:

¹⁷²⁵ Dr Michael Sargeant, *Transcript of evidence* - 23 November 2015, p.6. Dr Sargeant stated that he was unaware of the exact date that Mrs Lloyd phoned him

¹⁷²⁶ Ibid.

¹⁷²⁷ Ibid.

¹⁷²⁸ As noted above, Mr and Mrs Lloyd made attempts to get their blood tests results from both the CFA and Dr Sargeant. Dr Sargeant told the Lloyds to approach the CFA, and the CFA indicated that they did not hold the results - rather, they were in the possession of Dr Sargeant.

¹⁷²⁹ Mr and Mrs Matthew and Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.65

We requested access to the Lloyd's blood test results from the CFA via an FOI request. However the CFA instructed its lawyers that it did not have the blood tests results because they were with Dr Sargeant, who was the Lloyds' physician.

We advised Ashurst Lawyers that the CFA had engaged Dr Sargeant, not the Lloyds. Nevertheless, the CFA's lawyer maintained that the CFA did not have the results and therefore no VCAT proceeding was issued against the CFA.

The Lloyds made an FOI application against the (then) Department of Sustainability and Environment (DSE) for access to documents regarding communications between the CFA Department of Health and DSE.¹⁷³⁰

The Committee finds it unacceptable that the Lloyds had to go to the extent of a potential VCAT hearing before being informed that the CFA did not hold some of the documents they were seeking. The Committee also notes that although the Lloyds first requested all documentation relating to the results on 5 December 2013, then lodged an FOI claim on 20 January 2014, by 18 May 2015 they still did not have the results.

The Lloyds still do not have their results, more than two years after first seeking them. This is of great concern to the Committee.

Conclusion

The Committee was interested in Ms Herman's opinion of the CFA's response to its contamination of the Lloyds' property. Ms Herman said that the process had started with good intentions before being overwhelmed by the events that followed:

I think in the beginning really well; I think in the end not so well ... We had really good communication with them. I think there was a genuine feeling in CFA that we could do something to help them. I am not sure if you are aware of it, but Lex de Man actually got an evaluation of their property in anticipation of maybe paying them out. All of that kind of just fell away once it all blew.¹⁷³¹

The CFA's Ms Angela Seach said: "My own personal view is that there was not any deliberate intent to make life difficult. Errors are made; people are human. I think, clearly, we could have done better."¹⁷³²

When asked how the issue had affected him, Mr Lloyd, who is also a CFA volunteer, told the Committee: "Mentally it is ruining me, mate. I cannot handle it. It has cooked me."¹⁷³³

Mr Lloyd also spoke about the behaviour of the CFA, saying:

¹⁷³⁰ Email correspondence from Slater and Gordon Lawyers to Committee Secretariat, 2 May 2016

¹⁷³¹ Ms Sherry Herman, *Transcript of evidence*, 21 December 2015, p.20

¹⁷³² Ms Angela Seach, Acting Executive Manager Organisational Development, CFA, *Transcript of evidence*, 27 January 2016, p.11

¹⁷³³ Mr and Mrs Matthew and Beccara Lloyd, *Transcript of evidence*, 18 May 2015, p.68

Mick Bourke - in the early days, Beccara and I would have phone meetings with him. We would sit the phone in the middle of the table. He was not ever very nice to us, anyway, about the whole thing but he did speak to us. We asked him the same questions time and time again: 'How are we going to fix this?', 'How are we going to fix it?'. And he would come back, 'I'll get back to you', 'I'll get back to you' - nothing ever happened ... He was never nice. He never wanted to give us an idea of how to fix anything. He was just, 'We've done nothing wrong' virtually, the whole time.¹⁷³⁴

Mrs Lloyd added:

They are telling us, 'Yes, it's in there; yes, it's in your water; yes, it's in your kids; it's in your meats; yes, it's everywhere', and then when we say, 'Well, we want proper information and let's fix it up. We have to get lawyers', they are like, 'Well, we don't have to do anything'. That is what they are like. That is it.¹⁷³⁵

Regarding the long-term implications of the contamination of their farm, Mr Lloyd said:

I think the stigma of where we live has ruined even the value of our land now. Even if we cleaned it and everything like that, people are going to say, 'You live right next to a toxic wasteland, virtually'. It is never going to be the value of what it should be, despite the work we have put into it and what we have made it. I do not know that whatever they could do now is going to change the stigma that is around our farm and our area for what we do. It is just going to be there. People know. The town talks.¹⁷³⁶

In July 2015, Landmark advised the Lloyds that it would no longer buy their stock. This was due to buyer concern over the contamination risk posed by Fiskville.¹⁷³⁷

The Committee shares the view of Ms Herman that the CFA's response was initially well intended but quickly became poor. This was due to a combination of factors, including the CFA not being aware of the correct procedures to follow, the fact that its CEO was on leave at the time the contamination of the Lloyds' property was revealed and the Victorian Government's decision to assume responsibility for compensating the Lloyds perhaps as far back as 2013. (The Committee was unable to determine exactly when the Victorian Government assumed responsibility.)

Regardless, the Lloyds' lives have been greatly harmed through no fault of their own. The harm has arisen from the actions of the CFA and the time taken by the Victorian Government to make a decision on compensation. At time of writing this Final Report it has been three-and-a-half years since the Lloyds were notified of the contamination. During this time their business has been ruined and the stress of not knowing what is being done to compensate them has seen the health of both Matthew and Beccara Lloyd deteriorate.

¹⁷³⁴ Ibid. p.71

¹⁷³⁵ Ibid. p.70

¹⁷³⁶ Ibid. p.74

¹⁷³⁷ Correspondence from, Mr Xavier Shanahan, Livestock Manager Ballarat, Landmark, to Mr M Harris, Slater and Gordon Lawyers, 15 July 2015

The Committee was concerned that the Lloyds were adversely affected by giving evidence to the Committee, which prompted it to make the following recommendation in its Interim Report in June 2015: ‘Due to market sensitivity regarding contamination of food the Government considers the situation whereby local producers may not be able to sell their livestock or other produce’.¹⁷³⁸ The Committee remains concerned about the harm done to the Lloyds.

The Committee believes that the ramifications for the Lloyds are unacceptable. It can only hope that the Victorian Government keeps the Lloyds’ suffering in mind when finally making a decision about the right level of compensation for the Lloyds. The Committee understands that confidential negotiations between the Lloyds and the Government are currently underway.

¹⁷³⁸ Environment, Natural Resources and Regional Development Committee, Inquiry into the CFA Training College at Fiskville Interim Report, (2015, Report No.1, 58th Parliament), recommendation 1(c)

Case Study 5

Mr Neville Callow

Overview

Mr Neville Callow was a CFA Captain from 1990 to 1994. He bought a 92-acre property adjoining the Fiskville site in 2003 to run cattle and sheep before deciding to build a house on the property for his family. Mr Callow made multiple complaints to the CFA, EPA Victoria and Moorabool Shire Council from 2011-2015 about the impact fumes, smoke and debris produced by the Fiskville site were having on his property. He gave evidence about his experiences at a public hearing and made a submission to the Committee, including photographs, an excerpt of his interview transcript from the Joy Report, emails, letters and a 'nuisance diary' he completed in 2013.¹⁷³⁹

This Case Study is included as an example of the way in which the CFA has interacted with its neighbours at Fiskville and how Moorabool Shire Council and EPA Victoria responded to complaints from a neighbouring property owner.

Main Issues

Complaints by Mr Callow

On 16 June 2011, Mr Callow contacted EPA Victoria to complain about 'thick black smoke everywhere' spreading from the Fiskville site over his property and to express concern about the potentially dangerous effect the smoke was having on his family and tank water.¹⁷⁴⁰ An EPA Victoria record of its response to this complaint noted:

11:10 Spoke to John Myers and Paul Roughead of CFA. Training takes place often but irregularly. Sometimes 3 or 4 times a day, sometimes not for weeks. They train using different materials including flammable liquid (ULP) and gas. Have installed borders to dissipate smoke. CFA have operated on this site for 30 years. Complainant is just building a house now. Mick Harris is the Operations Manager for training. I recommended and CFA agreed that the dialogue would be best between the complainant and Mick Harris.

13:14 Spoke to complainant. He agreed with outcome and would contact CFA again to organise a meeting.¹⁷⁴¹

¹⁷³⁹ Mr Neville Callow, *Submission 42*

¹⁷⁴⁰ EPA Victoria, internal file note, 16 June 2011

¹⁷⁴¹ *Ibid.*

In his evidence to the Committee, Mr Callow described how he had been affected by the fumes, smoke and debris produced by the fire training at Fiskville:

You can tell pretty much what they are burning. If it is tyres, it is super black. That is probably not so bad - it is bad enough - but when you get that plastic polystyrene, when they are burning mattresses, pillows or whatever they do, that is deadly.¹⁷⁴²

Over the years my family and I, as well as my livestock, have suffered ongoing health issues. I have lost cattle as a result of them eating the plastic and the polystyrene blown onto my property from Fiskville.¹⁷⁴³

I sold a young cow to a local, and it died six months later, full of cancer. I have lost two newly born calves as a result of explosives training. A horse I had on agistment had the hair burnt off the top of its body as a result of acid rain.¹⁷⁴⁴

My only source of drinking water, which is collected in a large tank from my shed, I believe has been polluted by the smoke and fumes crossing my private property ... My daughter had never experienced asthma before I purchased this property; however, since being at Fiskville, she has had many episodes.¹⁷⁴⁵

Mr Callow added:

The EPA in Geelong just basically fobbed me off and said that it has got nothing to do with them. 'We will suggest to the Moorabool shire to put on a wind protocol', because they are the ones who issued the permit for the CFA to operate. Under that permit there are meant to be conditions, but I wrote a letter asking what conditions there were, and they said, 'You have got to use the freedom of information'. It costs I think \$147 or something to access them. Initially the Moorabool Shire were not too bad ... In the end they just do not want to know about it, you know what I mean? I do a running sheet - smoked out today, with the date, what type of smoke, what colour and all that type of stuff. The same the next day. I say I have complained and what have you. Eventually she had a meeting with the CFA management, but they said it really has got nothing to do with them. They have their strategic management plan. Basically the CFA is a law unto themselves; they just do what they want. What can you do? You can only complain about the same thing so many times and send the same email over and over.¹⁷⁴⁶

Mr Callow's complaint centred on not being notified by Fiskville of when fire training would occur, which Mr Callow wanted to know in order to prepare (such as going indoors or moving to a part of the property not affected). He also showed the Committee pictures of debris - pieces of plastic and metal - that he said were caused by explosives training at Fiskville.¹⁷⁴⁷

On 12 November 2012, Mr Callow sent an email to the CFA, WorkSafe, Moorabool Shire Council and EPA Victoria stating that his daughter had suffered an asthma attack due to the smoke and fumes from training held at Fiskville the previous

1742 Mr Neville Callow, *Transcript of evidence*, 25 May 2015, p.113

1743 Ibid.

1744 Ibid.

1745 Ibid.

1746 Ibid.

1747 Mr Neville Callow, *Submission 42*, part 2

day. Although Mr Callow had been made aware of the Fiskville training schedule he complained that ‘... it is still not satisfactory to do this type of training when the smoke and fumes drift across private property and affect the people working there’.¹⁷⁴⁸

EPA Victoria advised Mr Callow that it did not have authority to act and that it was a matter for the local shire – in this case Moorabool Shire Council.¹⁷⁴⁹ The CEO of EPA Victoria, Mr Nial Finegan, confirmed that this was the case when he gave evidence to the Committee. Mr Finegan said that EPA Victoria acted as a “broker” in organising meetings between Mr Callow, Moorabool Shire Council and the CFA.¹⁷⁵⁰ EPA Victoria also advised Mr Callow to speak with the CFA directly, which he did.

Moorabool Shire Council

In September 2011, Mr Callow made a complaint to Moorabool Shire Council following which a member of the Council met with staff at Fiskville.¹⁷⁵¹ In a letter dated 15 September 2011 to Fiskville’s Facilities Manager, Mr Martyn Bona, Moorabool Shire Council requested that the CFA formally consider developing a ‘wind protocol’.¹⁷⁵²

Mr Rob Croxford, Moorabool Shire Council’s CEO, confirmed to the Committee that the Council’s first contact with Mr Callow regarding Fiskville was in 2011. Mr Croxford explained that it took until 2013 for the Council to use its powers under the *Public Health and Wellbeing Act 2008* to obtain agreement between Mr Callow and Fiskville regarding the smoke affecting Mr Callow’s property.¹⁷⁵³ He said:

Under the Public Health and Wellbeing Act one of the courses of action was to try to get an agreement between the two parties. What happened there was a protocol was developed for smoke drift, fume drift. During 2013 our environmental health officer met with the neighbour and with senior people at Fiskville to talk about how we were going to mitigate the impact of this smoke drift. As a consequence I believe there was then a protocol developed which meant that the CFA would notify neighbours when training was going to be commenced. They would also change their processes in some way. During 2013, from the file notes that I have been able to review, it appears that there was some improvement.¹⁷⁵⁴

On 18 June 2013, in response to another complaint by Mr Callow, a Moorabool Shire Council Environmental Health Officer advised Mr Callow that, in order for the Council to investigate the site, under the nuisance provisions of the *Public*

¹⁷⁴⁸ Correspondence from Mr Callow to CFA, 12 November 2012, ‘Fw Smoke and fumes’ - Mr Neville Callow, *Submission 42*, Appendices, p.13

¹⁷⁴⁹ Mr Neville Callow, *Submission 42*, part 1, p.4

¹⁷⁵⁰ Mr Nial Finegan, Chief Executive Officer, Environment Protection Authority Victoria, *Transcript of evidence*, 14 December 2015, pp.1617

¹⁷⁵¹ CFA Briefing Note addressed to Mr Lex De Man, Thursday 15 December 2011, p.1

¹⁷⁵² Correspondence from Moorabool Shire Council to Mr Martyn Bona, Facilities Manager, CFA, 15 September 2011

¹⁷⁵³ These powers are examined in Chapter 8

¹⁷⁵⁴ Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, *Transcript of evidence*, 19 November 2015, p.5

*Health and Wellbeing Act 2008*¹⁷⁵⁵ he would need to keep a ‘nuisance diary’ outlining all smoke incidents. On 8 August 2013, the Council’s Environmental Health Officer attended Mr Callow’s premises to discuss, among other things, Mr Callow’s nuisance diary. The Officer’s file note states: ‘... explosives could be heard from the site while I was there. I commented on how loud they were and Neville advised that they were just small ones ... Neville did advise that debris from explosives sometimes lands on his property.’¹⁷⁵⁶

On 28 August 2013, two Council Officers conducted a site inspection at Fiskville.¹⁷⁵⁷ A Moorabool Shire Council Environmental Health Officer then wrote to the CFA on 30 August 2013 requesting a written response to a number of issues, including: procedures the CFA would put in place to minimise hot fire training emissions drifting offsite; how the CFA would manage complaints received during training exercises; and whether the CFA had provided contact numbers to neighbours.

The CFA responded to Moorabool Shire Council on 2 October 2013: ‘... an operations guideline has been developed, which includes Emissions Control procedure and Hot Fire Training Advice (PAD Operations Guideline 2.11). Furthermore CFA on a weekly basis distribute Hot Fire Training Advice Notices to all local neighbours via email.’¹⁷⁵⁸ The Committee was provided with several examples of these notices, one of which is included at Appendix 9.

Moorabool Shire Council’s Environmental Health Officer wrote to Mr Callow on 8 October 2013 stating that the Environmental Health Unit had carried out an investigation into the alleged nuisance emanating from the site.¹⁷⁵⁹ The investigation included:

- meetings with Mr Callow and CFA management
- examining Mr Callow’s nuisance diary
- taking photographs, and
- written correspondence.

The letter closes with the following:

Council believes it has acted within its duty to investigate the alleged nuisance under section 62(2) of the *Public Health and Wellbeing Act 2008* and believes that any future incidences of smoke arising from the Hot Fire Training activities at the Fiskville CFA site drifting onto your property are best dealt with by you contacting Fiskville CFA Facility directly.¹⁷⁶⁰

1755 *Public Health and Wellbeing Act 2008* (Victoria), ss. 58066

1756 Moorabool Shire Council File Note, Environmental Health Unit, 8 August 2013

1757 Moorabool Shire Council File Note, Environmental Health Unit, 10 November 2015

1758 Letter from Mr Martyn Bona, Facilities Manager, CFA, to Coordinator Community Health and Safety, Moorabool Shire Council, 2 October 2013

1759 Mr Callow included the letter as an appendix to his submission - Mr Neville Callow, *Submission 42*, Appendices, p.35

1760 Letter to Neville Callow from Coordinator Community Health and Safety at Moorabool Shire Council, 8 October 2013, p2

Mr Justin Justin, the Officer in Charge at Fiskville at the time, told the Committee that he had met with Mr Callow several times, following which Fiskville made changes to its fire training practices. Mr Justin said:

It was through our conversations that I implemented an email release every Friday as to the activities that would transpire the following week, because I know he was building his house and some days he would have people there, so that was just a reassurance for him so he would know the days we were actually burning ... I know a couple of times he spoke to me in relation to, 'Look, the smoke's blowing across my property', and I went out, ceased training and got the guys on the PAD to do something else until such time as Neville had left.¹⁷⁶¹

Licence to operate

In a letter dated 18 August 2011, Mr Justin advised Mr Callow that '... hot fire training activities are an established practice at Fiskville and are conducted in accordance with approvals from relevant authorities'.¹⁷⁶² Further, according to a CFA briefing note dated 15 December 2011, Mr Callow had been advised that the CFA '... had been on site for 40 years and had EPA consent to do fire related training activities'.¹⁷⁶³

However, this was not the case. An email from a CFA Operations Manager to Mr Justin dated 16 December 2011 states:

The staff at Fiskville were of the belief that we had a licence from EPA in relation to burning operations including such things as tyres, I initiated a search just after the complaint was received from Neville Callow to ensure that we were in fact complying with the licence conditions. At the time I left, no licence or file had been located.¹⁷⁶⁴

Mr Callow was eventually advised that the CFA did not have a licence to operate at Fiskville from either Moorabool Shire Council or EPA Victoria. Rather, it had existing use rights. The Shire's Manager of Statutory Planning and Building wrote to Mr Callow via email dated 23 May 2012:

Council's electronic records has only one reference to a planning permit for the site at Fiskville; that is planning Permit PA2012058 which is currently before Council for consideration. The reference to existing use rights reflects the provisions of the Moorabool Planning Scheme at Clause 63. This clause details the circumstances that must be met to establish any existing use rights. One mechanism to formalise those rights would be to seek a Certificate of Compliance from Council under s 97N of the Planning & Environment Act 1987. This would seek to get Council to declare that existing use rights exist on the land. Such a certificate would also seek to limit the existing use rights to those that can be verified as existing and complying with Clause 63 of the Scheme ... Any application for a certificate should include a letter requesting that Council provide a Certificate of Compliance under section 97N of the Planning and Environment Act 1987. Accompany the letter should be a statement

¹⁷⁶¹ Mr Justin Justin, *Transcript of evidence*, 21 December 2015, p.20

¹⁷⁶² Mr Neville Callow, *Submission 42*, Appendices, p.49

¹⁷⁶³ CFA internal Briefing Note to Mr Lex De Man, Thursday 15 December 2011, p.1

¹⁷⁶⁴ Correspondence from CFA Operations Manager to Mr Justin Justin, 16 December 2011

of what you believe to be the existing use rights that exist on the land. These rights should be expressed in terms of the defined uses as listed in Clause 74 of the Moorabool Planning Scheme. This statement should explore all possibilities for the land ... An alternative mechanism to define your existing use rights would be to seek a declaration from the Civil and Administrative Tribunal pursuant to s149A of the Planning and Environment Act 1987.¹⁷⁶⁵

This email indicates some misunderstanding by the Manager about Mr Callow's position as neighbour of the property and not a CFA employee. An application for a s. 149A declaration can only be made by a 'specified person', which is defined under the Planning and Environment Act 1987 in s. 148 to mean 'the owner, user or developer of the land directly affected by the matter'.

A further email from the Manager of Statutory Planning and Building to Mr Callow dated 1 November 2012 states:

I can advise that the CFA facility at Fiskville operates under existing use rights which have accrued the land [sic] from more than 15 years of continuous use. Council has issued no planning permits for the use of the facility as its age predates the planning controls implemented by the State Government. This in effect means that Council has no planning controls that it can apply to the land for the operation.¹⁷⁶⁶

This view was confirmed by Moorabool Shire Council in a letter to Mr Callow from Mr Croxford dated 13 November 2012:

The CFA purchased the Fiskville site in 1971 and commenced operations there in 1972. At that time a planning permit was not required by the CFA to use the site for fire training purposes. Far from needing Council's planning permission to operate the site, the CFA has, since 1972, had the benefit of existing use rights.

It is true that, since 1972, Council (and the former Shire of Ballan) has issued some planning permits to the CFA. Most have related to construction works for developments associated with a library extension, accommodation, toilet blocks and the like rather than planning permits related to use. As you are aware, Council also considered a planning permit application for a diversion channel in 2013. This was approved on the ground that it would minimise the movement of contaminated water within the site (which issue had only been identified as a potential issue after 2011).

I note your request that Council cancel the CFA's planning permit for the Fiskville property. Given that there is no planning permit authorising the use of the site for fire training purposes – the CFA has, as set out above, been operating with the benefit of existing use rights – this is not something that Council can do.¹⁷⁶⁷

1765 Email from Manager of Statutory Planning and Building, Moorabool Shire Council, to Mr Neville Callow, 23 May 2012

1766 Email from Manager of Statutory Planning and Building, Moorabool Shire Council, to Mr Neville Callow, 1 November 2012

1767 Correspondence from Mr Rob Croxford, Chief Executive Officer, Moorabool Shire Council, to Mr Neville Callow, 13 November 2012

Conclusion

Mr Callow gave evidence to the Committee that two CFA Officers had made an offer to buy his property in 2011. However, Mr Callow was then informed that the offer had not been approved by the CFA and was withdrawn.¹⁷⁶⁸ The Committee notes that the Lloyds (another neighbour) received similar treatment from the CFA.¹⁷⁶⁹ Mr Lex De Man, the CFA's former Executive Director, Operational Training and Volunteerism told the Committee that Mr Callow had asked the CFA to purchase his property. Mr De Man explained to the Committee that Mr Callow's asking price was higher than the CFA was willing to pay.¹⁷⁷⁰

1768 Mr Neville Callow, *Transcript of evidence*, 25 May 2015, pp.111-112

1769 See Case Study 4 on the Lloyds

1770 Mr Lex De Man, *Transcript of evidence*, 27 January 2016, p.20

Appendix 1

Submissions

Submission no.	Name of submitter	Submission no.	Name of submitter
1	Mr Stan Galewski	46	The Environment Protection Authority (EPA) Victoria
2	Mr Robin Ransome	47	Mr Mervyn Mann
3	Mr Graham Powell	48	Confidential
4	Mr Robert Bell	49	Mrs Elizabeth Blizzard
5	Confidential	50	AECOM
6	Mr Alan Wragg	51	Volunteer Fire Brigades Victoria (VFVB)
7	Mr Leonard Wyhoon	52	Mr Gerard Lloyd
8	Associate Professor Deborah Glass	53	Confidential
9	Mr Alistair Vincent Allan	54	Mr Ashley Browne
10	Dr John D. Ferrier	55	Mr David Ferguson
11	Mr Thomas Ford	56	Confidential
12	Mr Tony Ford	57	Fiskville Staff Members
13 -14	Confidential	58	National Union of Workers
15	Mr Graham West JP	59	Victorian Trades Hall Council
16	Confidential	60 – 60A	CFA
17	Mr Alex Martin	61	Confidential
18	Mr John Cutler	62	Professor Robert Joy
19 – 19A	Ms Deborah M. Etherton	63	Confidential
20	Ms Lesley Beard	64	Mr David Harris
21	Mr Kevin Etherton	65 – 65B	Cancer Council Victoria
22	Mr Peter Lucas	66	Ms Tracey Fabian
23	Name withheld	67	Confidential
24	Confidential	68	Mr Barry Allan
25	Name withheld	69	Mr David Abbey
26	Mr Steve Watts	70	Mr Jamie Andropoulos
27 – 27A	Mr Trevor Lansdown	71	Mr Jesse Anderson
28	Mr David Card	72	Confidential
29	Mr Geoffrey Barker	73	Mr Adam Baker
30	Mr Kevin Fischer	74	Mr Daniel Buchan
31	Confidential	75	Mr David Baird
32	Mr Ian Boyd	76	Confidential
33	Mr Paul King	77	Mr Trevor Lansdown
34	Name withheld	78	Mr Grant Braden
35	Confidential	79	Mr Howard Bishop
36	Mr John Albert Dixon	80	Mr Ian Beswicke
37	Mr Mark Glover	81	Mr Ian Burke
38	Confidential	82	Mr James Beard
39	Mr Brian Smith	83	Mr Malcolm Bruce
40	Mr Andrew Bishop	84	Mr Nicholas Bradley
41	Confidential	85	Mr Nicholas Busst
42 – 42C	Mr Neville Callow	86	Mr Patrick Burns
43	Mr Urs Biedermann	87	Mr Peter Baxter
44	Mr Michael Whelan	88	Confidential
45	Mr Raymond Greenwood	89	Mr Shane Bailey

Submission no.	Name of submitter	Submission no.	Name of submitter
90	Mr Steven Bottin	142	Mr Brett Hamill
91	Mr Steven Brodie	143	Mr Bryce Hotchin
92	Mr Tim Bruechert	144	Ms Emily Hayes
93	Mr Adam Clarke	145	Mr Greg Hunter
94	Mr Brent Clayton	146	Mr Jamie Hansen
95	Mr Damien Crosbie	147	Mr Jason Halls
96	Mr Damon Coonan	148	Mr Jordan Hill
97	Mr Dan Condon	149	Mr Ken Houston
98	Mr Greg Christison	150	Ms Kerry Hoey
99	Mr John Cuthbert	151	Mr Matthew Hirst
100	Mr Mark Couley	152	Mr Mick Hembrow
101	Confidential	153	Mr Norman Hocking
102	Mr Paul Chapman	154	Mr Peter Halasz
103	Mr Paul Chesher	155	Mr Ray Hollingworth
104	Mr Richard Cuthbert-Sayers	156	Mr Samuel Hull
105	Mr Robert Chesher	157	Mr Shane Harding
106	Mr Scott Connor	158	Mr Wayne Hall
107	Bowman and Knox Lawyers	159	Mr Travis Harris
108	Mr Stan Campbell	160	Mr Aaron Johnson
109	Mr Trevor Collins	161	Mr Andrew Judd
110	Mr Arran Dixon	162	Mr Chris Jacobsen
111	Mr Brent Dryden	163	Mr Ian Johnson
112	Mr Ian Day	164	Mr Lincoln Jones
113	Mr Jaron de Prada	165	Mr Michael Jones
114	Confidential	166 – 166A	Mr Michael James
115	Mr Joel Davey	167	Mr Chris Kaye
116	Ms Katherine Dunell	168	Mr James Kefalas
117	Mr Matthew Duda	169	Mr Neil Kingston
118	Mr Michael Doreian	170	Mr Phillip Kelly
119	Mr Nicholas Draper	171	Mr Brendan Lawson
120	Mr Darren Eenjes	172	Mr Chris Loeschekohl
121	Mr Paul Emsden	173	Mr Henri Laursen
122	Mr Tyson Ellery	174	Mr Marc Lardo
123	Mr Alan Foster	175	Mr Mark Lyons
124	Mr Andrew Farrance	176	Mr Michael Lia
125	Mr Joe Ferguson	177	Mr Phillip Leach
126	Mr Lindsay Forbes	178	Mr Andrew McMahon
127	Mr Robert Foote	179	Mr Ashley Mulcahy
128	Mr Tony Field	180	Mr Benjamin Mason
129	Mr Scott Gambino	181	Mr Brendon McKay
130	Mr Chris Gore	182	Mr Cameron McGregor
131	Mr Dan Gatt	183	Mr Chris Mitchem
132	Mr Darryn Gellie	184	Mr Chris Moloney
133	Mr Ian Glass	185	Mr Dane McKibbin
134	Ms Janine Glenn	186	Mr Daniel MacMann
135	Mr Matthew Gardner	187	Mr Darren Miller
136	Mr Rod Gater	188	Mr George McMullen
137	Mr Ross Graham	189	Mr Gerard Mann
138	Mr Andrew Hand	190	Mr Gregor Mitchell
139	Mr Andrew Hughes	191	Confidential
140	Mr Anthony Heafield	192	Mr Nick Martin
141	Mr Brent Hardy	193	Mr Phil Miatke

Submission no.	Name of submitter	Submission no.	Name of submitter
194	Mr Robert McVey	245	Mr Kenneth Valker
195	Confidential	246	Mr Adam Whitford
196	Mr Steve Martin	247	Mr Chris Wright
197	Mr Stewart Marshall	248	Mr Francis Williams
198	Mr Alan McLean	249	Mr Murray Walker
199-199A	Mr Gary Mynes	250	Mr Nathan Williams
200	Mr Mark Nevill	251	Mr Samuel Watterson
201	Mr Terry Nevill	252	Mr Steven Watts
202	Mr Dale O'Donnell	253	Mr William Young
203	Mr Andrew Picker	254	Mr Damian Zugaro
204	Mr Benn Pigdon	255-311	Confidential
205	Mr Charles Pearce	312	Mr Michael Giddings
206	Mr Michael Poore	313-372	Confidential
207	Ms Sarah Parnaby	373	Mr David Pitcher
208	Mr Shaun Pacher	374-379	Confidential
209	Mr Steve Pitcher	380	Ms Cecilia Le Duc-Spoor
210	Mr Blake Ross	381-415	Confidential
211	Mr Cameron Rees	416	Metropolitan Fire and Emergency Services Board (MFB)
212	Mr Craig Rothenbuecher	417	Slater and Gordon
213	Mr Damien Raven	418	Mr Alistair Leserve
214	Mr Glenn Ryan	419	Ms Anita Carlin
215	Ms Kelli Russell	420	Mr Anthony Dundas
216	Mr Kevin Randall	421	Mr Darren Brogden
217	Mr Warren Rickard	422	Mr David Brown
218	Mr Ben Reynolds	423	Mr Henry Barton
219	Mr Alan Sedgewick	424	Ms Jessica Walsh
220	Confidential	425	Mr Justin Lyons
221	Mr Christopher Sayers	426	Ms Kate Carpenter
222	Mr Dale Stemmer	427	Mr Nik Kotuziak
223	Mr John Stanton	428	Mr Peter Boicovitis
224	Mr Joseph Saliba	429	Mr Philip Jones
225	Mr Malcolm Stepnell	430	Mr Peter Mits
226	Mr Matthew Smith	431-444	Confidential
227	Mr Mick Sporton	445	Mr Michael Martin
228	Mr Nathan Shell	446	Mr Michael Tisbury
229	Mr Nathan Sturt	447	Ballan Fire Brigade
230	Mr Neil Schlipalius	448-488B	Mrs Diane Potter
231	Mr Paul Sianidis	449	United Firefighters Union
232	Mr Peter Shroder	450-450A	Mr Norm Winn
233	Mr Reginald Stott	451	Mr Cory Woodyatt
234	Mr Scott Stevens	452	Confidential
235	Confidential	453	Mr Alan Bennett
236	Mr Stewart Stephens	454	Confidential
237	Mr Tony Smith	455	Dr Ivan Howes
238	Mr Warren Short	456	Mr Francis Williams
239	Mr Ben Thorn	457	Mr George McMullen
240	Confidential	458	Mr John Cuthbert
241	Mr John Townsend	459	Mr Nicholas Bradley
242	Mr Stephen Trist	460	Mr Bernie Fradd
243	Mr Chris Vienna	461-461C	Mr Brian Whittaker
244	Mr Jonathon van Ek	462	Mr Gerald Conroy

Submission no.	Name of submitter	Submission no.	Name of submitter
463-463C	Mr Philip Taylor	471	Name Withheld
464	WorkSafe Victoria	472	Confidential
465	Confidential	473	Name Withheld
466	Name Withheld	474	Ms Kirstie Schroder
467	Name Withheld	475	Confidential
468-470	Confidential	476	National Toxics Network

Appendix 2

Public hearings

Monday 18 May 2015, Melbourne

Organisation	Name	Position
n/a	Mrs Diane and Mr Paul Potter	
	Mr Alistair Allan	
	Mrs Deborah and Mr Kevin Etherton	
	Mr David Card	
	Mr Gavan Knight	
	Mr John Cutler	
	Mrs Beccara and Mr Matthew Lloyd	
Monash University	Professor Malcolm Sim	
	Mr Anthony Del Monaco	
	Ms Sabine Pircher	

Monday 25 May 2015, Melbourne

Organisation	Name	Position
n/a	Mr Kenneth Lee	
	Mr Colin Cobb	
	Dr John Ferrier	
	Mr Neville Callow	
	Mr Tony Ford	
	Mr John Cutler	
AECOM Australia	Mr Darryl Strudwick	Auditor

Wednesday 3 June 2015, Launceston

Organisation	Name	Position
n/a	Professor Robert Joy	

Monday 15 June 2015, Melbourne

Organisation	Name	Position
n/a	Mr Andrew Bishop	
	Mr Norman Carboon	
	Mr Trevor Lansdown	
	Mr Michael Whelan	
United Firefighters Union (UFU)	Mr Peter Marshall	
	Mr Michael Martin	
	Mr Mick Tisbury	
	Mr Michael James	
	Mr Cory Woodyatt	
Volunteer Firefighter Brigades, Victoria	Mr Andrew Ford	CEO
	Mr Adam Barnett	Executive Officer

Friday 19 June 2015, Sydney

Organisation	Name	Position
n/a	Dr Roger Klein	
	Mr Nigel Holmes	

Monday 27 July 2015, Melbourne

Organisation	Name	Position
n/a	Mr Alan Bennett	
Ballan Fire Brigade	Mr Ian Ireland	Lieutenant
	Mr Ben Hatfield	Member
Fiskville Staff Members	Mr Chris Bigham	Acting Operations Manager
	Mr Paul Roughead	Operations Officer

Monday 19 October 2015, Melbourne

Organisation	Name	Position
Queensland Department of Environment and Heritage Protection	Mr Nigel Holmes	Principal Advisor, Incident Management
CRC Care	Professor Ravi Naidu	Director
Australian Centre for Human Health Risk Assessment	Professor Brian Priestly	Director

Friday 6 November 2015, Melbourne

Organisation	Name	Position
NICNAS	Dr Kerry Nugent	Principal Scientist
n/a	Mr Brian Whittaker	
Queensland Fire and Emergency Services	Dr Mike Logan, Director	Scientific Branch
Metropolitan Fire Brigade	Mr Rob Purcell	Acting Deputy Chief Officer
Fire Protection Association of Australia	Mr Scott Williams	Chief Executive Officer
	Mr Matthew Wright	Deputy Chief Executive Officer

Monday 9 November 2015, Melbourne

Organisation	Name	Position
Federation University	Dr Kate White	
Monash Centre for Occupational and Environmental Health	Professor Michael Sim	
	Associate Professor Deborah Glass	
University of Queensland	Professor Jochen Mueller	
	Dr Lesa Aylward	
Monash University	Professor Bryan Horrigan	Dean of the Faculty of Law

Thursday 19 November 2015, Melbourne

Organisation	Name	Position
National Toxics Network	Dr Rye Senjen	Senior Adviser
Moorabool Shire	Mr Rob Croxford	Chief Executive Officer
	Mr Paul O'Donohue	Managing Director
Central Highlands Water	Mr Geoff Cramer	Manager, Laboratory Services
	Mr Douglas Ahearne	Principal Environmental Scientist
Senversa	Mr Michael Rehfish	Principal Environmental Auditor
	Ms Kristi Hanson	Principal Risk Assessor

Friday 20 November 2015, Melbourne

Organisation	Name	Position
Department of Health and Human Services	Professor Michael Ackland	Acting Chief Health Officer
Emergency Management Victoria	Mr Craig Lapsley	Emergency Management Commissioner
	Mr Neil Robertson	Chief Executive Officer
WorkSafe Victoria	Ms Clare Amies	Chief Executive Officer

Monday 23 November 2015, Melbourne

Organisation	Name	Position
n/a	Dr Michael Sargeant	
ToxConsult	Dr Roger Drew	Principal Consultant
	Dr Cameron Bell	Manager, Veterinary Science
Department of Economic Development, Jobs, Transport and Resources	Dr Charles Milne	Chief Veterinary Officer
	Mr Gordon Nash	SAHO-NLIS/NORM abattoir coordinator
	Dr Tony Britt	Manager, Major Projects
PrimeSafe	Dr Brendan Tatham	Chief Executive Officer
Metropolitan Fire Brigade	Mr Peter Rau	Chief Officer

Monday 14 December 2015, Melbourne

Organisation	Name	Position
n/a	Mr Raymond Greenwood	
	Mr Len Foster	
	Mr Trevor Roche	
	Dr Rosemary Lester	
Environment Protection Authority	Mr Nial Finegan	Chief Executive Officer
	Ms Anne Northway	Principal Expert, Land and Groundwater
	Dr Laura-Lee Innes	Principal Expert, Waste

Monday 21 December 2015, Melbourne

Organisation	Name	Position
n/a	Mr Justin Justin	
	Ms Sherry Herman	
	Mr Mick Bourke	
CFA	Mr Jeff Green	Workplace Health and Safety Manager

Wednesday 27 January 2016, Melbourne

Organisation	Name	Position
n/a	Mr John Myers	
	Mr Lex De Man	
CFA	Mr Mark Glover	Operations Manager
	Ms Angela Seach	Acting Executive Manager, Organisational Development
	Mr James Stitz	Executive Manager, Frontline Learning and Development
MFB	Ms Kirstie Schroder	Director, Operational Learning and Development

Thursday 28 January 2016, Melbourne

Organisation	Name	Position
n/a	Mr Mick Bourke	
	Mr Michael Wootten	
	Ms Claire Higgins	
	Mr Euan Ferguson	
	Mr Alan Clayton	
CFA	Mr Jeff Green	Workplace Health and Safety Manager
Slater & Gordon	Mr Andrew Baker	Senior Associate

Friday 29 January 2016, Melbourne

Organisation	Name	Position
n/a	Dr Tee Guidotti (via videolink)	
CFA	Ms Lucinda Nolan	Chief Executive Officer
	Mr John Peberdy	Acting Chairperson

Appendix 3

Site visits

Site visit 1

Tour of the CFA Training College at Fiskville, Tuesday 2 June 2015

The Committee met with the following people:

Organisation	Name	Position
CFA	Mr James Fox	Manager, Office of the CEO
	Mr Lex De Man	Executive Director, Operational Training and Volunteerism
	Mr James Dullard	Operations Manager, Fiskville
	Mr Paul Roughead	Operations Officer, Fiskville
	Ms Amy Fuller	Program Office
	Ms Karen Alexander	Senior Legal Advisor
<i>Others in attendance</i>		
Volunteer Fire Brigades Victoria	Mr Andrew Ford	CEO
United Firefighters Union	Mr Peter Marshall	Secretary
	Mr Mick Tisbury	
Senversa	Mr Michael Rehfish	

Site visit 2

Tour of the CFA Training College at Bangholme and the Victorian Emergency Management Training Centre at Craigieburn, Thursday 4 June 2015

The Committee met with the following people:

Organisation	Name	Position
CFA	Mr Jeff Supple	Manager, Bangholme
	Mr Aaron Gardner	PAD Supervisor
	Ms Kate Harrap	Executive Director, Learning and Volunteerism
	Mr John Bell	Lead, VEMTC Operations
	Ms Amy Fuller	Program Office
	Mr James Fox	Manager, Office of the CEO
VEMTC	Mr Greg Leach	Executive Director, Organisational Learning and Development / Deputy Chief Officer
	Ms Kirstie Schroder	Director, Operational Learning and Development / Director VEMTC
	Mr Peter Thomas	Director, Operational Training / Assistant Chief Fire Officer
	Mr John Nish	Corporate Coordinator
<i>Others in attendance</i>		
Volunteer Fire Brigades Victoria	Mr Andrew Ford	CEO
United Firefighters Union	Mr Peter Marshall	Secretary
	Mr Mick Tisbury	
Senversa	Mr Michael Rehfisch	

Site visit 3

Meeting with the Department of Defence and the Office of the Minister for Defence in Canberra, 16 November 2015

The Committee met with the following people:

Organisation	Name	Position
Department of Defence	Mr Steve Grzeskowiak	Deputy Secretary, Estate and Infrastructure
	Ms Alison Clifton	Assistant Secretary, Environment and Engineering
	Ms Maureen Greet	Director, Strategic Contamination Management
	Commander Rachael Jones	Defence Legal Officer
Office of the Minister for Defence	Mr Dean Carlson	Advisor to the Minister for Defence
Office of the Assistant Minister for Defence	Mr Robert Curtin	Chief of Staff to Assistant Minister of Defence

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International Study Tour

Germany – Berlin, Dessau, Nürnberg, Brilon and Düsseldorf, 30 November – 4 December 2015

The Committee met with the following people:

Organisation	Name	Position
MONDAY 30 NOVEMBER, BERLIN		
Parliamentary Friendship Group for Relations with Australia & New Zealand	Mr Volkmar Klein, MdB (MP)	Chairman
European Firefighters Union Alliance	Mr Michael Unterhalt	
German Federal Environment Committee	Mr Carsten Mueller, MdB (MP)	Member
TUESDAY 1 DECEMBER, DESSAU		
	Ms Petra Apel	
	Ms Eva Fetter	
Umweltbundesamt (UBA) – German Federal Environment Agency	Dr Alexander Eckhardt	
	Dr Annegret Biegel-Engler	
	Dr Jutta Klasen	
WEDNESDAY 2 DECEMBER, NÜRNBERG		
Nürnberg Airport	Mr Dieter Herold	Head of the Environment Department
City of Nürnberg	Mr Alexander Heinel	Environment Department
	Mr Hans Splitgerber	Water Management Office
Gibs Geologists and Engineers GmbH & Co	Dr Heinrich Schoger	
THURSDAY 3 DECEMBER, BRILON		
BUND	Mr Paul Kröfges	
	Mr Markus Rüdell	
Ruhrverband	Mr Christoph Henke	
	Mr Markus Doppelmann	
Hochsauerlandkreis district	Mr Reinhard Loos	
Stadtwerke Arnsberg	Mr Thomas Kroll	Head of Water Division
Environmental Consultant	Dr Roland Weber	

Organisation	Name	Position
FRIDAY 4 DECEMBER, DÜSSELDORF		
Climate Protection, Environment, Fire Department, Consumer Protection, Parks and Forestry Department of Düsseldorf	Ms Helga Stulgies	
Environmental Office of Düsseldorf	Mr Ingo Valentin	
	Dr Inge Bantz	
Ministry for Climate Protection, Environment, Agriculture, Conservation and Consumer Protection of the State of North Rhine-Westphalia	Mr Christoph Rapp	
Agency for Nature, Environment and Consumer Protection, State of North Rhine-Westphalia	Ms Mareike Mersmann	

Appendix 4

The Inquiry document discovery process

Categories of documents requested/summonsed from the CFA

1. Lists of documents held

- On 10 February 2015 the Committee requested a list of documents held by the CFA.
- On 25 February 2015 the CFA provided a list.
- On 30 April 2015 the CFA wrote to the Committee about their methodology for searching for documents.

2. FOI documents

- Letter to CFA 2 March 2015: ‘the Committee requests a copy of all documents released by the CFA under the Freedom of Information Act 1982 from 2011 to the present, in their original unredacted form’.
- These documents were provided on 20 March 2015.

3. Insurance documents

- A letter was sent to CFA on 18 March 2015 requesting:
 - Insurance policies, agreements, contracts and indemnities, including the monetary amount for liability that the CFA was covered for;
 - Internal documents dealing with the assessment of the CFA’s insurance liabilities and risks in relation to insurance policies;
 - CFA tender documents for insurance, including any documents outlining specific types of risks or activities that would need to be covered by a prospective insurer; and
 - A list of insurance providers (e.g. WorkSafe Victoria) contracted to provide insurance to the CFA and the period during which they did so.
- Documents in response to this request were provided on 2, 17 and 30 April 2015.

4. Documents relating to the Lloyd family

A letter to the CFA on 27 May 2015 requested:

Can you please advise the following:

What water, soil, animal and human tests were carried out in relation to the Lloyd family, properties they own or lease and animals they rear, by or on behalf of the CFA or that were facilitated by the CFA?;

On what legal basis were these tests conducted

By whom and where were the tests conducted; and

What were the results of these tests?

In addition to these questions, the Committee requests documents which are either held or controlled by the CFA or its agents which relate to the Lloyd family. These include any test results on soil, water, livestock and the Lloyds themselves. The request extends to internal CFA documents including but not limited to: correspondence (email communications, memos, letters etc.), board minutes and any other document that relates to the Lloyds.

We understand that the CFA may have been in contact with other government entities in relation to the Lloyds. On that basis, this document request explicitly extends to correspondence between the CFA and other government entities including, but not limited to, the Department of Health and Human Services, the Department of Environment, Land, Water & Planning, and the Department of Economic Development, Jobs, Transport and Resources.

- The first tranche of documents in response to this request was provided on 24 June 2015.
- The second tranche of documents, and a response to questions, were provided on 8 July 2015.
- Further documents were provided on 22 January 2016.

5. Independent Fiskville Inquiry interview transcripts

- A letter to the CFA 27 May 2015 requested: 'On behalf of the Committee, I seek copies of all interview transcripts that were conducted as part of the investigations by the Independent Fiskville Investigation undertaken by Professor Robert Joy'.
- On 4 June 2015 the Victorian Government Solicitor's Office (VGSO) (on behalf of the CFA) responded raising concerns that Professor Joy made undertakings of confidentiality to those he interviewed. The VGSO advised that 26 of the transcripts were 'restricted' and held by Ashurst lawyers. The VGSO advised that both the confidential and the restricted transcripts needed to be summonsed.
- On 26 June 2015 the Committee issued a summons to the CFA.
- On 10 July 2015 the CFA provided 372 'confidential' interview transcripts in response to summons.
- On 26 June 2015 the Committee issued a summons to Ashurst.
- Ashurst responded to summons by providing the 26 restricted interview transcripts on 6 July 2015.

6. Board meeting papers

- On 8 September 2015 the Committee summonsed the CFA Board meeting papers from 1971 to December 2014.
- On 23 September 2015 the VGSO wrote to the Committee to advise that ‘meetings conducted by CFA Fiskville management and staff about the Fiskville training site’ had been identified and that they would need to be summons separately.
- The response led to this summons was in tranches of documents that were received on the following dates in 2015: 28 September, 1 October, 9 October, 16 October, 23 October, 6 November, 20 November, 30 November (two deliveries), 7 December, 11 December, 17 December; as well as 15 January, 2 March, 7 March, 17 March, 18 April and 22 April 2016.

7. Fiskville Committee minutes

- On 25 September 2015 the Committee issued a summons for ‘All documents relevant to meetings conducted by CFA Fiskville management or staff about the Fiskville training site that are relevant to the Committee’s terms of reference’ by 5 October 2015.
- The response to this summons was received on 28 September 2015.

8. CFA financial information

On 27 October 2015 the Committee issued a summons requesting the following information by 10 November 2015:

1. The overall Fiskville budget for the financial years 2010 11, 2011 12, 2012 13 and 2013 14;
 2. For the financial years 2010 11, 2011 12, 2012 13 and 2013 14, how much the CFA spent on environmental remediation of the Fiskville site and surrounding properties and the nature of the remediation work;
 3. The proportion of the budget spent on the remediation work referred to in paragraph 2, and information as to whether these funds were from the Fiskville or CFA budget or funded separately;
 4. The amount the CFA has spent on environmental and human health impact assessments in relation to Fiskville and surrounding properties; and
 5. The total expenditure by the CFA for legal advice and representation in relation to matters connected with the Fiskville site and surrounding properties. Such expenditure may include, but is not limited to, spending associated with claims for compensation, legal representation during the Independent Fiskville Investigation and advice about responding to Freedom of Information requests.
- The CFA responded to the summons on 10 November 2015. The Committee requested further information and clarification on 16 February 2016, which was provided by the CFA on 29 February 2016.

Documents requested from other Departments and Agencies

Department/Agency	Request/s for list of documents sent	List/s of documents received	Date/s documents were requested by Committee	Date/s documents were received
Corrections Victoria	11 March 2015	27 March 2015	Documents were not requested	N/A
Department of Economic Development, Jobs, Transport and Resources	16 March 2015 27 April 2015	29 May 2015 3 June 2015	3 June 2015 13 November 2015	21 July 2015 19 November 2015 20 November 2015 17 December 2015
Department of Education and Early Childhood Development	10 February 2015	2 March 2015 (advised no relevant documents held)	Documents were not requested	N/A
Department of Environment, Land, Water and Planning	10 February 2015 16 October 2015	10 April 2015 28 October 2015	Documents were not requested	N/A
Department of Health and Human Services	10 February 2015	27 March 2015	22 May 2015	17 June 2015 8 July 2015
Emergency Management Victoria	10 February 2015	27 February 2015	21 October 2015	30 October 2015 19 November 2015 3 December 2015
Environment Protection Authority	10 February 2015	25 February 2015 3 March 2015	21 May 2015	27 May 2015 2 June 2015
Metropolitan Fire Brigade	10 February 2015	6 March 2015 1 April 2015	13 November 2015	1 April 2015 19 November 2015
Moorabool Shire Council	10 February 2015	25 February 2015	16 October 2015	28 October 2015 21 December 2015
Parks Victoria	11 March 2015	27 March 2015	Documents were not requested	N/A
Victoria Police	11 March 2015	6 May 2015	Documents were not requested	N/A
Victorian Registration and Qualifications Authority	16 March 2015	27 March 2015	Documents were not requested	N/A
Victorian WorkCover Authority	10 February 2015	24 February 2015 10 March 2015	20 October 2015 13 November 2015 17 November 2015	30 October 2015 26 November 2015 29 December 2015

Note that in some cases documents were provided in response to a request made during a public hearing¹⁷⁷¹ or in response to additional requests for information to follow up other matters raised throughout the course of the Inquiry.

¹⁷⁷¹ For example, the documents provided by Moorabool Shire Council on 21 December 2015 were requested during Mr Rob Croxford's (Chief Executive Officer) appearance on 19 November 2015.

Appendix 5

CFA Fiskville Community Update

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Fiskville Training College

Community update



CFA Fiskville

CFA's Fiskville Training College, located at 4549 Geelong-Ballan Road, plays a vital role in training Victoria's firefighters and emergency service workers, including CFA's 59,000 volunteers, career firefighters, and staff.

This campus has been CFA's principal training ground since 1973 and provides the facilities and expertise that deliver a comprehensive range of hot fire training, including petrochemical fires, tanker fires, house and structure fires, vehicle and aviation fires.

Fiskville is one of Australia's largest fire and emergency management training colleges which employs residents from the local Fiskville and Ballan community.

Fiskville Investigation and Assessments

In 2011 concerns were raised regarding the historic use of chemicals in hot fire training, including firefighting foams, and the potential risk of chemical residues affecting both human health and the local environment.

Acting on these serious claims, CFA commissioned Professor Robert Joy to conduct an independent investigation into the past use of chemicals in hot fire training at Fiskville.

The Report of Professor Rob Joy *Understanding the Past to Inform the Future, June 2012* made recommendations to undertake

extensive environmental and human health risk assessments of CFA's Fiskville Training College and the downstream environment. In July 2012, CFA engaged environmental engineering firm Cardno Lane Piper (Cardno) and an eminent Australian toxicologist to undertake these assessments and prepare formal reports.

Cardno and the toxicologist prepared 12 Fiskville assessment reports regarding the nature and extent of contamination at the site and downstream.

The outcomes of these assessments are positive and conclude there are no major risks to CFA personnel, site visitors, the local/downstream community, or the ecology.

EPA Oversight of Fiskville

In response to the issues identified in Professor Joy's Report, the Environment Protection Authority (EPA) issued two 'Clean-Up Notices' for Fiskville in January 2013. The EPA issues these notices to prevent or remedy potential non-compliances with the Environmental Protection Act.

In accordance with the terms of these notices, an EPA-appointed Environmental Auditor recently completed an independent audit of Fiskville and its environs to identify any risk of harm due to live fire training activities at the site, including the storage and use of chemicals.

Fiskville Training College

As part of his audit, the Environmental Auditor reviewed all previous reports and tests conducted into possible contamination of water and soil at Fiskville, including Cardno’s recent reports.

In his audit report, the Environmental Auditor concluded:

- Human health risks from potential exposures – both on-site at Fiskville and off-site – to residues from historical hot fire training activities are low and acceptable; and
- Environmental works already underway at Fiskville will reduce the potential for risks to the ecology on-site at Fiskville. The potential risks include possible impacts on higher order predators, such as birds of prey, which might eat fish from Lake Fiskville or rabbits and other small species on the Fiskville site.

The EPA has reviewed the assessments and recommendations made by the Environmental Auditor which notes that residues from the historical use of firefighting foams present in and around CFA’s Fiskville Training College pose a low and acceptable risk to workers, trainees, visitors and residents downstream of Lake Fiskville.

The EPA-appointed Environmental Auditor’s report and all of Cardno’s reports are posted on EPA’s website epa.vic.gov.au

Beremboke and Eclipse Creeks – Water Quality

Barwon Water has confirmed there is no public drinking water taken directly from the Beremboke or Eclipse Creeks downstream of Lake Fiskville. In addition, Cardno scientists and the Environmental Auditor note that it is unlikely that people are taking their own drinking water from these creeks.

The Beremboke and Eclipse Creeks are seasonal and often dry up. Like any creek or farm dam, they contain contaminants such as agricultural chemicals and fertilisers, animal waste and bacteria. Environmental assessments conducted by Cardno have confirmed the presence of contaminants in surface water in the Beremboke and Eclipse Creeks downstream of Fiskville.

In relation to these assessments the EPA-appointed Environmental Auditor concludes:

- Key points**
- As a precautionary measure, water taken directly out of the Beremboke and Eclipse Creeks should not be used for human consumption (i.e. drinking water).
 - The Beremboke and Eclipse Creeks are safe for livestock watering and irrigation.
 - Produce and meat from livestock which has been watered from the Beremboke and Eclipse Creeks is safe for human consumption.

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Community update

CFA has previously notified a range of regulatory authorities about these assessments including the Department of Health, the Department of Environment and Primary Industries, PrimeSafe, WorkSafe, EPA, Moorabool Shire Council, local water authorities and several other key stakeholders. The Department of Health advises Victorians not to drink river water, even when the water is treated by household treatment systems, as these systems have their limitations and may not remove all harmful microorganisms and chemicals. Refer to attached information sheet issued by the Department of Health. For more information, go to health.vic.gov.au and search 'unsafe water'.

Fiskville Environmental Works

CFA recently completed engineering works at Fiskville to prevent the discharge of residues from CFA's hot fire training operations into nearby creeks.

These works include the diversion of the Beremboke Creek around Lake Fiskville and the creation of a new wetland to filter stormwater before it enters the Beremboke creek. The wetlands will improve the ecology of Fiskville and create a habitat for local birds, frogs and other aquatic species.

Tree planting at the new wetlands

**Next Phase of Works**

CFA will soon begin a second stage of works to remediate the surface water and sediments in Lake Fiskville and four other dams on the training site. This will involve the drainage of water from these catchments and the removal and treatment of soils. CFA plans to call for Expressions of Interest from qualified environmental engineering companies to undertake this work. These remediation works are expected to be completed by 2017.

Questions?

Please email: fiskville-enquiries@cfa.vic.gov.au or contact CFA on (03) 9262-8216.

Other relevant agencies:

- Moorabool Shire Council (03 5366 7100)
- Corangamite Catchment Management Authority (03 5232 9100)
- Southern Rural Water (0419 509 087)
- Barwon Water (1300 656 007)
- Environment Protection Authority Victoria (1300 372 842)
- Department of Health (1300 761 874)

You can also find more information online:

cfa.vic.gov.au/about/fiskville-investigation

Are you using unsafe river water in your home?

health

This information sheet is designed to inform people living in or visiting rural communities about the health risks associated with taking water from rivers and streams for domestic use.

Is it safe to use untreated water from a river or stream?

Water from rivers and streams may contain harmful microorganisms and chemicals that can make people sick. Even in remote areas away from human habitation, harmful microorganisms from native animals are still a potential source of illness and, as waterways get closer to farming activities and country communities, the risk increases due to runoff from farms, houses and commercial activities.

It is important to note that:

- Consuming untreated river or stream water may lead to severe illness (for example, gastroenteritis). Children, the elderly, pregnant women and people with suppressed immunity are the most vulnerable.
- Guests or visitors may also become ill if they consume untreated river or stream water.

The risk of contamination increases when it rains, and during floods, as stormwater washes materials from tracks and roads into rivers and streams. Additionally, flooded properties often result in farm chemicals and sewage from septic tanks being washed into waterways.

Another possible risk is from blue-green algae, which can be toxic to humans, domestic pets and stock. These can grow in dams, streams and even in unroofed water tanks under the right conditions.

For these reasons, untreated raw water should not be directly piped into homes or taken from rivers and streams for drinking, or used in the kitchen or bathroom.



Department of Health



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Will boiling river water make it safe?

Boiling river water only kills harmful microorganisms. As water from rivers and streams in rural areas may also contain chemicals from activities such as farming, boiling the water will not effectively remove the chemical hazard (algal toxins could also be released to the water if blue-green algae are present).

Can I treat river water to make it safe?

It is possible to treat water to remove some harmful microorganisms and chemicals. However, this is a specialist task that requires expensive filters and disinfection systems, and a degree of expertise to operate and maintain. These treatment systems also have their limitations and therefore may not remove all harmful microorganisms and chemicals.

What is the best way to source safe water where town water is not available?

Rainwater collected from your roof has been used for many generations in rural communities and is recognised as the most reliable and safest way to source water where a town drinking water supply is not available. Groundwater can also be of high quality if bores are well maintained and protected.

For more information see the Department of Health publication *Your private drinking water supply*, available online at <health.vic.gov.au/water>.

If your tank runs out of water, emergency supplies of drinking water can be obtained from local water carters. Contact your local water corporation for details of local water carters, or look up the telephone directory under water carters.

Where can I find more information about drinking water safety?

Department of Health

- www.health.vic.gov.au/water
- Water Program on 1300 761 874

Your council Environmental Health Officer

For your local council contact details refer to your local telephone directory or refer to the Department of Planning and Community Development (DPCD) website at <www.dpcd.vic.gov.au>.

To receive this document in an accessible format phone 1300 761 874 using the National Relay Service 13 36 77 if required.

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Appendix 6

Stockholm Convention on Persistent Organic Pollutants

The Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs). In 1995, the Governing Council of the United Nations Environment Programme called for global action to be taken on these pollutants, defined as ‘chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment’. The Convention was signed in May 2001 and became effective from May 2004.

The Intergovernmental Forum on Chemical Safety and the International Programme on Chemical Safety identified what it believed to be the 12 worst persistent organic pollutants. Co-signatories agreed to outlaw nine of these chemicals, limit the use of DDT to malaria control, and curtail inadvertent production of dioxins and furans (toxic substances).

Parties to the convention have agreed to a process by which persistent toxic compounds can be reviewed and added to the convention, if they meet certain criteria for persistence and the ability to spread across the environment. As of May 2013, there were 179 parties to the Convention, (178 states and the European Union). Australia signed the Convention on 23 May 2001.¹⁷⁷²

The Persistent Organic Pollutants Review Committee was established in 2005, to consider additional candidates nominated for listing under the Convention. In May 2009, agreement was reached on the first new chemicals to be added to the Convention. Amendments were also agreed to Annexes A (elimination), B (restriction) and C (unintentional production / release) to the Stockholm Convention, including nine new POPs, one of which was PFOS (listed in Annex B). (These additions, the first chemicals to be added to the annexes since Australia signed up to the Convention in 2004, were supported by Australia.¹⁷⁷³) The amendments included a list of acceptable purposes and specific exemptions for PFOS.

¹⁷⁷² Stockholm Convention, *Status of ratification*, (chm.pops.int/Countries/StatusofRatifications/tabid/252/Default.aspx), viewed 5 December 2015

¹⁷⁷³ Australian Government, Department for the Environment, *Nine new POPs and the treaty making process*, (www.environment.gov.au/protection/chemicals-management/pops/new-pops), viewed 5 December 2015

Acceptable purposes (not time limited)

Acceptable purposes for PFOS include photo-imaging, photo-resist and anti-reflective coatings for semi-conductor, etching agent for compound semi-conductor and ceramic filter, aviation hydraulic fluids, metal plating (hard metal plating) only in closed-loop systems, certain medical devices (such as ethylene tetrafluoroethylene copolymer (ETFE) layers and radio-opaque ETFE production, in-vitro diagnostic medical devices, and CCD colour filters), firefighting foam, insect baits for control of leaf-cutting ants from *Atta* spp. and *Acromyrmex* spp.

Specific exemptions (five years initially, renewal possible)

Photo masks in the semi-conductor and liquid crystal display (LCD) industries, metal plating (hard metal plating, decorative plating), electric and electronic parts for some colour printers and colour copy machines, insecticides for control of red imported fire ant, and termites, chemically driven oil production, carpets, leather and apparel, textiles and upholstery, paper and packaging, coatings and coating additives, rubber and plastics.¹⁷⁷⁴

The Committee heard that levels of PFOs in the global environment have decreased since its listing in the Stockholm Convention and removal from products such as firefighting foam.¹⁷⁷⁵ As well, Professor Jochen Mueller from the University of Queensland provided evidence that firefighters who trained in the past ten years only generally have lower levels of PFCs in their blood than firefighters who trained more than ten years ago.¹⁷⁷⁶

¹⁷⁷⁴ Stockholm Convention, *The new POPs under the Stockholm Convention*, (chm.pops.int/TheConvention/ThePOPs/TheNewPOPs/tabid/2511/Default.aspx), viewed 5 December 2015

¹⁷⁷⁵ Dr Rye Senjen, National Toxics Network, *Transcript of evidence*, 19 November 2015, p.6

¹⁷⁷⁶ Professor Jochen Mueller, University of Queensland, *Transcript of evidence*, 9 November 2015, p.6

Appendix 7

Chronology of the MFB's decision to cease training at Fiskville

Between December 2011 (when the first *Herald Sun* story was published) and June 2012, the MFB repeatedly sought information on the past practices at Fiskville and their implications for ongoing training at Fiskville. Many of these requests either went unanswered or the CFA did not provide information it had committed to provide.¹⁷⁷⁷

On 20 June 2012, the MFB ceased training at Fiskville due to concerns over the quality of the water raised by Mr Brian Rogash, a Senior Station Officer at the MFB.¹⁷⁷⁸

On 25 June 2012, the *Herald Sun* published a story on the MFB's decision to cease training at Fiskville. The story raised concerns about the water quality at Fiskville.¹⁷⁷⁹ The MFB's Ms Kirstie Schroder told the Committee that prior to this story the MFB had not received any reports from its members of illnesses from training at Fiskville, however after the story was published the MFB received a number of reports of illnesses from its members.¹⁷⁸⁰

This evidence contrasts with a letter the CEO of the MFB, Mr Nick Easy, wrote to Mr Mick Bourke, the CFA's CEO, on 2 July 2012. This letter stated that the MFB had received no reports of illness or injury from its members who had attended Fiskville.¹⁷⁸¹

On 8 October 2012, the MFB decided to resume training at Fiskville based on assurances of the safety of the water from the CFA, which included advice from WorkSafe.¹⁷⁸² On 3 October 2012, WorkSafe wrote to the CFA noting that inspections had been carried out at the Fiskville site on 6 December 2011 and 10 August 2012. The letter states: 'WorkSafe acknowledges the continues [sic]

¹⁷⁷⁷ MFB, *Submission 416*, pp.3-6

¹⁷⁷⁸ Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.3

¹⁷⁷⁹ Ruth Lamperd, *Toxic shock: firefighter training cut amid new Fiskville health fears*, *Herald Sun*, 25 June 2012

¹⁷⁸⁰ Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, p.4

¹⁷⁸¹ MFB, *Submission 416*, p.9

¹⁷⁸² MFB, *Submission 416*, p.13

operation of the Fiskville Training Facility in accordance with the risk controls associated with dangerous goods and firefighting water presented during inspector visits conducted since 6 December 2011.¹⁷⁸³

On 9 October 2012, the UFU lodged a grievance at Fair Work Australia (now the Fair Work Commission). The grievance stated that the dams at Fiskville were still being used as a back-up water system.¹⁷⁸⁴

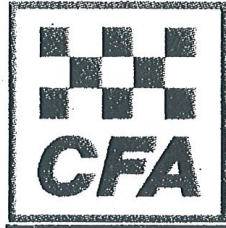
The MFB relocated planned Fiskville training to other sites while the dispute was being heard. This continued into 2013 and the MFB found alternative sites for its training, including the new VEMTC facility at Craigieburn.¹⁷⁸⁵

1783 Correspondence from Mr Jarrod Edwards, Director, Workplace Hazards and Hazardous Industries Group to Ms Sherry Herman, Project Manager, Office of the CEO, CFA, 3 October 2012.

1784 Ms Kirstie Schroder, Director of Operational Learning and Development, MFB, *Transcript of evidence*, 27 January 2016, pp.9-10

1785 MFB, *Submission 416*, pp.13-16

Appendix 8
**CFA Management Plans for
Firefighting Water at Fiskville
2008, 2010 and 2012**



MANAGEMENT PLAN

FIREFIGHTING WATER

CFA TRAINING COLLEGE
– FISKVILLE–

March 2008

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3. OPERATIONAL CONSIDERATIONS

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6. APPENDICES

1. INTRODUCTION

In October – November 2005, CFA commissioned a report into the quality of water used for firefighting training at CFA Field Training Grounds.¹ This report examined and assessed the potential impact on the health of personnel and the environment, and made recommendations for the ongoing management of the identified issues.

This report was followed up with a second report in October 2007 which reviewed the original water test results recommendations.² It asserted that:

"Each training ground should document a "Management Plan" to address the issue of firefighting water."³

2. BACKGROUND

CFA Fiskville has a series of Dams on its premises as well as a "Pit".

Water for the main fire fighting supply is pumped from the Pit which is filled from the town water supply to the main hydrants on the PAD. Water from Dam 2 can also be diverted into the pit. Water for the back up water supply is pumped from Dam 2.

Once used on the fireground, the water flows back into Dam 1 via a triple Interceptor which is serviced every 12 months. Possible contaminants on the fireground are foam and hydrocarbons. Possible contaminants of Dam 1 are faecal matter from wildlife and contaminants from the fireground. Possible contaminants of Dam 2 are faecal matter from wildlife and contaminants from the fireground as Dam 1 and Dam 2 are connected via a channel containing 300mm of crushed scoria. There are also Dams 3 and 4 which can be used to top up the other Dams if needed. Dam 1 contains sludge which is contaminated with hydrocarbons and heavy metals from past practices. Options for the remediation or removal of this sludge are being assessed.

Samples are taken every 3 or 4 months by Central Highlands Water and analysed for BOD, E.coli, oil & grease, total phosphate, suspended solids and total nitrogen. Samples are taken from Dams 1, 2 and 3.

¹ Wynsafe Occupational Health Services, Report titled, "Assessment of Firefighting Water at CFA South Eastern Training Ground", October – November 2005.

² Wynsafe Occupational Health Services, Report titled, "Management of the Quality of firefighting Water at CFA Field training Grounds", October 2007.

³ Recommendation 5, page 10 of the October 2007 Report.

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3. OPERATIONAL CONSIDERATIONS

3.1 Water is not to be used if:-

- Water is visibly contaminated
- Water gives off an unpleasant odour
- Any person complains of irritation or other health effects after using the water
- Scheduled testing has not been carried out
- Unacceptable analytical test results are received

3.2 NOTE: If any of the above conditions apply, then:-

- Isolate and tag out the suspected tank
- Use other sources of water if available
- Take a water sample for analysis
- Take steps, if necessary, to correct any contamination i.e., by flushing out the tank, or treating with disinfectant products
- Advice or assistance from water treatment company may be necessary

The agreed water quality standard for firefighting water is:

- | | |
|--------------------------|--------------------|
| • E coli | <10 orgs per 100mL |
| • BOD | <10 mg/l |
| • pH | 6.0 – 9.0 |
| • Suspended solids | <5 mg/l |
| • Pseudomonas aeruginosa | <10 orgs per 100mL |

The first 4 criteria of the standard comply with the Class A recycled water criteria recommended by EPA and adopted by CFA in **SOP 9.36 – Recycled Water – Use and management of.**

The level for Pseudomonas aeruginosa is based on advice from Ecowise Environmental as being an appropriate standard for firefighting water. Written advice from Ecowise Microbiologist ~~Not Relevant~~ on 6 March 2008 stated that:

Pseudomonas aeruginosa is an opportunistic pathogen and may cause infections in vulnerable individuals (such as eye, ear, skin and wound infections). We recommend a guideline for Pseudomonas aeruginosa of 10 orgs/100mL for fire fighting exposure. This is based on the knowledge and experience of our microbiologists and is supported by guidelines developed by the Government of British Columbia, Canada - Water Quality Criteria for Microbiological Indicators (Government of British Columbia, Ministry of Environment, 2001). The British Columbia guidelines call for 75th percentile values of no more than 2 orgs/100mL for primary contact and 10 orgs/100mL for secondary contact.

4. SCHEDULE FOR WATER SAMPLING AND ANALYSIS

Water samples are to be taken quarterly and bi annually.

Schedule

1. Quarterly Tests

Procedure

On the first Monday of each quarter one water sample is to be taken from each of the following:

- i Dam 1 (inflow)
- ii Dam 1 (effluent)
- ii Dam 2
- iii Dam 3

Water samples are to be tested for:

- I E.coli
- ii BOD
- iii Oil & Grease
- iv Total phosphate
- v Suspended Solids
- vi Total Nitrogen

The sample bottles should be filled to exclude air

Water sample bottles to be labelled, to indicate the source and should correspond with the instruction letter (see Appendix A)

Water samples should be packed with ice bricks or similar and sent with the instruction letter by courier to:

Central Highlands Water – Laboratory Services
Learmonth Rd
WENDOUREE VIC 3353
Phone:5320 3194

The samples should arrive at Central Highlands Water within 24 hours of sampling.

2. Bi Annual Tests

Procedure

On the first Monday of July and December, 3 water samples are to be taken from each of the following:

- i Dam 2
- ii Pit

Water samples are to be analysed for:

- E.coli & Pseudomonas (sterile micro bottle)
- BOD (1 litre bottle)
- pH & Suspended Solids (1 litre bottle)

All sample bottles should be filled to exclude air

Water sample bottles to be labelled, to indicate the source and should correspond with the instruction letter (see Appendix B). Water bottles (2 sterile micro bottles and 4 one litre bottles) are available from Ecowise Environmental at:

Ecowise Environmental (Victoria) Ltd
Caribbean Business Park
22 Dalmore Drive
SCORESBY VIC 3179
Phone: 03 8756 8000

Water samples should be packed with ice bricks or similar and sent with the instruction letter by courier to:

Ecowise Environmental (Victoria) Ltd
Caribbean Business Park
22 Dalmore Drive
SCORESBY VIC 3179
Phone: 03 8756 8000

The samples should arrive at Ecowise Environmental within 24 hours of sampling.

7. CONTROL MEASURES

Protection of health or personnel using firefighting water:

1. All personnel (staff, firefighters, commercial clients, etc) must wear turnout clothing and equipment as outlined in the SOP relevant to the PAD area being used.
2. Water must not be used if any of the conditions, as listed in 5 (a) Operational Considerations, exist.
3. If water analysis results indicate that the water is not to the agreed standard then the storage location is to be immediately isolated and tagged out.
4. Notify the following:
 - i. Manager, CFA Fiskville
 - ii. PAD Supervisors
 - iii. Site Health & Safety representative
 - iv. All staff
5. Provide a copy of the test results to:
 - i. Manager, CFA Fiskville
 - ii. PAD Supervisors
 - iii. Site Health & Safety representative
 - iv. Staff notice board
6. Use other sources of water.
7. Investigate cause.
8. Determine course of action to rectify problem – i.e:
 - i. Take steps to correct any contamination, like flushing out storage tanks, or treating with disinfectant products.
 - ii. Seek advice or assistance from a water treatment company.
9. Acceptable test results must be obtained before any tagged out water source can have the tag out removed.

APPENDIX A

24 November 2007

Central Highlands Water – Laboratory Services
Learmonth Rd
WENDOUREE VIC 3353

Dear Sir/Madam

TESTING OF WATER SAMPLES

I have enclosed 4 samples of water that require testing for:

- i E.coli
- ii BOD
- iii Oil & Grease
- iv Total phosphate
- v Suspended Solids
- vi Total Nitrogen

The water samples bottles are labelled as follows:

- Sample 1 Dam 1 (inflow)
- Sample 2 Dam 1 (effluent)
- Sample 3 Dam 2
- Sample 4 Dam 3

I would appreciate if you could fax the results to us on Not Relevant

Thank you for your co-operation in this matter.

Yours sincerely

Not Relevant

APPENDIX B

24 November 2007

Ecowise Environmental (Victoria) Ltd
Caribbean Business Park
22 Dalmore Drive
SCORESBY VIC 3179

Attention: Not Relevant

Dear Not Relevant

TESTING OF WATER SAMPLES

I have enclosed samples of water that require testing for:

Sample 1	E.coli & Pseudomonas (sterile micro bottle)
Sample 2	BOD (1 litre bottle)
Sample 3	pH & Suspended Solids (1 litre bottle)
Sample 4	E.coli & Pseudomonas (sterile micro bottle)
Sample 5	BOD (1 litre bottle)
Sample 6	pH & Suspended Solids (1 litre bottle)

The water samples bottles are labelled as follows:

Sample 1	Dam 2
Sample 2	Dam 2
Sample 3	Dam 2
Sample 4	Pit
Sample 5	Pit
Sample 6	Pit

I would appreciate if you could fax the results to us on Not Relevant

Thank you for your co-operation in this matter.

Yours sincerely

Not Relevant



MANAGEMENT PLAN

FIREFIGHTING WATER

CFA TRAINING COLLEGE
- FISKVILLE -

JUNE 2010

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1. INTRODUCTION

In October – November 2005, CFA commissioned a report into the quality of water used for fire fighting training at CFA Field Training Grounds. This report examined and assessed the potential impact on the health of personnel and the environment, and made recommendations for the ongoing management of the identified issues.

This report was followed up with a second report which reviewed the original water test results recommendations. It asserted that:

“Each training ground should document a “Management plan” to address the issue of fire fighting water”

2. BACKGROUND

CFA Fiskville has a series of Dams on its premises as well as a “Pit”.

Water for the main fire fighting supply is pumped from the Pit which is filled from the town water supply to main hydrants on the PAD. Water from Dam 2 can also be diverted into the Pit. Water for the back up water supply is pumped from Dam 2. While water restrictions are in force, the Pit is supplied with water from Dam 2.

Once used on the fire ground, the water flows back into Dam 1 via a triple interceptor which is serviced every 12 months. Possible contaminants on the fire ground are foam and hydrocarbons. Possible Contaminants of Dam 1 are faecal matter from wildlife and contaminants of the fire ground. Possible contaminants of Dam 2 are faecal matter from the wildlife and contaminants from the fire ground as Dam 1 and Dam 2 are connected via a channel containing 300mm of crushed scoria. There are also Dams 3, 4 and 5 which can be used to top up the other Dams if needed. Dam 1 contains sludge which is contaminated with hydrocarbons and heavy metals from past practices. Options for the remediation or removal of this sludge are being assessed.

Samples are taken every 3 or 4 months by Central highlands Water and analysed for BOD, E.coli, oil & grease, total phosphate, suspended solids, total nitrogen and Pseudomonas Aeruginosa. Samples are taken from Dams 1, 2, 3, 4 and 5.

3. OPERATIONAL CONSIDERATIONS

Water is not to be used if:

- Water is visibly contaminated
- Water gives off an unpleasant odour
- Any person complains of irritation or other health effects after using water
- Scheduled testing has not been carried out
- Unacceptable analytical test results are received

NOTE: If any of the above conditions apply, then:

- Use other sources of water if available
- Take water sample for analysis
- Take steps necessary, to correct any contamination
- Advice or assistance from water treatment company may be necessary

The agreed water quality standard for fire fighting water is:

- | | |
|--------------------------|----------------------|
| • E Coli | < 150 orgs per 100ml |
| • BOD | < 10 mg/l |
| • pH | < 6.0 – 9.0 |
| • Suspended solids | < 5 mg/l |
| • Pseudomonas Aeruginosa | < 10 orgs per 100ml |

The first 4 criteria of the standard comply with Class A recycled water criteria recommended by EPA and adopted by CFA in **SOP 9.36 – Recycled Water – Use and Management of.**

4. SCHEDULE FOR WATER SAMPLING AND ANALYSIS

Water samples are to be taken quarterly.

Schedule

1. Quarterly Tests

Procedure

On the first Monday of each quarter, one water sample is to be taken from each of the following:

- i. Dam 1 (inflow)
- ii. Dam 1 (effluent)
- iii. Dam 2
- iv. Dam 3
- v. Dam 4
- vi. Dam 5

Water samples are to be tested for:

1. Pseudomonas Aeruginosa
2. E. coli
3. BOD
4. Oil & Grease
5. Total phosphate
6. Suspended solids
7. Total Nitrogen

The sample bottle should be filled to exclude air.

Water sample bottles to be labelled, to indicate the source and should correspond with the instruction letter (see Appendix A).

2. Half Yearly Tests

Procedure

On the first Monday of each half one water sample is to be taken from each of the following:

- i. The Main Pumping Pit
- ii. Dam 2
- iii. Pumper 1 or 2 (whatever is available)

Water samples are to be tested for:

- i. PFOS/PFOA

Water samples should be packed with ice bricks or similar and sent with the instruction letter by courier to:

Central highlands Water – Laboratory Services
Learmonth Rd
WENDOUREE
Phone: 5320 3194

The samples should arrive at Central Highlands water within 24 hours of sampling.

5. CONTROL MEASURES

Protection of health or personnel using fire fighting water:

1. All personnel (Staff, fire fighters, commercial clients, etc.) must wear turnout clothing and equipment outlined in the SOP relevant to PAD area being used.
2. Water must not be used if any of the conditions, as listed in 3.1 operational considerations, exist.
3. If water analysis results indicate that the water is not to the agreed standard then the storage location is to be immediately isolated.
4. Notify the following:
 - i. Manager, CFA Fiskville
 - ii. PAD Supervisor
 - iii. Site health & safety representative
 - iv. Staff notice board
5. Provide a copy of the test results to:
 - i. Manager, CFA Fiskville
 - ii. PAD Supervisors
 - iii. Site health & safety representative
 - iv. Staff notice board
6. Use other sources of water
7. Investigate cause
8. Determine course of action to rectify problem – i.e:
 - i. Take steps to correct any contamination
 - ii. Seek advice or assistance from a water treatment company
9. Acceptable test results must be obtained before any water source can be used again

APPENDIX A

24 November 2007

Central Highlands water – Laboratory Services
Learmonth Rd
WENDOUREE VIC 3353

Dear Sir/Madam

TESTING OF WATER SAMPLES

I have enclosed 6 samples of water that require testing for:

- i. E. coli
- ii. BOD
- iii. Oil & Grease
- iv. Total Phosphate
- v. Suspended Solids
- vi. Total Nitrogen
- vii. Pseudomonas Aeruginosa

The water samples bottles are labelled as follows:

- Sample 1 > Dam 1 (inflow)
- Sample 2 > Dam 1 (effluent)
- Sample 3 > Dam 2
- Sample 4 > Dam 3
- Sample 5 > Dam 4
- Sample 6 > Dam 5

I would appreciate if you could fax the results to us on Ph: (03) 5368 1368

Thank you for your co-operation in this matter.

Yours Sincerely

John Myers
PAD Supervisor

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MANAGEMENT PLAN

FIREFIGHTING WATER

CFA TRAINING COLLEGE
- FISKVILLE -

MAY 2012

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In October – November 2005, CFA commissioned a report into the quality of water used for fire fighting training at CFA Field Training Grounds. This report examined and assessed the potential impact on the health of personnel and the environment, and made recommendations for the ongoing management of the indentified issues.

This report was followed up with a second report which reviewed the original water test results recommendations. It asserted that:

“Each training ground should document a “Management plan” to address the issue of fire fighting water”

2. BACKGROUND

CFA Fiskville has a series of Dams on it's premises as well as a “Pit”.

Water for the main fire fighting supply is pumped from the Pit which is filled from the town water supply to main hydrants on the PAD. Water from Dam 2 can also be diverted into the Pit. Water for the back up water supply is pumped from Dam 2.

While water restrictions are in force, the Pit is supplied with water from Dam 2.

Once used on the fire ground, the water flows back into Dam 1 via a triple interceptor which is serviced every 12 months. Possible contaminants on the fire ground are foam and hydrocarbons. Possible Contaminants of Dam 1 are faecal matter from wildlife and contaminants of the fire ground. Possible contaminants of Dam 2 are faecal matter from the wildlife and contaminants from the fire ground as Dam 1 and Dam 2 are connected via a channel containing 300mm of crushed scoria. There are also Dams 3, 4 and 5 which can be used to top up the other Dams if needed. Dam 1 contains sludge which is contaminated with hydrocarbons and heavy metals from past practices. Options for the remediation or removal of this sludge are being assessed.

Samples are taken every 3 or 4 months by Central highlands Water and analysed for BOD, E.coli, oil & grease, total phosphate, suspended solids, total nitrogen and Pseudomonas Aeruginosa. Samples are taken from Dams 1, 2, 3, 4 and 5.

3. OPERATIONAL CONSIDERATIONS

Water is not to be used if:

- Water is visibly contaminated
- Water gives off an unpleasant odour
- Any person complains of irritation or other health effects after using water
- Scheduled testing has not been carried out
- Unacceptable analytical test results are received

NOTE: If any of the above conditions apply, then:

- Use other sources of water if available
- Take water sample for analysis
- Take steps necessary, to correct any contamination
- Advice or assistance from water treatment company may be necessary

The agreed water quality standard for fire fighting water is:

- | | |
|--------------------------|----------------------|
| • E Coli | < 150 orgs per 100ml |
| • BOD | < 10 mg/l |
| • pH | < 6.0 – 9.0 |
| • Suspended solids | < 5 mg/l |
| • Pseudomonas Aeruginosa | < 10 orgs per 100ml |

The first 4 criteria of the standard comply with Class A recycled water criteria recommended by EPA and adopted by CFA in SOP 9.36 – **Recycled Water – Use and management of.**

4. SCHEDULE FOR WATER SAMPLING AND ANALYSIS

Water samples are to be taken quarterly.

Schedule

1. Monthly Tests

Procedure

On the first Monday of each month, one water sample is to be taken from each of the following:

- i. Dam 1 (inflow)
- ii. Dam 1 (effluent)
- iii. Dam 2
- iv. Dam 3
- v. Dam 4
- vi. Dam 5

Water samples are to be tested for:

1. Pseudomonas Aeruginosa
2. E. coli
3. BOD
4. Oil & Grease
5. Total phosphate
6. Suspended solids
7. Total Nitrogen

The sample bottle should be filled to exclude air.

Water sample bottles to be labelled, to indicate the source and should correspond with the instruction letter (see Appendix A).

2. Half Yearly Tests

Procedure

On the first Monday of each half one water sample is to be taken from each of the following:

- i. The Main Pumping Pit

- ii. Dam 2
 - iii. Pumper 1 or 2 (whatever is available)
- Water samples are to be tested for:
- i. PFOS/PFOA

Water samples should be packed with ice bricks or similar and sent with the instruction letter by courier to:

Central highlands Water – Laboratory Services
Learmonth Rd
WENDOUREE
Phone: 5320 3194

The samples should arrive at Central Highlands water within 24 hours of sampling.

5. CONTROL MEASURES

Protection of health or personnel using fire fighting water:

1. All personnel (Staff, fire fighters, commercial clients, etc.) must wear turnout clothing and equipment outlined in the SOP relevant to PAD area being used.
2. Water must not be used if any of the conditions, as listed in 3.1 operational considerations, exist. Until,
3. Determination of course of action to rectify problem – i.e.:
 - i. Take steps to correct any contamination
 - ii. Seek advice or assistance from a water treatment company
 - iii. **Water will be treated as per recommendations from Central Highlands Water**
4. If water analysis results indicate that the water is not to the agreed standard then the storage location is to be immediately isolated.
5. Notify the following:
 - i. Manager, CFA Fiskville

- ii. PAD Supervisor
- iii. Site health & safety representative
- iv. Staff notice board

6. Provide a copy of the test results to:

- i. Manager, CFA Fiskville
- ii. PAD Supervisors
- iii. Site health & safety representative
- iv. Staff notice board

7. Use other sources of water

8. Investigate cause

9. Acceptable test results must be obtained before any water source can be used again

APPENDIX A

24 November 2007

Central Highlands water – Laboratory Services
Learmonth Rd
WENDOUREE VIC 3353

Dear Sir/Madam

TESTING OF WATER SAMPLES

I have enclosed 6 samples of water that require testing for:

- i. E. coli
- ii. BOD
- iii. Oil & Grease
- iv. Total Phosphate
- v. Suspended Solids
- vi. Total Nitrogen
- vii. Pseudomonas Aeruginosa

The water samples bottles are labelled as follows:

- Sample 1 > Dam 1 (inflow)
- Sample 2 > Dam 1 (effluent)
- Sample 3 > Dam 2
- Sample 4 > Dam 3
- Sample 5 > Dam 4
- Sample 6 > Dam 5

I would appreciate if you could fax the results to us on Ph: Not Relevant

Thank you for your co-operation in this matter.

Yours Sincerely

Not Relevant
Not Relevant

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Appendix 9

Hot Fire Training Notification



CFA State Training College Fiskville Hot Fire Training Advice

Week Commencing Monday 07 July 2014

Please be advised that Hot Fire Training is scheduled to be conducted at Fiskville during the week noted above on days and times outlined in this advice.

Every effort will be made to ensure the smoke and emissions resulting from this training are kept to a minimum during this time to ensure any impacts on you are averted.

Should you have any queries or concerns in relation to this advice please contact the Fiskville Duty Officer during office hours on:

- **Extension 7200:** Internal Fiskville Phones, or
- **5366 7200:** External Phones and Mobiles

Day	Date	Times
Monday	07 July 2014	
Tuesday	08 July 2014	0830 – 1700 Hours
Wednesday	09 July 2014	0830 – 1700 Hours
Thursday	10 July 2014	
Friday	11 July 2014	0830 – 1700 Hours
Saturday	12 July 2014	
Sunday	13 July 2014	0830 – 1700 Hours

Notes:

Hot Fire Training activities on **Tuesday 08th and Wednesday 09th July** will include laboratory and external demonstrations which show the reactive properties of substances.

These demonstrations will be conducted inside the PAD Compound, and will include some reactions which result in small explosions.

- Distribution:**
- Fiskville Staff
 - Fiskville Residents
 - Course Participants
 - Contract Staff
 - Fiskville Visitors
 - Fiskville Leasees
 - Fiskville Neighbours
 - VicFire FSCC

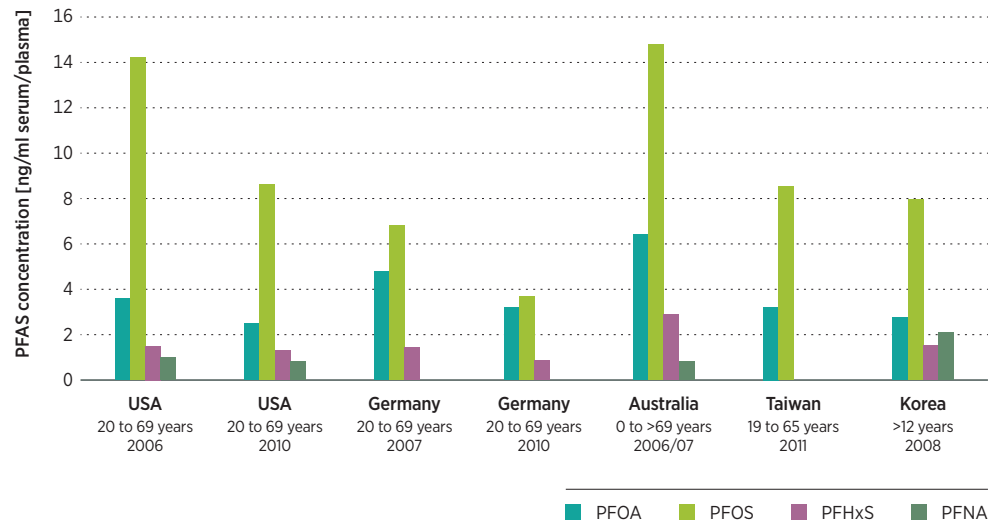
CFA Fiskville Hot Fire Training Advice

CFA.3151.8051.001.0026

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Appendix 10

International comparison of PFC levels in human blood



Sources: Olsen et al. 2012; Schröter-Kermani et al. 2013; Toms et al. 2009; Hsu et al. 2013; Ji et al. 2012, In: 'Human exposure to PFOA / PFOS and health risks', Presentation to Environment, Natural Resources and Regional Development Committee, Umwelt Bundesamt, 1 December 2015.

Minority Report

16 May 2016

Minority Report: Environment, Natural Resources and Regional Development Inquiry Into the CFA Training College at Fiskville

This report is submitted by Mr Bill Tilley MLA, Member for Benambra, Mr Tim McCurdy MLA, Member for Ovens Valley and Mr Simon Ramsay MLC, Member for Western Victoria.

The CFA is a treasured Victorian institution, predominantly comprised of altruistic volunteers who give up their time and risk their lives to protect the lives and property of their fellow Victorians. No one should doubt that it is their courage, integrity, strength of character and inherent sense of duty that make the CFA great.

Tragically it would seem that the very traits that make our CFA volunteers great- duty, loyalty, selflessness, heroic stoicism and ensuring that the call of duty is heard and the job gets done no matter how tight the budget or how scarce the resourcing- has also permitted a situation to develop where shortfalls in resources have resulted in decisions being made which, if considered with the benefit of 20/20 hindsight would not be made again.

This report should not focus on finger pointing or trying to compartmentalise responsibility to a group of people or individual organisations. Rather it should examine across the spectrum of government, the circumstances and environment that resulted in the events detailed within from occurring and seek answers and solutions that prevent similar events from ever occurring again.

Ideally, such a response should look beyond the walls of the CFA and examine the impact of factors such as systemic and ongoing underfunding by a series of successive governments and the actions of those with vested interests who have sought to use the CFA as a political or industrial weapon to further an ideological cause. Regrettably, the committee's terms of reference did not allow such a wide-ranging review, although the minority report members remain hopeful that such an examination may occur in the future.

The committee in its findings, discovered site contamination as has occurred is not unique to CFA, particularly on the issue of PFOS and PFOA. Such contamination is an emerging issue with airfields with fire support services historically using PFOS and PFOA in fire suppressing foams both in Australia and overseas. Furthermore, beyond firefighting, serum levels in populations are being influenced by use of PFOS and PFOA in household items. It is perhaps unfair to single out the CFA when the committee itself has witnessed this first hand around the world.

This report honours our CFA members; people imbued with the courage that sees them willingly enter a blazing building to rescue the trapped or stand shoulder to shoulder in the maelstrom as the wildfires rage towards them and who do it not for gain but for the most prized of all reasons, duty, loyalty and community service.

This report seeks to ensure that those who continue to shoulder the load or those who in the future will take up the mantle and follow the call of duty will receive the care and treatment that they all deserve.

The content and findings of this report are, and should be, of concern to all Victorians. The work of the Committee has uncovered long seated and arguably entrenched failings to ensure the safety of our emergency service workers. It makes for sombre reading and raises significant concerns that warrant further investigation, enquiry and most importantly, action to ensure such events cannot occur again.

Whilst not seeking to denigrate the work of the committee or defend the indefensible it should be noted that the Committee is not a court of law, nor is it equipped with the skills or expertise to forensically and scientifically examine many of the technical aspects that pertain to this matter. Those tasks have appropriately been allocated to experts appointed to assist the committee.

Notwithstanding this, the minority members share some concerns that evidence given to the committee in the form of lay opinion, speculation or anecdotal recall, appears in some cases to have been accepted by some members of the committee as irrefutable proof. Anecdotal and hearsay evidence cannot substitute for empirical evidence nor can it be fairly and reasonably used to support an otherwise unsupported or untested hypothesis, or support a political or industrial agenda, or give succour to those who would seek to capitalise or profit from others misfortune. Such an approach belittles the object of this enquiry and does a disservice to those adversely referred to within. More importantly, it trivialises the impact of those tragically, adversely and personally affected by the events in question.

Rather than such an approach being permitted, the minority members submit that a far more fair and just approach is to adopt the “Briginshaw” standard first established by the High Court in *Briginshaw v Briginshaw* (1938) 60 CLR 336.

In that case the High Court cautioned that:

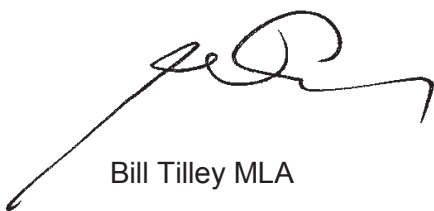
The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding, are considerations which must affect the answer to the question whether the issue has been proved to the reasonable satisfaction of the tribunal

With this in mind, the minority members of this committee reminds the parliament that this enquiry was commissioned and established to deal with serious and troubling issues and approached its duties and deliberations in a sombre and responsible manner with input and assistance from dedicated professionals who likewise contributed in a manner befitting of the serious matters before them.

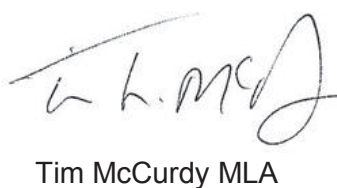
It is therefore critical that any resulting responses arising from this report are as equally considered, measured and responsible and those charged with responding weigh the evidence presented to the committee in a manner consistent with the Briginshaw standard.

The minority members also note that there are a number of organisations and entities in Victoria who either derive their livelihood from proclaiming that the “sky is falling” and then offering their services to address the perceived crisis or alternately, seem to never miss an opportunity to turn any incident into an occasion to advance a political agenda or ideology, or at even baser level, indulge in political or character assassination. Such individuals and entities should not be permitted to exploit the misfortunes of others for cheap political or ignoble financial gain.

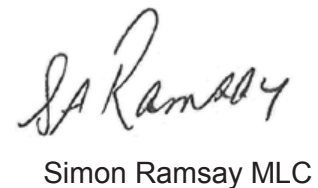
We caution those charged with responding to the findings of this report to remember the purpose for which it was commissioned and especially, to never forget those whose lives have been lost or irretrievably damaged and now look to the Government for meaningful action, not self-interested rhetoric and hysterical hyperbole.



Bill Tilley MLA



Tim McCurdy MLA



Simon Ramsay MLC

