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Central Purchasing for Fire

AUSTRALASIAN FIRE AUTHORITIES COUNCIL

An Interactive Qualifying Project Report

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In partial fulfilment of the requirements for the

Degree of Bachelor of Science

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Sensitive Materials Removal Notice:

This version has been edited. Sensitive information has been removed and is available through another version, which is only available to the Australasian Fire Authorities Council and Jonathan R. Barnett (advisor for this project from Worcester Polytechnic Institute).

Abstract

This project evaluated a bulk purchasing program for the Australasian Fire Authorities Council. Research completed in the United States on pre-existing bulk purchasing systems and similar agencies that deal with the same problems as Australia were followed by interviews conducted with the fire services in Australia. The result was a recommendation to set up a bulk purchasing committee within AFAC, and pursue the bulk purchase of cab chassis and wildland PPC/PPE.

Keywords: Australia, purchasing, fire, AFAC

Executive Summary

The purpose of this report is to **identify the opportunity of a bulk purchasing system for the following commodities**:

- Breathing apparatus for structural fires
- Cab chassis for tanker appliances
- Wildland personal protective clothing and equipment

A bulk purchasing system for these commodities would potentially reduce costs and save the agencies money, and could also help bring about more Australian standards.

During this project, spend data and logistical data pertaining to the purchasing of tanker cab chassis, structural breathing apparatus, and wildland personal protective clothing and equipment was collected and collated. This data was collected and used to identify obstacles and opportunities for future bulk purchasing of these commodities; this information was then used to make recommendations to AFAC for future pursuit of a bulk purchasing system. The spend data was obtained through the use of a data questionnaire, which was sent to most of the fire agencies in Australia. To attain the logistical data, personal interviews were conducted with the same agencies that received the data questionnaire. A bulk purchasing system for these commodities would potentially reduce costs and save the agencies money, and could also help bring about more Australian standards.

From the research performed, it can be seen that there was a great deal of money spent on these commodities in the 2005/06 financial year. The most was spent on heavy tanker cab chassis in the 2005/06 financial year (heavy tankers usually contain approximately 3000 liters of water). This total

was close to $20 million AUD, which is a large portion of the overall fire budgets in Australia. Following the heavy tanker cab chassis came light tanker cab chassis (usually holding around 1000 to 1500 liters of water), which was around $4 million in the 2005/06 financial year.

Tied with the light tanker cab chassis at $4 million were wildland protective jackets and trousers (combined). Next were wildland protective boots, which totaled almost $2.5 million in the 2005/06 financial year. Following the boots were the wildland protective gloves and helmets (combined). In 2005/06, around $1.5 million was spent on these together. Then were the breathing apparatus air cylinders, which cost Australia approximately $670,000 in 2005/06. Finally were the breathing apparatus back panel and face mask, which totaled about $110,000.

This data shows that there are many potential opportunities for a bulk purchasing system to be created. Based on this data, recommendations were made on the pursuit of all of these commodities. It was highly recommended that AFAC immediately pursue heavy tanker cab chassis, as it costs Australia around $20 million in 2005/06, and is therefore where most of the cost savings could be attained. This should be done by establishing a bulk purchasing committee that would be made up of technical and purchasing personnel from all of the fire agencies, and then they should begin to design a national technical specification. A similar recommendation was made for the light tanker cab chassis.

Due to the lack of a national standard for cab chassis, AFAC may consider pursuing the wildland PPC/PPE instead, because standards already exist, or are in the process of being written. A great deal of money was spent

in 2005/06 on just wildland PPC/PPE and so there would be potential cost savings in a bulk purchase for these, but it would probably not be as much as for cab chassis.

1. Concerning breathing apparatus, both air cylinders and sets, the recommendation was a bulk purchase system should not be pursued at this time. These two items together do not represent a very significant portion of the budget, and air cylinders across Australia have a wide variation in specifications, which would create a problem in creating a national specification.
2. Further research should be performed on the data collected during this project. This needs to be done to ensure that the figures collected are completely accurate, especially for the variation in cost per unit over the agencies for heavy tanker cab chassis.

Other recommendations were made, which include writing more Australian standards for these commodities, reevaluating purchasing policies in the fire services, and pursuing bulk purchasing of other commodities. These other commodities were suggested by interviewees in data collection process.

Authorship

For this report all project team members, Daniel Caron, Ryan Lewis, and David Pesce have agreed that all work was divided evenly between them.

Daniel Caron was in charge of organizing the data gathered and transforming it into legible charts and graphs to easily be analysed. He was the main contributor of the results and analysis section in this document.

Ryan Lewis was the main contributor of the methodology and the recommendations sections. David Pesce was the main contributor of the glossary, the introduction, and the executive summary.

All team members were present for all interviews and all had influence on questions asked. For all other parts of this project it must be noted that it has been a combined team effort. In all cases when one team member finished one section then the other two team members would edit and add input ensuring that all team members had influence on all sections.

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New South Whales Rural Fire Service
Queensland Fire and Rescue Service
South Australia Country Fire Service
Western Australia Fire and Emergency Services Authority
Tasmania Fire Service

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1 Introduction

1.1 History

Each of the states and territories of Australia is comprised of different fire agencies, with each state or territory generally having two individual agencies within it. Starting over 100 years ago, organized fire brigades began forming throughout Australia, and since then they have stayed separate entities with separate policies and procedures. This once allowed the fire agencies in different regions of Australia to manage fire brigades independently and effectively, but as modern technologies allow for better and faster communications over longer distances, it has made firefighting cooperation much easier between all of the states and territories.

Bushfires pose an especially dangerous threat for the more rural areas of Australia, and also for those metropolitan areas that are close to the city outskirts. For long-lasting and fast-spreading bushfires, it is important for brigades to be able to call in help from agencies in surrounding areas. On January 24, 2006, ”About 150 volunteer fire-fighters from NSW arrived in South Australia yesterday to help their exhausted colleagues…”(Madden, M3) Agency collaboration is crucial in defeating wildfires across Australia.

The collaboration of fire services in Australia is important for preventing the loss of life during a bushfire; however, each fire service is still independent from others and has its own policies and procedures for procurement of equipment, training of firefighters, and the allocation of resources. These three things are obstacles in the way of truly effective joint firefighting efforts. Although a firefighting troop would come to help out another area with their own equipment, it does not mean that they will be able to remain self-

sufficient during an entire campaign. Water reserves in tankers are very limited (up to around 3000 liters of water) and so firefighters will need to tap into the water supplies of the area they are currently in; however, this is not always easy as most states and territories use different hose attachments. In addition, equipment such as breathing apparatus is different across the eight states and territories. If there is ongoing agency collaboration, many times helping fire brigades sometimes cannot refill their air cylinders because of incompatibility issues.

1.2 Project Goals and Scope

The best way to encourage AFAC member agencies to buy the same products is to set up a standardized procurement process for all agencies that does not hinder a bulk purchase. This includes all the fire services following the same standards when purchasing equipment.

> "Given the similar nature of member agencies, their activities and needs, AFAC has recognized that opportunities potentially exist to derive benefit for members through savings or avoided costs that might be achieved through cooperative bulk purchasing arrangements. The ability to institute arrangements for cooperative bulk purchasing is dependent upon common procedures and common needs. Presently, the extent of such commonality is unknown." (Bavington, 38)

This project's goals were to collect and collate data from fire agencies throughout the Australasian region in order to assess the benefits of a bulk purchasing system being implemented throughout the region. First, a general questionnaire was sent to the different fire agencies. The questionnaire

focused on three commodities: cab chassis for tankers, breathing apparatus for structural fires, and wildland personal protective clothing.

Another major goal of this project was to make recommendations for the future pursuit of bulk purchasing of these commodities (cab chassis for tankers, breathing apparatus for structural fires, and wildland personal protective clothing), as well as to identify possible opportunities for bulk purchasing outside of these commodities. Identification of bulk purchasing opportunities for the three commodities was done by analysis of the collected data. By noticing trends throughout all, or a majority of the agencies, it was possible to recognize opportunities and make a recommendation based on the findings.

1.3 Project Terms of Reference

The project goals and specifications were listed in the document, "Bulk Purchasing Research Project Terms of Reference." (Bulk Purchasing Terms of Reference)[1] The described approach was to collect and collate logistical data and spend data in order to determine the effectiveness of a bulk purchasing system. This data collection is only a small part of the overall development of a bulk purchasing working group, but is crucial for the progress of the overall project which is outlined in this document. (Bulk Purchasing Terms of Reference)

Another key element to the data collection phase was to identify important purchasing drivers in the overall procurement process for each agency. This was important for the overall project because it was to help determine how to come up with a standardized way of comparing the different

[1] Terms of Reference document can be found in Appendix A -.

purchasing processes throughout Australia. In this process, the document also states that the project was to identify the relevance of each of the three commodities to each agency. This part is also important because it will affect the overall interest and cost savings of the bulk purchasing system. For example, structural breathing apparatus has limited use in rural areas; however, rural fire services do not have any use for these as there are no large structures that would require the need for this type of breathing apparatus. Conversely, a water tanker appliance is a key requirement for any rural fire service, as there are generally no useable water supplies that the brigades can hook up to. However, these are almost useless in large metropolitan areas as there are many places that a brigade can hook hoses up to in order to get enough water to extinguish a fire. (Bulk Purchasing Terms of Reference)

In summary, the main purpose of the data collection phase is to Identify the opportunity of a bulk purchasing system. In this exercise three commodities will be focused on and they are:

- Breathing Apparatus
- Cab Chassis for Tanker Appliances
- Wildland PPC/PPE

The findings of these three commodities will help establish the direction of bulk purchasing within the Australian fire services.

2 Literature Review

The following are discussions of the most relevant research that has been reviewed. The resources described below should be use in the future for similar projects. This research stemmed from performing keyword

searches on topics such as central purchasing, wildfire management, and central purchasing within fire departments.

2.1 NFPA 1143

Standard for Wildland Fire Management 2003 Edition

The NFPA developed this standard because they recognized the efforts in the United States to solve the problem of ailing forests and endangered communities in or around forest regions. Furthermore, they came up with standards to help smaller fire departments, such as volunteer fire departments, prepare for fire fighting in forest areas. These actions include mitigation, prevention, and community coordination.

In chapter 5 entitled *Preparedness,* Financial planning is discussed:

> *5.2 Financial Planning.*
> *The financial element of the preparedness plan shall include, as a minimum, the contractual agreements to provide for the following services:*
> *(1) Fuel, oil, and lubricants*
> *(2) Medical services, including injury reports*
> *(3) Catering, food, and drinking water*
> *(4) Personnel hiring and hourly pay*
> *(5) Outside services, including lodging and communications*
> *(6) Equipment maintenance*
> *(7) Specialized fire-fighting equipment*
> *(8) Purchasing agreements and systems*
> *(9) Incident support*
> *(10) Insurance notification systems*
> *(NFPA, standard 1143, chapter 5.2)*

Number eight on this list would be of most importance to this project by identifying examples of pre-existing purchasing agreements and systems in the United States, and they could be used as the framework for solutions in Australia.

2.2 Federal Wildfire Activites: Current Strategy and Issues Needing Attention

August, 1999

This report gives background information on the size and scope of the Forest Service (detailing land mass and current labor force). It then gets into more specifics on the allocation of funding for their firefighting budget.

> *"The Forest Service and BLM [Bureau of Land Management] use the National Fire Management Analysis System, which includes a computer model, to develop their wildfire preparedness budget requests." (Meissner, 4)*

This model basis its evaluation on historical data of weather patterns and so has no real significance in the use for firefighting in cities or other areas where fires are unpredictable. Therefore, the amount of funding received by each location is shifted from fiscal year to fiscal year based on this model. So it is important to their uses that all personnel be trained in a standardized manner as to be interchangeable when allocation of funding and resources shifts.

When a fire department does not receive the amount of funds they require there are several ways they can reduce their costs. For example, they can remove fire engines from service; have only partially staffed engines reduce on-call time for an engine from seven days per week to five days, or not hire extra fire fighters during drier seasons.

A useful system implemented by the Forest Service and BLM is for emergency funds. A certain portion of the central funding is not spent or allocated to any locations, but is instead kept in reserve for departments who need a temporary staff increase or emergency equipment. This allows departments to get by with using less funding.

The National Interagency Fire Center is used as the central driving force behind mobilizing firefighting resources. To make everything more cost-effective, agency managers work together to mobilize supplies and resources; the remainder of the report has no real value to budgeting structure or procedures and is therefore useless to the needs of this project.

2.3 Purchasing & Supply Chain Management

This book gives an overview of purchasing and supply chain management. The most relevant parts were the purchasing process, purchasing objectives, and the FedEx Purchasing Model. The purchasing process can be broken down into six subtopics. First is to identify user need for the product or service. Next, evaluate potential suppliers and then go through the process if bidding, negotiation, and supplier selection. Fourth, gain purchase approval and then release and receive purchase requirements. Lastly, release and receive purchase requirements. (Monczka et al., 28-69)

Purchasing Objectives started with supporting the needs of internal customers by buying items both quickly and cost effectively and being responsive to the material needs and supporting the needs of the customers within the organization. The next objective is to purchase both efficiently and effectively by following budget restrictions, providing training and opportunities for employees, and using purchasing systems which increase productivity. Next, was the development and maintenance of supply. The actions needed to do this are to constantly evaluate suppliers and maintain good relationships with suppliers. Finally, it is recommended to use cross-functionality by communicating often with internal users and ensuring all users receive all required supplies. (Monczka et al., 28-69)

The final topic that was relevant to this project was Federal Express's purchasing model which consisted of seven steps:

- Step1: Decide whether the item is worth enough to put strategy around the purchase. This is easily done based on price/value.
- Step 2: If the spend is worth strategizing, the buyers must decide where to go for the item(s). Decide if to stick with a current supplier or go to check new ones.
- Step 3: Conduct in-depth research on suppliers if it is decided to do so. Can requirements, service aspects, etc. be satisfied?
- Step 4: Review the current strategy up to this point.
- Step 5: Receive RFP's (Request for Protocols) and select the supplier/negotiate a contract.
- Step 6: Integrate everyone involved/effected with the information at hand. This includes supplier, purchase value, estimated delivery date, order quantity.
- Step 7: Benchmark the supply market. This can be done through various internet databases. (Monczka et al., 64-67)

2.4 Bulk Purchasing Report – Stage 1

This report is a precursor to the project that will be completed in Australia. It helps to give a better idea of what the project will entail as it was written by people that will be in charge of the project. The main purpose of the report is to present an analysis of procurement policy and frameworks that are in operation across Commonwealth, States and Territories in the present (Bavinton, 32).

A commonality between the Commonwealth, States and Territories in the procurement process there needs to be three levels of compliance: regulatory requirements, implementation of standards and best practice, and individual agency operational matters. The three levels can be further broken down into three verbs which are must, should, and may. To be successful the

report suggests that bulk purchasing be under the must and should category. Two areas that are relevant to bulk purchasing are specification of goods and services and the detail and management of the tender process. These areas should be looked upon when it comes time to implement a bulk purchasing system (Bavinton, 49).

2.5 GAO Wildland Fire Management

This report comes from the United States Government Accountability Office and is a follow up to a report talked about above *Federal Wildfire Activities: Current Strategy and Issues Needing Attention August, 1999.* The general accountability office (GAO) studied the management of wildland fires because the US government deemed it as very important to protect against wildland fires because they can cause catastrophic damage to ecosystems and resources that maintain communities. Over the past two decades the number of wildland fires has increased at an alarming rate putting at risk human lives, property, and ecosystems (Nazzaro, 1).

GAO found many improvements since its last study in 1999 including agencies adopting various national strategy documents addressing the need to reduce wildland fire risks. Agencies have been putting more effort and funds toward research in wildland fires and are better at addressing fire threats. Lastly, the agencies have strengthened their overall accountability for their investments in wildland fire activities by implementing improved performance measures and a framework for monitoring results (Nazzaro, 1).

The biggest recommendation that GAO had was the implementation of the LANDFIRE system which is a data and modeling system. This system will gain agencies more consistent information on wildland fire threats and

locations. LANDFIRE could also help local fire departments save money by changing their local fire management plans. In the long run this system can help resolve wildland fire problems in a timely and cost-effective fashion for years to come (Nazzaro, 12).

2.6 Telephone Calls That Provided Useful Information

2.6.1 John McDonald GSA – General Services Administration (Vehicle Acquisition & Leasing)

Vehicles are ordered through online program AutoChoice that can only be accessed by GSA members. AutoChoice is a state of the art online ordering system. Vehicles are not kept in stock and are ordered on a need basis. However, the GSA does have contracts with vehicle suppliers thus allowing them to save more money than a smaller organization making much minor purchases.

2.6.2 Gena Brown - GSA Contracts (Departments of Fire Equipment)

To purchase other fire equipment besides vehicles the GSA has another state of the art website called GSA Advantage. This allows members to log on and select the products they would like to purchase. Bids are not awarded to suppliers with the best prices. If a supplier would like to sell its products to GSA members then they have to contact the GSA and the GSA will determine if their products have the necessary quality and appropriate cost to be sold to GSA members.

2.6.3 Ivan Butcher – California Department of Forestry and Fire Protection (Department of Fire Equipment)

For this organization run by the state of California to protect its vast forests their wildland clothing is produced by their prison industries. They have a contract with an Australian company, MSA, and that is where they purchase their breathing apparatus. They do not award bids for their contracts in this section of the organization.

2.6.4 Richard Armstrong – California Department of Forestry and Fire Protection (Department of Vehicles)

For the vehicle section of the California Department of Forestry and Fire Protection, the company places bids for their vehicle contracts and the bids are awarded to the suppliers with the best price. Surrounding California fire departments are sometimes allowed to collaborate in the purchases of these vehicles.

2.7 Colleges of Worcester Consortium Joint Purchasing Group

The prime intention of the Consortium Purchasing Group is to set up group purchase contracts for the financial benefit of its members. Through supportive associations, it enables members to make greater use of sparse or limited resources. The group also provides purchasing departments a chance to share helpful information, as well as to support the advance and execution of high-quality purchasing management (Bello). Products that the group purchases jointly include:

- Appliances
- Auto/Van Rental
- Bottled Water
- Coffee Service

- Computer Paper
- Computer Technology
- Copier Paper
- Electric Lights
- Envelopes
- Office Furniture
- Laser Printer Toner Cartridges
- Office Supplies
- Paper Towels/Tissues
- Safety Gloves/Exam Paper

To belong to the group an organization must be a non profit association with an educational mission. The group meets eight times per year and they vote on the types of contracts they would like to pursue. Subcommittees are formed for each product/service and these committees develop a proposal that goes to vendors and the joint purchasing group maintains all of this on a database. When the responses come back the sub committee reconvenes and analyzes the bid. This analysis is presented at the next meeting and all of the members of the group vote if they would like to pursue the particular product or service. Each individual organization is responsible for its own ordering, billing and payments to the joint purchasing group (Bello).

3 Methodology

This section discusses the methods used to collect and analyze the data and information used in this report. The two data collection approaches that were used were personal interviews and researching on the internet.

Background research was conducted in Worcester, Massachusetts in order to gather some general knowledge about the project. Since Australia has many of the same problems with wildfires as the United States does, research was conducted on purchasing departments across the United States. In addition, preliminary information was gathered on the three

commodities of interest, breathing apparatus, cab chassis, and wildland PPC/PPE. Lastly, an initial SWOT analysis was performed on the implementation of a bulk purchasing system within the Australian fire services.

Once in Australia, additional information was gathered through the use of interviews both in person and on the phone. Data sheets were sent to all the fire services of interest[2] and they provided general information about firefighting equipment[3]. The data was then brought together and analyzed in order to make recommendations on the possibility of a bulk purchasing system. All of these findings were presented in a final presentation on February 22, 2006 to the project bulk purchasing steering committee.

3.1 Background Research

The background research that was completed in Worcester, Massachusetts had two objectives. First was to gain some general knowledge about wildfires and bulk purchasing systems. Second, to identify similar purchasing departments in the United States, which interface with the same problems as Australia, and evaluate the approaches they used. The western part of the United States was a primary focus because of the wildfires they battle in the summer months. Australia also has a wildfire problem and learning about the western states in the United States provided valuable information.

Information was researched on the basics of wildfires by looking at NFPA standards on purchasing fire equipment. (Standard for Wildland Fire

[2] Fire agencies used for data collection: ACT Emergency Services Authority, CFA, FESA WA, MFB, NSW Fire Brigades, NSW Rural Fire Services, QFRS, South Australian CFS, and Tasmanian Fire Service.
[3] All signed data sheets can be found in Appendix C -.

Management) Reports on wildland fire management from the general accounting office of the United States were looked at to fully understand the wildfire problem. (Nazzaro) Next, a book on purchasing and supply chain management was examined to recognize what needs to take place for a bulk buy to be successful. (Monczka)

Research was conducted on the internet to look at fire purchasing departments in the United States that could be correlated with Australia's fire departments. The California Department of Forestry and Fire Protection were contacted to get a general sense of their purchasing policies. Next, the General Services Administration was contacted because they do bulk purchases of vehicles for many agencies around the United States. Finally, the Colleges of Worcester Consortium Joint Purchasing Group was contacted so to get a basic overview of a bulk purchasing system. The information learned from these agencies is in the Literature Review section of this report. A record of the important telephone calls that were made during this time is laid out in two organizational charts, Figure 3-1 and Figure 3-2.

After this research was completed a SWOT analysis was completed in order to asses what the implementation of a bulk purchasing system would do for the Australian fire services. This was done with the knowledge gained from the research performed knowing that the complete picture of the inner workings of the fire services of Australia would not be known until the project team arrived in Melbourne and conducted interviews.

Figure 3-1: California Department of Forestry and Fire Protection

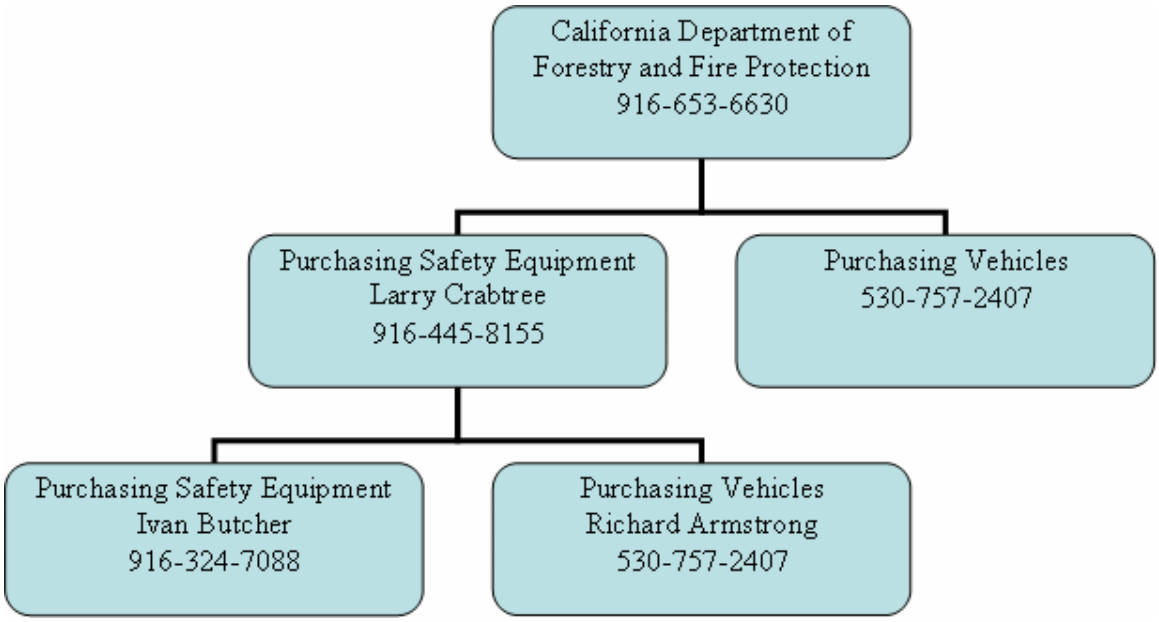
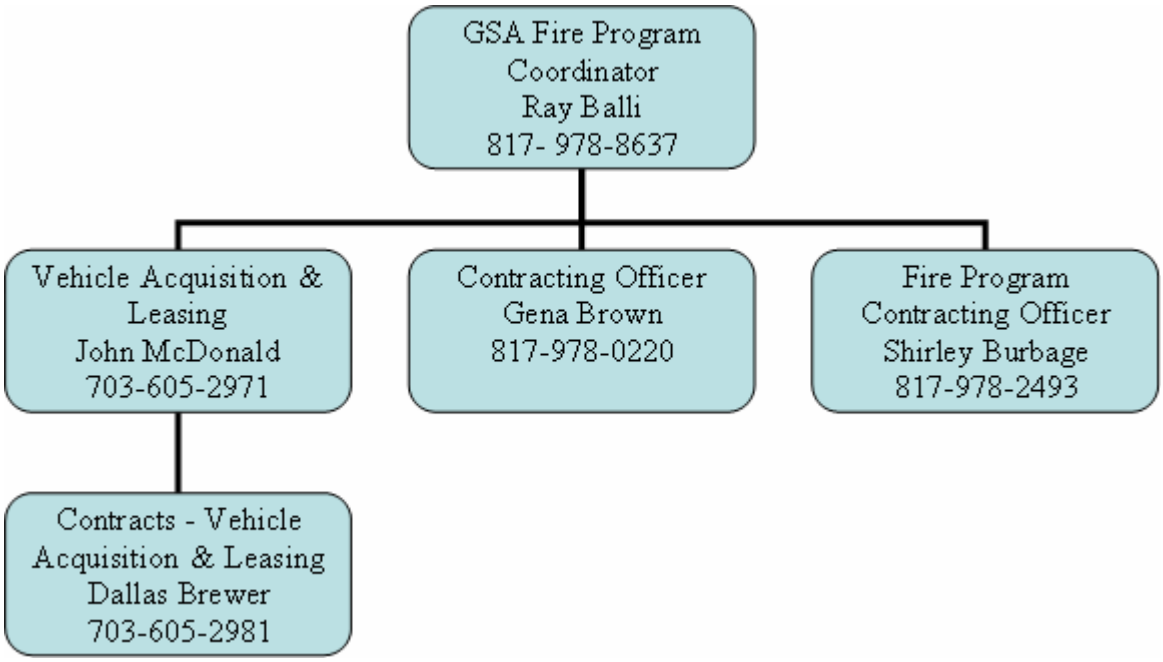


Figure 3-2: US General Services Administration



3.2 Interviews with Fire Services

The steering committee provided by AFAC, set three commodities for the project team to focus on: breathing apparatus, wildland PPC/PPE, and

cab chassis. After a few weeks of conducting interviews, the cab chassis category was further narrowed down to heavy and light tankers. This allowed the project team to focus on a narrower group cab chassis.

Interviews were conducted with the following fire services in Australia:

Table 3-1: Fire Agencies Interviewed

• **VIC Country Fire Authority** • **VIC Metropolitan Fire Brigade** • **NSW Fire Brigades** • **NSW Rural Fire Service** • **Tasmania Fire Service**	• **WA Fire and Emergency Services Administration** • **SA Country Fire Service** • **QLD Fire and Rescue Service**

At the beginning of the stay in Melbourne, the project team devised an interview itinerary based on the SWOT analysis completed in Worcester. This interview itinerary changed many times during the course of the project, due to scoping out the project and determining what are the most important aspects are to focus on. The main purpose of the interviews was to collect information on the purchases of the fire services in order to see where a bulk purchasing arrangement could best fit. Furthermore, the interviews gathered the opinions of the CEO's and purchasing managers on the subject of bulk buying. This gave the project team ideas on what specific areas to focus on when making recommendations and performing analysis.

One of the main issues in the interview itinerary, besides stressing the importance of the data sheet, was to attain from the fire services the obstacles that would be needed to overcome, for them to take part in a bulk purchase. The final interview itinerary is shown below in an outline style:

- Technical Specifications
- Who decides on them?
- What standards do they use and how do they know they are high-quality?
- How do they know when to upgrade equipment?

- Purchasing
- Overall purchasing process
- Laws and regulations on purchasing
- Policy on piggybacking on other fire services contracts
- Where do they find suppliers to purchase from
- Firefighters Unions
- Do firefighters have input in determining tech specs?
- Would firefighters oppose switching equipment?
- Overall obstacles to overcome to implement a bulk purchasing system

It was brought to the project team's attention that the states have different tender boards and this could present a problem with interagency purchasing collaboration. Research was conducted with the Victorian state tender board to further explain this issue. To make sense of the fire services' purchasing powers, a table (Table 4-2) was completed listing purchasing policies and guidelines. (Whelan)

The reports on all of the interviews conducted can be found in Appendix B -. Below is a timeline (Table 3-2) of all the interviews conducted during the project team's stay in Australia:

Table 3-2: Interview Timeline

Date	FireService	Interviewees
9/1/2006	CFA	John McCarthy and Mark Tarbett
12/1/2006	CFA	Neil Bibby, John Grech, and Shane Franklin
13/1/2006	QFRS	Ian Mitchell, Sharon Clark, Andrew Vasta, and John Dodd
16/1/2006	NSWFB	Ted Mlynarz and Hans Bootsma
18/1/2006	MFB	Rob Wilson and Terry Hitch
31/1/2006	CFS	Euan Ferguson
31/1/2006	TFS	Mike Brown
1/2/2006	MFB	Peter Akers and Peter Whelan
2/2/2006	CFA	Mark Connell and Shane Franklin
2/3/2006	WAFESA	Frank Pasquale, Mike Duyckers, and Ron Zatella
2/6/2006	RFS	Paul Springett

3.3 Data Sheet

Midway through the stay in Australia, it was determined by the project team and the steering committee that the most important information are the specific products that the fire services purchase. The information included on the data sheet was type of product, price per item, quantity purchased per year, and expected purchases in the future. The data sheets were sent out to all the participating fire services and there was one sheet sent for each commodity. The sheets can be found in Appendix C - of this report.

4 Results and Analysis

4.1 Data Collection

A series of interviews were set up with nine fire agencies in Australia. As directed by the AFAC steering committee, the project focused on the following agencies:

- ACT Emergency Services Authority
- Country Fire Authority Victoria
- Fire and Emergency Services Authority Western Australia
- Metropolitan Fire Brigade Melbourne
- NSW Fire Brigade
- NSW Rural Fire Service
- QLD Fire and Rescue Service
- South Australian Country Fire Service
- Tasmanian Fire Service

During these interviews, logistical data was obtained regarding purchasing policies, union issues, specifications, and standards. Based on the information gathered, the agencies where compared at the procedural level.

Along with this data, spend data was collected in order to determine which commodities would provide for the greatest cost savings, and also to

see if there were large differences for the same product over all of the fire agencies[4]

4.2 Spend Data Analysis

The data collected from the questionnaire and personal interviews was sorted, condensed, and analyzed. The purchasing information for each commodity was rearranged into organized tables. Each table contained all the pertinent data from every agency regarding one commodity, so the similarities and differences could be easily seen. These tables can be found on page 146, section Appendix C - of this report.

The following sections will analyze each item in detail. The figures listed in each section are based off the data received from each agency. The questionnaires with this data have been signed to validate their accuracy.

4.2.1 Breathing Apparatus – Air Cylinders

Breathing Apparatuses are purchased in parts. The back panel and face mask are purchased from one supplier, while the air cylinder is purchased from another. When looking at the data on just the cir cylinders, many differences become apparent. Rather than any common product, agencies individually purchase different items from varied suppliers. Not only do the supplier and size of the tank vary, but the price per item for these air cylinders also varies greatly. One would expect that with different suppliers and different products the price should change, but there is as much as a $200 difference between agencies buying the same sized carbon fibre tanks from the same suppliers. This variation is over 35% of the average price per

[4] Official write-ups of interviews and signed data questionnaires can be found in Appendix C -.

unit, on a product that accounted for more than $670,000 in purchases last year. Currently, there is not enough data to explain this.

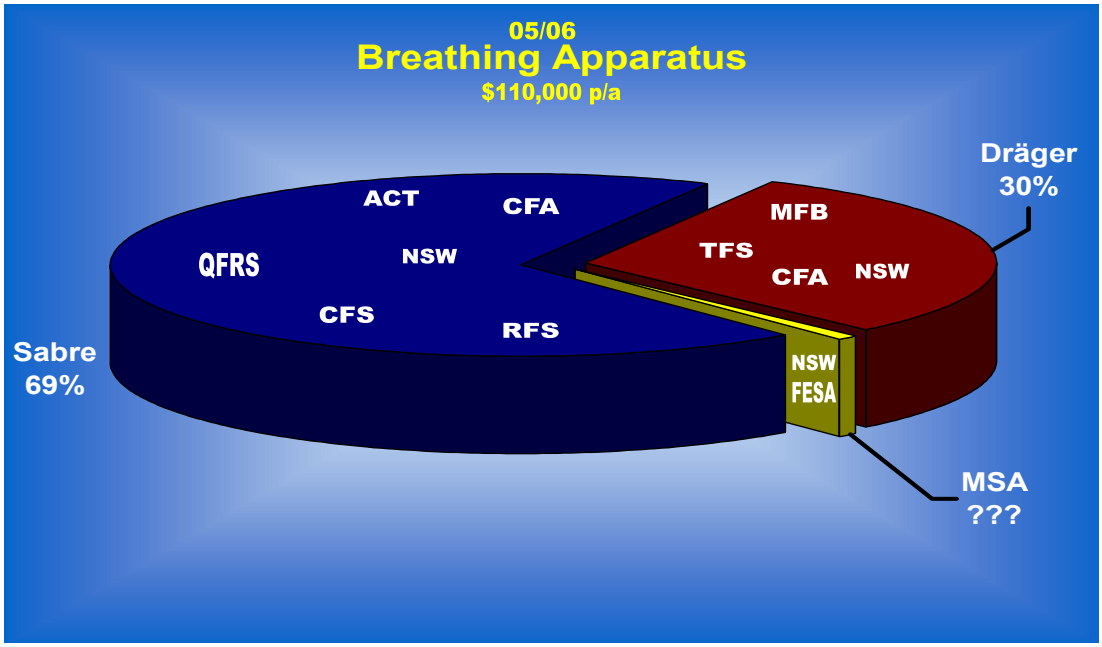
4.2.2 Breathing Apparatus – Full Sets: Back Panel and Face Mask

All of the fire agencies purchase breathing apparatus sets, which again is the back panel and face mask, from just three suppliers: Sabre, Dräger, and MSA. Dräger and Sabre hold most of the market, but it is unknown what percent of the purchases go to MSA, as neither NSW RFS nor FESA WA could give estimated purchases of these items.

While the purchases are similar, the annual quantity is relatively low over the whole Australian market (only $110,000 last year). This is because new technology has almost eliminated the need to buy new BAs. Now BA sets can be maintained and kept as long as needed. Even when an upgraded face mask is developed, it can be exchanged for the existing one in the BA sets. Until a major technological increase renders the current BA sets extinct, the annual purchases will remain low as illustrated in Figure 4-1:[5]

[5] See Breathing Apparatus signed spreadsheets or overall comparative spreadsheets, both found in Appendix C -.

Figure 4-1: BA Sets Spend Data

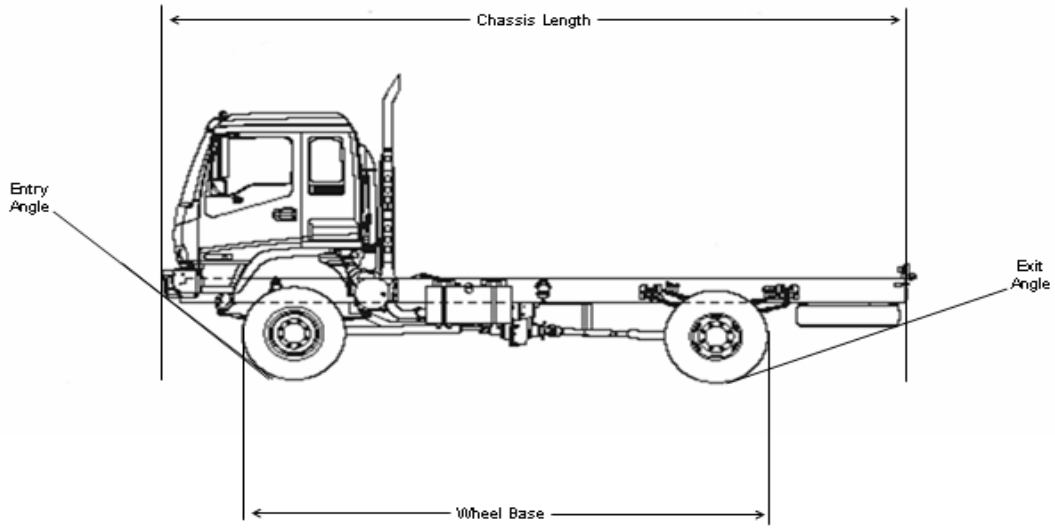


4.2.3 Cab Chassis – Heavy Tankers

Cab chassis for heavy tankers, which accounted for $20,000,000 in purchases last year, is the most costly commodity researched in this project. Of this $20,000,000, 87% went to Isuzu and 13% to Hino. This information is displayed in Figure 4-3.

Because there are few suppliers and a high volume of purchases, bulk purchasing looks promising; agencies would not have to modify what they would need, but they could still take part in bulk purchasing arrangements and see the same cost benefits as other agencies. The ACT would also see greater advantages. For Heavy tankers, the ACT has both Isuzu and Hino chassis and with the small quantities the ACT purchases, they do not currently have the buying leverage. If a bulk purchasing system were developed for this item, the ACT would be able to gain the buying leverage they need.

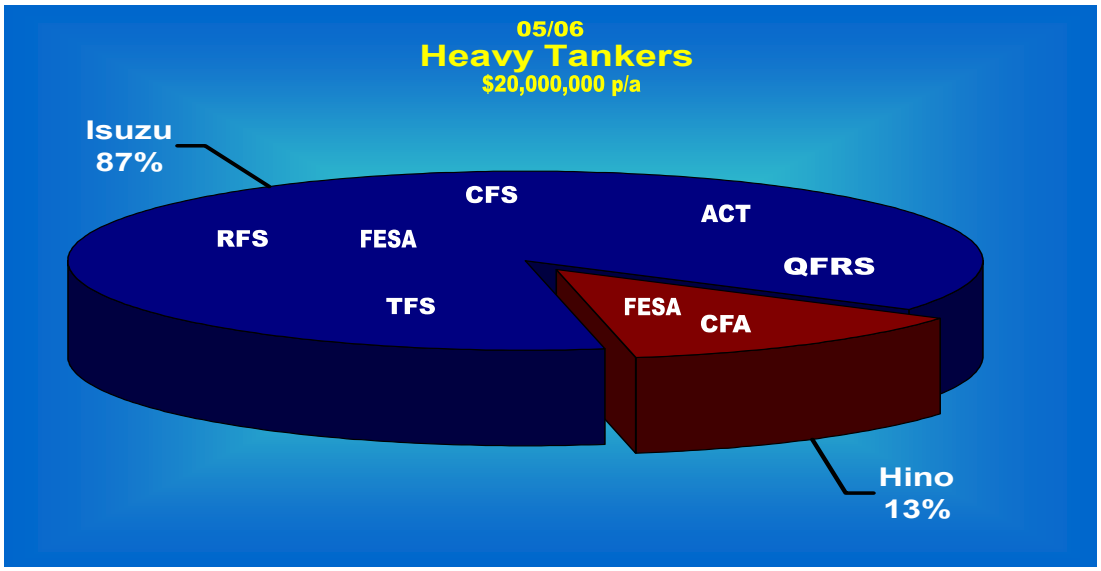
Figure 4-2: Cab Chassis Diagram



While there is a potential for bulk purchasing with cab chassis for heavy tankers, the data also reveals some obstacles. Nearly all of the technical specifications that are required from the manufacturer of the cab chassis are flexible because they can be altered after market. However, several agencies have strict requirements about the minimum entry angles. Since there is no national standard, three agencies buy the standard that suppliers offer, two agencies require a 25° minimum entry angle, and two agencies require a 30° minimum entry angle. Changes to the entry angle require special modifications to be done by the manufacturer before the chassis is shipped, like replacing the suspension with a heavy-duty upgrade. This is not so much an obstacle as it is just something to keep in mind. A national standard would help to correct this variation[6].

[6] See signed data spreadsheets for heavy and light tanker cab chassis or the comparative data spreadsheets for them, which are both in Appendix C -.

Figure 4-3: Heavy Tanker Spend Data

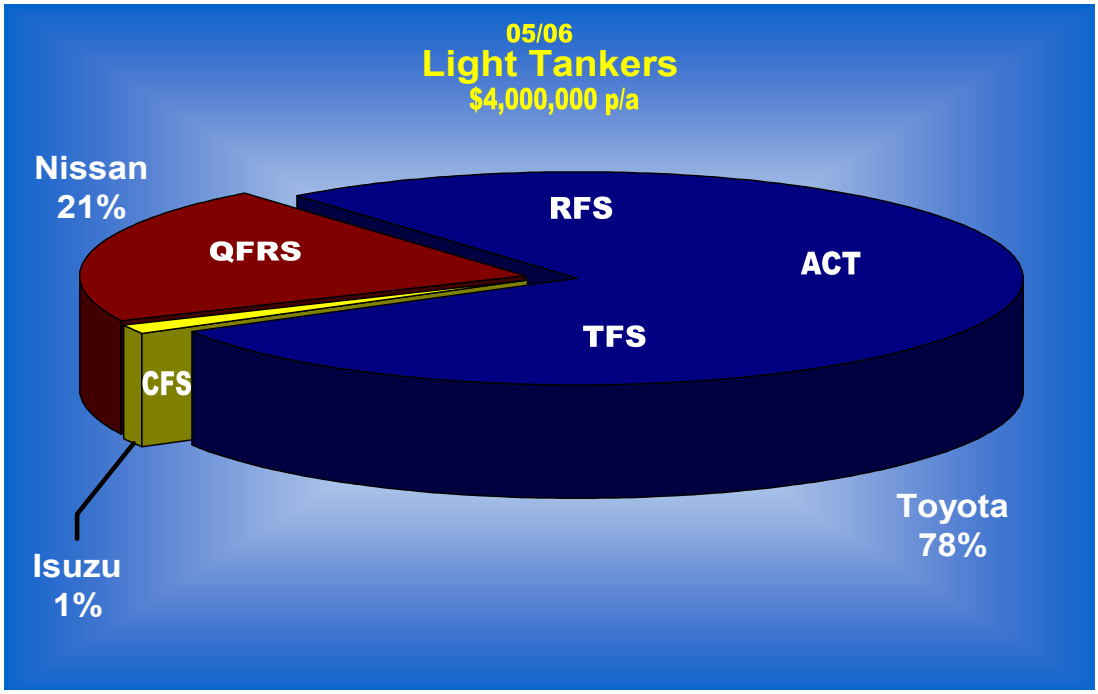


4.2.4 Cab Chassis – Light Tankers

Similar to the heavy tankers, the cab chassis for light tankers have few differences between agencies. There are only three manufacturers that the agencies purchase from, and the technical specifications they require are very similar. The horsepower, chassis length, and exit angle are all negotiable. The minimum entry angle again is an issue. Three agencies accept the manufacturer standard, two agencies require a 25° minimum, and one agency requires a 30° minimum. Again, a national standard would help with this issue. This information is illustrated in Figure 4-4.[7]

[7] See signed data spreadsheets for heavy and light tanker cab chassis or the comparative spreadsheets for them, which are both in Appendix C -.

Figure 4-4: Light Tanker Spend Data

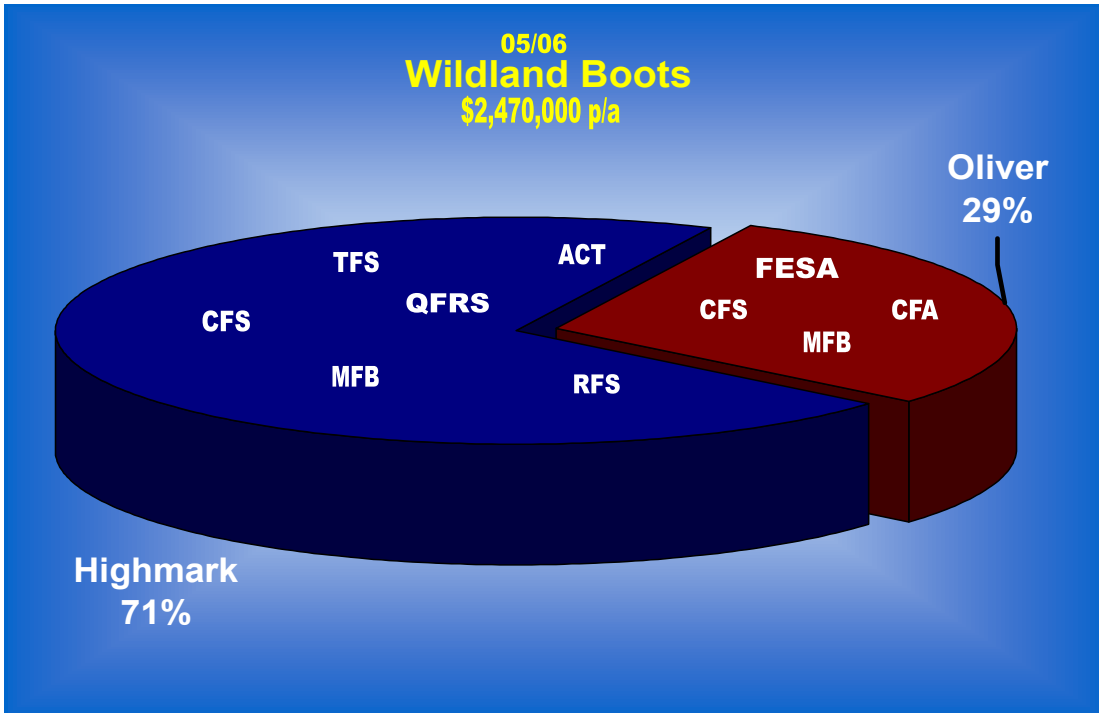


4.2.5 Wildland PPC – Boots

While the products vary slightly, some having side-zippers and others having front zippers, only two manufacturers are used. A contract with a vendor would certainly allow for different models of the same product to be purchased, and therefore there is still a potential for a bulk purchase here. Figure 4-5 below shows the spread of each vendor over the fire agencies in Australia[8].

[8] See signed data spreadsheets for Wildland PPC/PPE or a comparative spreadsheet for them which are both in Appendix C -.

Figure 4-5: Wildland Boots Spend Data



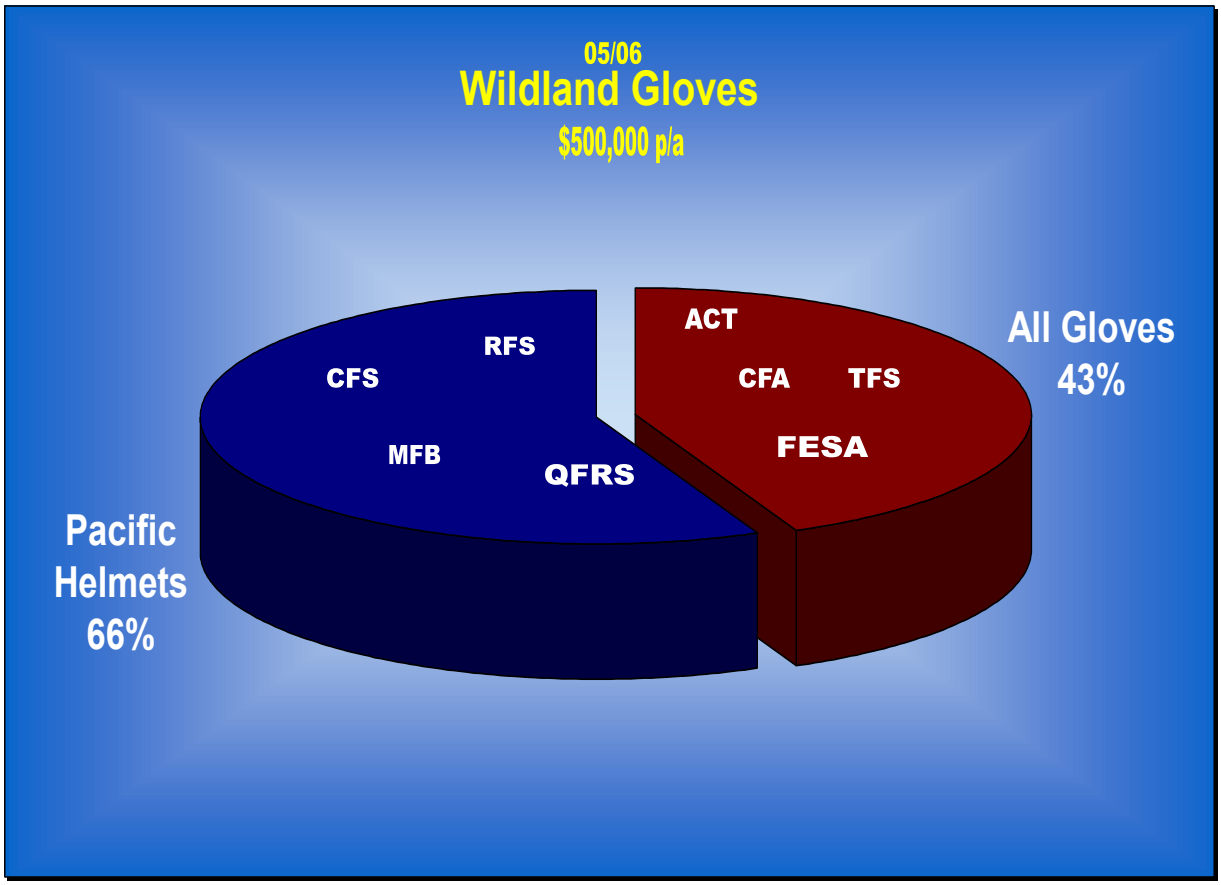
4.2.6 Wildland PPC – Gloves

The wildland gloves are also very similar purchases. The $500,000 spent last year was almost equally distributed between two suppliers. Bulk purchasing here should prove to be worth the effort. This is may be seen in the data illustrated by Figure 4-6, which shows the different companies which sold gloves to the Australian fire agencies in 2005/06.

A comparative spread sheet has been compiled to display the similarities and differences in the purchases of wildland protective gloves between the fire agencies of Australia[9].

[9] See signed data spreadsheets for Wildland PPC/PPE or a comparative spreadsheet for them which are both in Appendix C -.

Figure 4-6: Wildland Gloves Spend Data

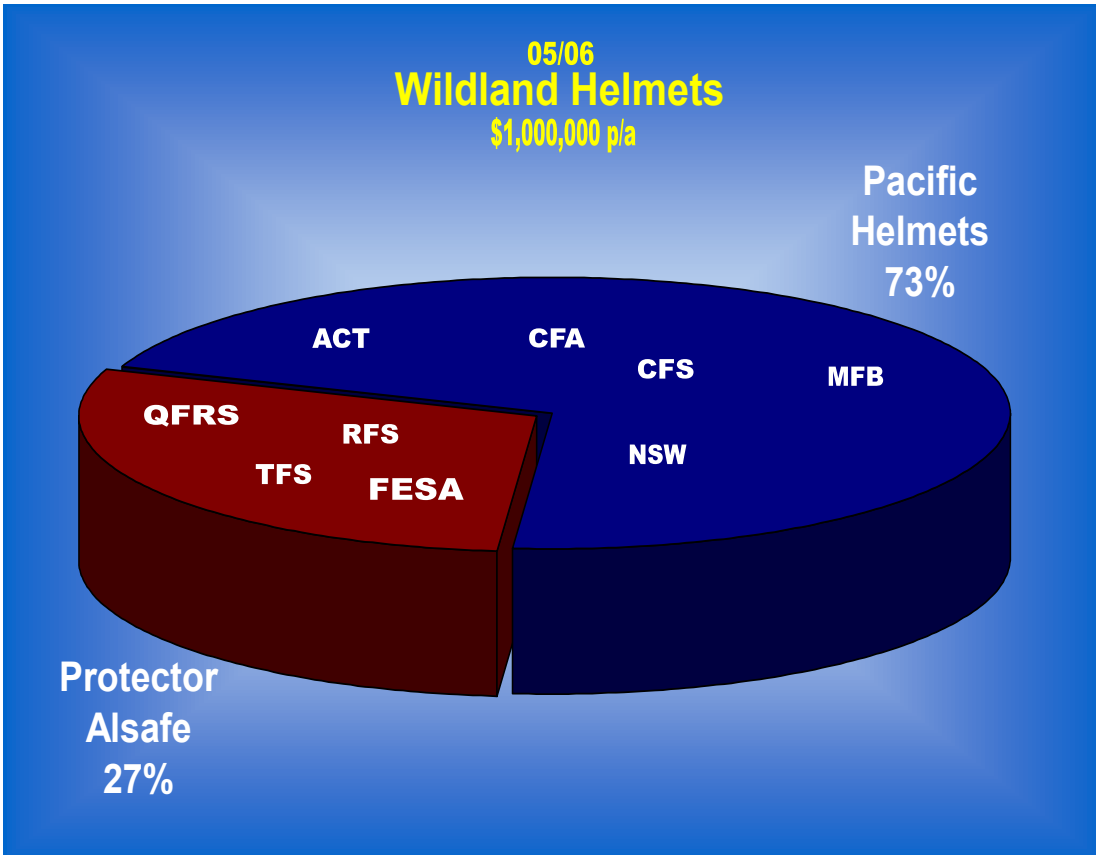


4.2.7 Wildland PPC – Helmets

Last fiscal year the total number of helmets purchased exceeded $1,000,000. Again, the purchases were very similar, and there were only two suppliers. Upon closer inspection, 73% of the helmet purchases and 66% of the glove purchases went to the same company. This can be seen in Figure 4-7[10].

[10]See signed data spreadsheets for Wildland PPC/PPE or a comparative spreadsheet for them which are both in Appendix C -.

Figure 4-7: Wildland Helmets Spend Data

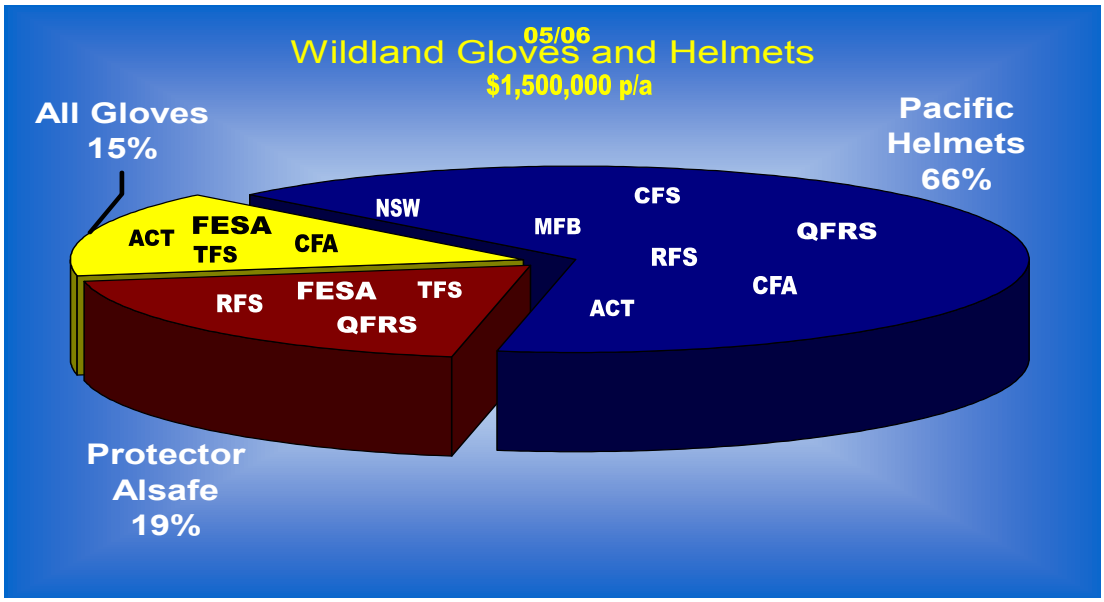


4.2.8 Wildland PPC – Gloves and Helmets Combined

The gloves and helmets which were just looked at are currently purchased on separate tenders, yet for the most part, both are purchased from the same companies (Foster). With 9 agencies there are 15 contracts with only 3 suppliers. The reduction in administrative costs alone should be enough motivation to have 3 central tenders with the 3 suppliers. Figure 4-8 shows this comparison in a pie chart[11].

[11] See signed data spreadsheets for Wildland PPC/PPE or a comparative spreadsheet for them which are both in Appendix C -.

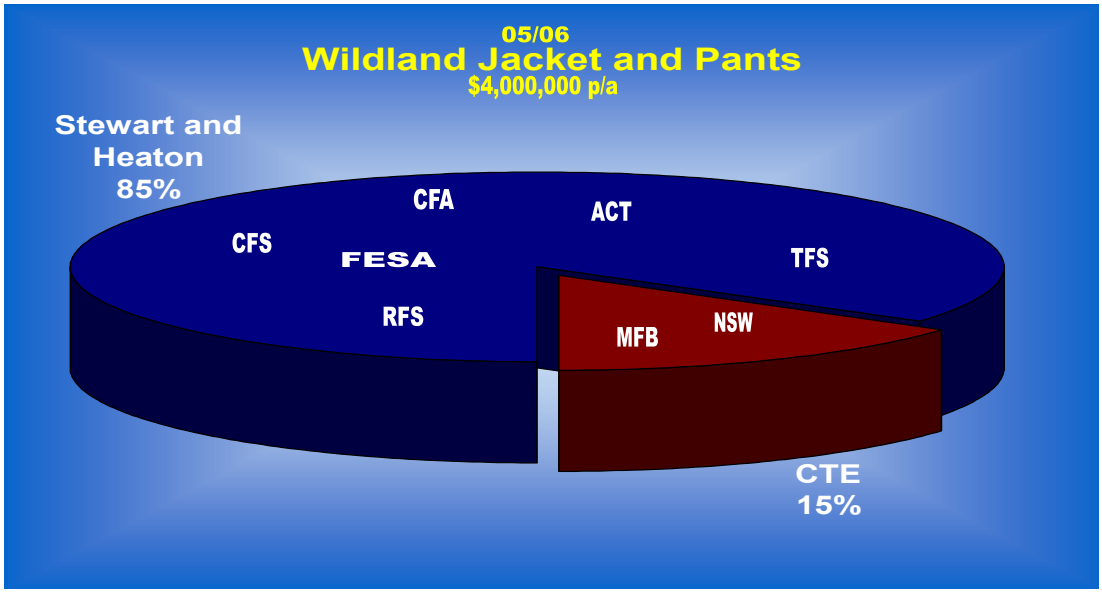
Figure 4-8: Gloves and Helmets Combined



4.2.9 Wildland PPC – Jackets and Pants

The jackets and pants purchased annually represent $4,000,000 of the total budget. All this money is divided between only two suppliers. This is another opportunity to reduce administrative costs and potentially the price per unit by turning eight tenders into two. This is seen in Figure 4-9 [12].

Figure 4-9: Wildland Jackets and Pants Spend Data



[12] See signed data spreadsheets for Wildland PPC/PPE or a comparative spreadsheet for them which are both in Appendix C -.

4.3 Logistical Data Analysis

During the process of interviewing the fire agencies in Australia, certain ideas became apparent; many were common among the different agencies. These ideas, along with the numerical spend data collected, helped to provide a framework to make recommendations off of. The most important logistical information to be analyzed was the following:

- State Procurement Regulations
- Universal Standards
- Firefighter Unions

4.3.1 State Procurement Regulations

Every state and territory in Australia has a board or department that is devoted to designing and implementing procurement policies and procedures for its state. These regulations are enforced mainly to government agencies, but some policies do apply to other organizations to ensure that business is done properly. The purchasing authorities for each state or territory are listed in Table 4-1:

Table 4-1: Purchasing Authorities

State or Territory	Purchasing Authority	Website
ACT	ACT Procurement Solutions	http://www.treasury.act.gov.au/about/organisation/procurement.shtml
New South Wales	Department of Commerce	http://www.dpws.nsw.gov.au/
Queensland	Queensland Purchasing	http://www.qgm.qld.gov.au/
South Australia	State Procurement Board	http://www.spb.sa.gov.au/
Tasmania	Department of Treasury and Finance	http://www.treasury.tas.gov.au/
Victoria	Victorian Government Purchasing Board	http://www.vgpb.vic.gov.au/
Western Australia	Department of Treasury and Finance	http://www.dtf.wa.gov.au/

Even though most fire brigades are government departments, for the most part they have statutory purchasing power. In other words, each agency goes out to tender for themselves, with little input from the government. Sometimes agencies are even above the purchasing laws. According to the Victorian Government Purchasing Board, the CFA and MFB are not bound by law to follow the regulations of the VGPB (Tamburro). A listing of each interviewed agency and a brief summary of their purchasing power and procedures is listed below in Table 4-2.

One of the most important policies to this project is regulations put on interstate purchasing, often referred to as "piggybacking.[13]" Piggybacking is a form of bulk purchasing (Brown), but this project group believes that it is utilized to its fullest. There are many similarities in purchasing, yet there are many opportunities for piggybacking that aren't taken advantage of.

Table 4-2: Fire Agency Purchasing Policy

Agency	Contact	Summary of Purchasing
ACT Emergency Services Authority http://www.esa.act.gov.au/	**Russell Shephard – 02 6207 9543**	**ACT Emergency Services Authority is a statutory authority. For purchases over $50,000 AUD a purchasing plan must be put together and submitted to the state procurement board, ACT Procurement Solutions. For purchases over $100,000 AUD a full tendering process is required, which is prepared by ACT Emergency Services Authority and submitted to the procurement board, who then perform the tendering. ACT ESA does have some say in the process though, they put in recommendations on what suppliers to use and submit technical specifications. (Shephard)** **There are no restrictions on piggybacking, but a select-tender must be signed off by the commissioner of ACT ESA and then approved by the procurement board. (Shephard)**

[13] See Piggybacking on page 57, Section 6.

CFA Victoria **http://www.cfa.vic.gov.au/**	**Mark Connell – 03 9262 8686**	**The CFA is a statutory authority, which uses open-tendering. They follow VGPB guidelines, but are not bound to these laws; they do feel that these laws could become an obstacle when switched their purchasing procedures. According to Nick Tamburro from the VGPB, they are allowed to make their own purchasing guidelines (Tamburro). For major purchases, the board must sign off on the tender. They allow other agencies to piggyback with them. These agencies include TFS and MFB. (Connell)**
FESA Western Australia **http://www.fesa.wa.gov.au/**	**Frank Pasquale – 08 9323 9828**	**FESA is a statutory authority; however, they must follow state guidelines set forth by the Department of Treasury and Finance. They must go on tender for any purchase over $100,000 and must submit an RFQ for any other purchases. According to the policies of the State Supply Commission, piggybacking is not allowed normally by FESA. It prohibits inter-state tenders without use of a premiere level agreement. This agreement is made between the states to make an exception, and so piggybacking is allowable, though difficult to accomplish. (Pasquale)**
MFB Melbourne **http://www.mfbb.vic.gov.au/**	**Elizabeth Bednarski – 03 9665 4367**	**MFB is a statutory authority; they do their own tendering, but have adopted state regulations from the VGPB, which is written in their charter. Open-tendering for purchases over certain prices, where approval is gained from their board. They piggy-back on CFA contracts, but "are not willing to piggyback on other contracts" due to jurisdiction outside of Victoria. (Bednarski)**
NSW Fire Brigades **http://www.nswfb.nsw.gov.au/**	**Ted Mlynarz – 02 9742 7441**	**NSW Fire Brigades is a government department; for purchasing under $150,000 they have full purchasing authority and do their own tendering, as long as it follows the laws of the Department of Commerce. For purchases over $150,000, NSW Fire Brigades gives the technical specifications and terms of contract to the Department of Commerce, who does the tendering for them. NSW Fire Brigades has no say in the process outside of the specifications given. (Mlynarz)** **Other agencies are allowed to**

		piggyback with them once the tendering process has been completed by the Department of Commerce. NSW Fire Brigades can get special permission from the Department of Commerce to piggyback with other agencies for purchases over $150,000, and if it is under they can piggyback with other agencies without permission. (Mlynarz)
NSW Rural Fire Service **http://www.bushfire.nsw.gov.au/**	**Paul Springett – 02 8741 5540**	**They are a government department falling under the Ministry for Emergency Services. They have statutory purchasing power, but the Department of Commerce sets the rules for purchasing; no higher approval necessary outside of agency. If purchase is over $150,000 they must go out to open-tender.** **If they want to piggyback they request from the other agency, in writing, saying they are allowed to do it. There are flexibilities with laws in piggybacking; the other tender does not have to follow their purchasing laws strictly. They must piggyback with NSW Fire Brigades before going on to other agencies. (Springett)**
Queensland Fire and Rescue Service **http://www.fire.qld.gov.au/**	**Albert McLean – 07 3633 6942**	**QFRS is a statutory authority; they go out on the tendering process themselves but must follow certain regulations provided by the state board. The QFRS is headed by a commissioner, who reports to a director-general, who reports to an advisory board. Approval must be gained for purchases over $100,000. (McLean)**
South Australian CFS **http://www.cfs.org.au/**	**Arthur Tindall – 04 1903 4637**	**The CFS is a statutory agency, but is required to follow state laws in the tendering process. Though a bulk purchasing system may be against some state laws, Tindall said there are ways around it. The CFS also piggybacks on other fire services contracts all the time. They can use a pre-existing contracts whenever, as long as the contract is no more than eleven months old. The process of creating a contract is very expensive and the CFS tries to save money on this whenever they can. They use closed-tenders for all purchases, but this does not limit their purchasing power. (Tindall)**

Tasmanian Fire Service **http://www.fire.tas.gov.au/**	**Michael Brown – 03 6230 8608**	**TFS is a government agency which falls under the Department of Health and Human Services. They have treasury guidelines set by the state board; these have to do with tendering. They have full control of purchasing, and only their own board must approve large orders. They piggyback frequently with NSW, Victoria – CFA, South Australia, and Queensland. When piggybacking, they must make sure tender signed follows similar laws to their own. (Brown)**

This compilation of the purchasing policies of different agencies allows for easy comparing and contrasting between them. For example, it is noticeable that most agencies require some type of approval for large purchases (usually over $100,000 - $150,000), though some of these approvals come from within the agency and others must come directly from the state purchasing authority.

Another important point brought up by this comparison is about a state's ability to "piggyback" with other agency's tenders. This is usually done by smaller agencies to gain a better price advantage that the larger agency could possibly possess, but it can be done by any agency. Aside from price advantages from larger orders, "piggybacking" also allows for other price savings as it removes the tender process and often will remove the need for an agency to write their own technical specifications (Brown).

4.3.2 Universal Standards

During the interviews, each agency explained their process for developing technical specifications for each of the commodities; these technical specifications are used to identify what companies will be able to sell their products to that agency. Usually the specifications are decided upon by

a committee of people who meet regularly to discuss changes that must be made. These specifications are usually based upon historical data from previous years, personal preference of the firefighters, and standards provided from different organizations (for example, Australian standards, ISO, European standards, or NFPA standards from the US). Without the presence of an Australian standard, the agencies follow other standards, usually following one of the three other common ones, listed above (Mitchell).

The wildland PPC/PPE is now undergoing a review process to update the existing Australian standards. These standards have proven useful for making the products purchased similar across all of Australia. Some agencies use the current Australian standards (current available standards are listed in Table 4-3), while others take these standards and add to them in order to make their equipment better for their own purposes (Shephard). Even with these additions the overall garments remain very similar.

For cab chassis, the only main requirement is that the chassis comply with Australian Design Rules, which are the standards for any vehicle that can be legally registered for street driving. Other standards followed by agencies are usually the ISO standards, set forth by the International Standards Organization. These standards are common among the agencies, but the standards are often modified by the different fire authorities in order to meet the fire brigade's needs. Often they will add to the standard with historical data; for example, the CFA requires the standard rubber brake lines to be replaced with stainless steel because of the threat of being caught in a fire. This was based off of the events of Ash Wednesday, 16 February 1983,

where firefighters were caught in bushfires and the heat of the fires melted the brake lines, making it impossible for them to retreat (Grech).

The breathing apparatus is another commodity that has a current Australian standard. The most common type of breathing apparatus used by agencies is an open-circuit breathing apparatus. Using mostly one style of breathing apparatus allows agencies to save money because they do not need to have a filling station for many types of BA, and they also do not need to use different testing equipment. Another advantage to using only the open-circuit style is that the technical specifications only need to be written for one type, therefore the agencies can reduce the amount of time and effort put into coming up with the specifications, which could lead to potential cost savings for them. (Tarbett)

On the whole, the fire agencies in Australia agree that universal standards on equipment are extremely difficult to agree on (McCarthy). They attribute this to Australia's diverse climates and landscapes, where one product might not offer enough protection in a cooler climate, but in warmer climates it could cause major exhaustion problems in firefighters. Aside from this setback with the wildland PPC/PPE, differing terrains and landscapes cause problems for a universal cab chassis. The major hindrance is whether to select a four-wheel drive or two-wheel drive chassis, and also sometimes the sizes of chassis can cause problems depending on the area. (Vasta)

Table 4-3: Australian Standards Available (Shephard):

Commodity	Australian Standard(s)
Breathing Apparatus	**AS/NZS 1716**
Cab Chassis	**N/A**
Wildland Protective Boots	**AS/NZS 4821**
Wildland Protective Gloves	**AS 2161.6**
Wildland Protective Helmet	**AS/NZS 1801**
Wildland Protective Jacket	**AS 4824(Int):2001**
Wildland Protective Trousers	**AS 4824(Int):2001**

4.3.3 Firefighter Unions

The United Firefighters Union of Australia is a collection of all of the firefighter unions across Australia. These unions play an important role in the purchasing and technical specifications portions of any tendering process. They are put on technical specification committees to ensure that the needs and requirements of the firefighters are not neglected when designing the specifications (Franklin). Also, the union has the right to veto any purchase tender after it has already been decided upon, if they feel the equipment is not what they want or need (Foster).

These two capabilities of the unions make them a very powerful entity in the overall purchasing process. This concern was addressed in the interviews, although it seemed most agencies do not see the unions as much of a threat to the bulk purchasing project (Foster). All agencies did recognize that union representation was very important for these processes because it keeps the end-users, the firefighters, up to date with what is happening with their equipment, and allows them to see if they are going to be able to use a particular type of product (Franklin).

According to Len Foster, it's would be very important to keep unions in mind when setting up the bulk purchasing system. Creating a national standard must require proper representation from every union to maintain the

good working relationship with unions for the creating of technical specifications (Foster).

5 Recommendations

After reviewing the data and gaining some general knowledge of the purchasing procedures of each fire service, a few recommendations have been decided upon, which will facilitate in the overall bulk purchasing project. All of the commodities show some type of potential for bulk buying, though some have more at the moment than others. This is due, in part, to available national standards and the commodity demand. Other areas that should be addressed are the setting up of a committee to oversee bulk purchasing tenders and to address state procurement policy.

5.1 Pursuit of Commodities

5.1.1 Breathing Apparatus: Air Cylinders

Air cylinders represented more than $670,000 of the 2005/06 budget for all of the Australian fire services annual purchases. Although this is a relatively large amount of money, there are many variables to consider when purchasing an air cylinder. The main three factors are pressure, size, and brand. There are many brands used in Australia, and when the factors of pressure and size are also taken into consideration, it then becomes a confusing situation. It is not recommended that the breathing apparatus air cylinders are considered for bulk purchasing until an agreed specification is reached between all of the agencies.

5.1.2 Breathing Apparatus: Back Panel and Face Mask

The project team believes breathing apparatus would not be a product to currently consider for bulk purchasing. This commodity only accounted for $110,000 of the total annual budget for all the fire services in Australia during the 2005/06 year, therefore there is not much potential to save money in this area. Breathing apparatus have a life span of around ten to fifteen years, and after this period of time, fire services usually update their inventory over the span of a few years. Fire services are not willing to switch their supply of breathing apparatus when it is only in the middle of its life span, as this would require extra training for users and maintenance technicians, wasting money.

The last technological shift in breathing apparatus was about ten years ago. If this happens again, it would be an excellent time to consider a bulk purchase: the change in technology would increase a need for new breathing apparatus, thus driving up sales and creating a possibility to save money with a bulk purchase.

5.1.3 Cab Chassis: Heavy and Light Tankers

Heavy and light tanker cab chassis represented about $24 million in the total annual budget of all the fire services for 2005/06. This is a large amount money and there are many similarities in the different cabs the fire services purchase. For example, 88% of the fire services purchase their heavy tankers from Isuzu and 78% purchase their light tankers from Toyota. Obstacles here include the little differences each fire service requests on the cab chassis; some of these differences include the horsepower, gross vehicle mass, tank capacity, chassis length, and ride height. Since the budget is so big for this commodity the potential for savings is very large and this

opportunity should not be overlooked. The project team believes these obstacles could be easily overcome to produce a successful bulk purchase.

5.1.4 Wildland PPC/PPE: Jackets and Trousers

There is a large opportunity to bulk purchase Wildland PPC/PPE currently. Currently throughout Australia, the wildland jackets and trousers are required to meet the Australian standard, AS 4824. This is a major help in creating a standardized purchase across Australia, and these two commodities alone represented about $4,000,000 of the 2005/06 financial year budget. The wildland jackets and trousers are only purchased from two different manufactures, with 83% of the sales going to Stuart and Heaton. It is clear that bulk purchasing for the wildland jackets and trousers is definitely possible, due largely to the Australian standards that have been put in place. Therefore it is recommended that bulk purchasing be pursued for these.

5.1.5 Wildland PPC/PPE: Boots, Gloves, and Helmets

Approximately 66% of wildland gloves and helmets purchased in Australia are purchased from Pacific, and about 71% of wildland boots are purchased from Highmark. These three commodities together represented almost $4 million of the 2005/06 annual budget over all of the Australian fire services. Australian standards do exist for these commodities, which will make them easier to agree upon for a national bulk purchasing tender. AS/NZS 1801 applies to wildland helmets, AS/NZS 4821 applies to wildland boots, and AS2161.6 applies to the wildland gloves.

Although different agencies do have different requirements, most of these differences are only in colors or other small additions. So again, this is

another great opportunity to be pursued in bulk purchasing, and this project group therefore recommends in doing so.

5.2 Continue Writing National Standards

The fire services in Australia are already following the national standard for wildland PPC/PPE and breathing apparatus. Because of this, they are purchasing almost the same equipment already. This presents a great opportunity for a bulk purchase. If Standards Australia can continue its work with creating national standards, then fire services will gradually use more and more of the same equipment.

At this moment, there is a reluctance to use similar specifications between agencies because no agency wants to change the way that they do things. If Australian standards are available for all commodities, it would greatly strengthen the progress towards national specifications, as agencies would be forced to have identical baselines to create their specifications from.

It is in the opinion of this project group that further efforts need to be made towards creating national Australian standards for cab chassis, and reviewing and updating the current standards for breathing apparatus and wildland PPC/PPE. These standards will facilitate the process for creating a bulk purchasing system because it will eliminate the need to create large committees to create specifications to use for tendering.

5.3 Design Bulk Purchasing Committee

AFAC has already brought the CEOs of the fire services in Australia together, and they have all agreed upon pursuing bulk purchasing. The next

step is to bring the purchasing managers and technical engineers of each fire service together, in order to agree upon the purchase of commodities.

Described earlier in this report is the opportunity that exists for the bulk purchasing of tanker cab chassis[14]. As of now, many fire services are purchasing very similar cab chassis, and this would therefore be a great place to start. Every project needs a place to start, and pursuing just one commodity at first could have a very positive result, creating a chain reaction that could cause agencies to collaborate on other types of purchases in the future.

As a result, it is the recommendation of this project team that the first commodity to be explored is the tanker cab chassis. A bulk purchasing committee might be created to explore the cost savings available when purchasing together. Furthermore, they should begin to develop technical specifications that can be agreed upon by all of the agencies. This committee therefore needs to be made up on purchasing managers and technical experts. If it is not possible to create national specifications at this time due to the absence of Australian standards for cab chassis, then a committee for wildland PPC/PPE should be created instead. The wildland PPC/PPE will not result in as large of cost savings, but could be easier to purchase nationally, as there are pre-existing Australian standards for the wildland PPC/PPE.

5.4 Review Fire Service Purchasing Policies

As part of this research, concerns were identified. Some of the purchasing managers expressed concern about purchasing policies; they

[14] The opportunity and recommendation for heavy tanker cab chassis can be found on page 50, section 5.1.3.

stated that their current policies, some enforced by the state government, would prevent them from purchasing on an out-of-state contract or tender. Further research[15] showed that these purchasing policies were not very threatening to bulk purchasing because there is always a way around them. However, further research needs to be conducted into the purchasing policies of each agency, and also those that are enforced by the state governments.

5.5 Explore Other Commodities

There are other possibilities for bulk purchasing that were not explored during this project work. Other commodities were recommended by various people during the interview process. Potential other products include: fire suppressant foam and aerial appliances.

5.5.1 Fire Suppressant Foam

The recommendation for considering fire suppressant foam came from many different people across Australia. A written recommendation by Richard Donarski[16] was previously made to AFAC, and it highlights the things that need to be accomplished to be able to bulk purchase foam. Foam is almost uniform across every agency, and so the ability to develop a national specification for it would be very simple, as compared to any of the commodities explored during this project. This project group recommends that bulk purchasing of fire suppressant foam be pursued in order to gain potential long-term cost savings. (Donarski, 1)

[15] See Table 4-2 for a complete comparison of agency purchasing policies.
[16] Richard Donarski's written recommendation on the bulk purchase of foam can be found in Appendix A - of this document

5.5.2 Aerial Appliance Cab Chassis

A recommendation for bulk purchasing of aerial appliances was identified during an interview with Neil Bibby. Bibby, CEO of the CFA, said that he saw real potential savings available if Australia bought these vehicles in a combined purchase. The cost of each vehicle exceeds well over $1 million, and Bibby argues that the chassis used by any state or territory is probably very similar. It is consequently a recommendation of this project team that bulk purchasing of aerial appliance cab chassis be pursued by another research team. (Bibby)

5.6 Validation of Collected Data

As mentioned previously in Section 4, the data collected during this project was validated to the best of the project team's ability. Even though this is true, it does leave some room for figures to be slightly inaccurate, especially in areas of prices of commodities. Therefore, it is recommended that further investigation be performed into the data collected during this project, to make sure that it is all completely right.

5.7 Conclusions

The purpose of this project was to collect and collate data from fire agencies in Australia, in order to see if bulk purchasing could be accomplished for breathing apparatus, cab chassis, and wildland PPC/PPE. Based on the collected data, it has been concluded that it is very possible to perform bulk purchasing for these commodities. Currently there is an opportunity to do this with the cab chassis and wildland PPC/PPE, but not for the breathing apparatus. In the future, when agencies are replacing large

amounts of breathing apparatus at once, it will be a good opportunity to use bulk purchasing for them.

6 Glossary

ACT Emergency Services Authority – Australian Capital Territory Emergency Services Authority. Agency responsible for the emergency services in ACT, references in this document are made about the fire services portion. More information available at: http://www.esa.act.gov.au/

AFAC – Australasian Fire Authorities Council. See Australasian Fire Authorities Council.

All Gloves – A small, privately owned manufacturer and supplier of fire protective gloves. All Gloves is based in Western Australia and has no known website. They sell the FirePro series of wildland gloves to many Australian fire agencies. (Banister)

Australasian Fire Authorities Council – Established in 1993, it is a non-profit organization which serves to represent fire and emergency services in the Australasian region. They are based in East Melbourne, Victoria, and more information can be found at their website: http://www.afac.com.au/

BA – Breathing apparatus. See Breathing Apparatus.

Breathing Apparatus – Device which uses compressed air or oxygen in order to supply breathable air to the user.

Bushfire – See Wildfire.

Cab Chassis – A part of a truck which consists of the underlying frame, wheels, engine, power-train, and cab.

CFA – Country Fire Authority Victoria. The CFA is responsible for fire services in the outer metropolitan region of Melbourne as well as the rest of Victoria. Sometimes called CFA Victoria. More information at: http://www.cfa.vic.gov.au/

Closed-Circuit BA – A breathing apparatus which uses compressed oxygen to provide breathable air to the user. It recirculates exhaled gas used when a longer-duration supply of air is needed, such as in mine rescues.

CTE – Australian based manufacturer of protective clothing for safety and industrial applications. Formerly known as Can't Tear 'Em they are now called CTE Pty Ltd. Their website is: http://www.cteppc.com/

FESA WA – Fire and Emergency Services Authority Western Australia. It is responsible for the fire and rescue services provided in Western Australia. Any reference to it in this document usually refers only to the fire agency. Also referred to sometimes as FESA. More information at: http://www.fesa.wa.gov.au/

Dräger – Manufacturer and supplier of breathing apparatus and other safety and emergency equipment; Dräger is based in Germany. It is also sometimes referred to as Drager and Draeger. More information can be found at their website: http://www.draeger.com/

General Services Administration – This American agency is, according to the acting administrator, the "premier acquisition agency" for the United States federal government. More information can be found on their website at: http://www.gsa.gov/

GSA – General Services Administration. See General Services Administration.

Highmark Shoes – An Australian manufacturer and supplier of wildland protective boots, including the Taipan series of fire-protective boots. To find more information visit: http://www.highmark.com.au/

Hino – Japanese based supplier and manufacturer of trucks to the Australian market through their Australian branch, Hino Motor Sales Australia Pty Ltd. Hino is a leader in the medium truck market. More information about Hino can be found at their website: http://www.hino.com.au/

Isuzu – Japanese based major manufacturer and supplier of motor vehicles. The Australian branch is a conglomerate with General Motors (GM), and is a leader in the truck market in Australia. More information can be found at their Australian site: http://www.isuzu.com.au/

MFB – Metropolitan Fire and Emergency Services Board, though commonly referred to as the Metropolitan Fire Brigades. The MFB is responsible for the fire services provided throughout the metropolitan regions of Melbourne. Also known as MFESB or MFB Melbourne. More information at: http://www.mfbb.vic.gov.au/

Mine Safety Appliances Company – American based manufacturer of breathing apparatus, protective clothing, and other safety equipment. They supply to the Australian market through MSA [Aust.] Pty. Ltd. More information can be found at: http://www.msanet.com/

MSA – Mine Safety Appliances Company. See Mine Safety Appliances Company.

National Fire Protection Association – An American non-profit organization that provides international codes and standards, research, training, and education on fire equipment and practices. More information about the NFPA can be found on their website at: http://www.nfpa.org/

NFPA – National Fire Protection Association. See National Fire Protection Association.

Nissan – Major Japanese based manufacturer and supplier of motor vehicles, Nissan sells to the Australian market through Nissan Australia. More

information about the Australian branch can be found at: http://www.nissan.com.au/

NSW Fire Brigades – New South Wales Fire Brigades. Agency responsible for fire services in metropolitan areas of New South Wales, such as Sydney and New Castle. Also referred to as NSWFB. More information at: http://www.nswfb.nsw.gov.au/

NSW Rural Fire Service – New South Wales Rural Fire Service. Agency responsible for providing fire services to the rural, non-metropolitan areas of New South Wales. Sometimes referred to as the RFS. More information at: http://www.bushfire.nsw.gov.au/

OHS – OHS stands for Occupational Health and Safety and this comes from the department of employment and workplace relations from the Australian government Canberra. Their website is: http://www.nohsc.gov.au/

Oliver – Founded in 1887, Oliver is an Australian owned manufacturer and supplier of industrial and safety footwear. More information about Oliver can be found at their website: http://www.oliver.com.au/

Open-Circuit BA – Most common type of breathing apparatus, filled with filtered compressed air. The air is just taken directly from the atmosphere and compressed in a cylinder until it is needed.

Pacific Helmets – A New Zealand based manufacturer and supplier of helmets for many applications, including wildland fires. More information can be found at their website: http://www.pacifichelmets.com/

Piggybacking – A form of bulk purchasing where an agency purchases off another's tender. (Brown)

Protector Alsafe – Australian supplier and manufacturer of safety equipment, such as wildland fire gloves and helmets. Protector Alsafe is a merger from manufacturer Protector and distributor Alsafe. More information can be found at: http://www.protectoralsafe.com.au/

QFRS – Queensland Fire and Rescue Service. Agency in Queensland responsible for fire protection services in urban/metropolitan areas. A separate section of QFRS is the Rural Fire which is responsible for the less populated areas and bush in Queensland. More information at: http://www.fire.qld.gov.au/

Sabre – Manufacturer and supplier of breathing apparatus devices, now owned by the American organization, Tyco. To find out more about Sabre, visit their website: http://www.sabreba.com/

SACFS – South Australian Country Fire Service. See South Australian CFS.

Scania – Scania is a global truck retailer, which sells pumpers to the Australian fire suppression market. Their Australian branch is known as Scania Australia Pty. Ltd. and more information can be found at their website: http://www.scania.com.au/

South Australian CFS – South Australian Country Fire Service. Agency in South Australia responsible for fire protection services in rural areas. Sometimes called SACFS or just CFS. More information at: http://www.cfs.org.au/

Stewart and Heaton – Australian owned supplier of protective apparel for use by fire fighters and other emergency response departments. More information can be found at their website: http://www.shcc.com.au/

SWOT Analysis – Strengths, weaknesses, opportunities, and threats analysis. This is a management tool which looks at the current strengths and weakness of any organization. It then also looks and opportunities and threats of a new project or idea being undertaken by the organization. By examining all of these points, it makes the organization able to use its strong points and improve the things that they do not do well. It also allows the organization to see what benefits they will see from trying a new idea, which then allows them to make a decision on whether or not they should attempt this new idea.

Tasmanian Fire Service – Sometimes called the TFS, this agency is responsible for the fire protection services throughout Tasmanian metropolitan areas. More information at: http://www.fire.tas.gov.au/

Toyota – A major contributor to the motor vehicles market across the globe, Toyota is a Japanese based manufacturer and supplier which sells to the Australian market through Toyota Australia. More information about Toyota Australia can be found at: http://www.toyota.com.au/

Wildfire – A fire which moves rapidly. These usually occur in rural lands, and often during in very hot, dry weather. (http://www.dictionary.com/)

Wildland Fire – See Wildfire.

Wildland PPC/PPE – Wildland Personal Protective Clothing and Equipment. These are pieces of clothing and equipment worn by firefighters during a wildfire. These include: helmet, gloves, boots, pants, and jacket.

Worcester Polytechnic Institute - A university located in Worcester, Massachusetts in the United States of America. It's mostly known for its excellent degree programs in math, science, and engineering; however, it also offers degrees in management, liberal arts, and various other majors. To learn more, visit the school's homepage: http://www.wpi.edu

WPI – Worcester Polytechnic Institute. See Worcester Polytechnic Institute.

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Appendix A - Bulk Purchasing Preliminary Documents

A.1 BULK PURCHASING RESEARCH PROJECT: TERMS OF REFERENCE

Purpose

To provide guidance to AFAC on the implementation of a Bulk Purchasing system for member agencies and propose a methodology for implementation.

SCOPE

Data Collection Phase:

Appoint a research team from WPI Institute USA to access the bulk purchasing process.
Collate logistical data and commence preparatory work to identify significant issues in the following commodities:

Wildland clothing
Cab Chassis
Breathing Apparatus

Assess commodity relevance to agency delivery drivers.
Collate spend data and develop a spend map for the agencies scaled by highest to lowest usage.
Rate the importance (and as a consequence, the priority) of these drivers to the individual agency objectives.

Identification Phase:

Confirm the importance of commodities to each agency.
Review the currency of existing agreements that may limit our ability to implement new arrangements.
Benchmark comparative unit pricing between suppliers.
Identify how the technical compatibility of user requirements is developed eg the NAFC model.
Scope the effort and cost of analysing commodities compared with the expected benefits
Review any existing arrangements between member agencies of joint purchasing or usage of state/territory contracts.
Identify opportunities in other commodity groups.
Finalise the list of identified sourcing opportunities.

Completion of Commodity Demand Analysis:

Assess the impact of agency business drivers and operational requirements.

Review both historic and projected future spends that may highlight important underlying trends. Is demand seasonal or subject to external factors beyond user control.
Identify any likely change in user requirements.
Where assets have an extended lifecycle compile a business process to form a picture of the total lifecycle cost.
Revise the list of identified opportunities to ensure that sourcing efforts will offer sustainable results.

Completion of Commodity Supply Analysis:

Consider the operation of the supply industry. Contact needs to be co-ordinated via the Project Managers.
Consider the competitiveness of the supply industry and identify dominant suppliers.
Analysis of the dominant suppliers and the proportion of the supplier's thru put that the agencies demand potentially may represent.
Identify any likely Intellectual Property issues.
Consider potential areas where suppliers will have a focus on value adding and typically focus on lowest life-cycle cost considerations.

Implementation Methodology:

The Implementation Strategy details the plan that AFAC will employ to source the commodities.
This should communicate to AFAC the potential savings, likely costs, timeline and significant milestones in the sourcing exercise; in particular, highlighting the benefits and limitations associated with these commodities.
It should outline any outstanding technical specification issues and advise how they may be resolved.
It should highlight any risks that may result from the exercise such as a loss of competitiveness in the supply industry, dependency on sole source supplier, logistical issues, etc.
Specifies the tendering process and likely negotiating strategies to be employed including consideration of associated probity issues.
Highlights any future supply management issues that will be recommended.

Membership

Steering Committee

Len Foster, Russell Shephard, Lynette White, Mark Connell, Rob Llewellyn, Peter Whelan and Jonathan Barnett

Project Managers;

Russell Shephard and Lynette White

Research Team

WPI Students (co-ordinated by Jonathan Barnett)

Reporting Arrangements

The Research team will report directly to the Project Managers.
Project Managers to review documents prior to final presentation

The Project Managers will report to the Steering Committee and the Council.

Conduct of Business

The Research Team members will be acting on behalf of AFAC for the purpose of this project as approved by the Council.

Co-Ordination

The Project Managers will be responsible for the co-ordination of the Research Team and provide guidance as required.

Provide list of suppliers and contacts in each of the following agencies :

Country Fire Authority	CFA
Metropolitan Fire & Emergency Services Board	MFB
New South Wales Fire Brigades	NSWFB
NSW Rural Fire Service	NWRFS
Queensland Fire & Rescue Service	QFRS
SA Country Fire Service	CFS
SA Metropolitan Fire Service	SAMFS
Fire & Emergency Services Authority W.A.	FESA
Tasmania Fire Service	TFS

LOGISTICS

AFAC will provide the following for the duration of the project;

use of an office
use of telephones
use of computers
travel arrangements in the form of Melbourne Tram tickets (Zone one monthly ticket)
travel arrangements for the Research Team to carry out on-site investigations in;
- Sydney
- Brisbane

TIMELINES

Preparatory work currently underway
Research Team arrives in Australia 1st week of January 2005.
Commence 5th January in AFAC office
Anticipated duration of project – 7 ½ weeks
Initial report on findings to be presented by Friday 17th January 2006.
Presentation of final outcome to Committee of Management and/or Council members

A.2 Bulk Purchasing SWOT Analysis

A Bulk Purchasing SWOT Analysis

For the Australasian Fire Authorities Council

Daniel Caron

Ryan Lewis

David Pesce

12-Dec-2005

Worcester Polytechnic Institute

In order to help an organization know its full potential, it must first realize all of the things that make it run as well as it does and then other things which need to be improved before expansion can be done effectively. According to Mind Tools' website, the most effective way to do this is to use a SWOT Analysis, which identifies the strengths, weaknesses, opportunities, and threats which an organization is effected by.

By knowing the strengths which an organization has, it is possible to effectively look at the opportunities that this organization may be able to take advantage of. These opportunities might be a result of new technology, a larger budget, or even just a new idea. If the company has enough strengths which coincide with the opportunities it is seeking, then it is very possible that seizing this opportunity will be a smart move for the organization.

Conversely, by knowing the weakness which plagues an organization, the threats of trying a new idea or procedure become very apparent. These threats are going to most likely be major obstacles facing a company, and could mean large problems down the road if things are not handled well at the beginning.

STRENGTHS

- Some collaboration between members already exists in AFAC. For example, Tasmania purchases jointly with South Australia.
- Many companies and organizations around the world currently use bulk purchasing methods. In the Unites States, known entities that collaborate for purchases include: the California Department of Forestry and Fire Protection (fire.ca.gov), General Services Administration (gsa.gov), FedEx (fedex.com), etc. These existing models will help facilitate the development of such a system in Australia.

- The current suppliers of products are located primarily within Australia. Not only does this allow for easier and faster procurement, but it helps to stimulate the local economy.
- All members of AFAC have experience in purchasing. Newer companies and organizations sometimes have a difficult time establishing relationships with sellers. Since the members of AFAC have been purchasing equipment for so long, they have founded first-rate relationships with current vendors and also know what to look for when searching for new vendors.
- AFAC has created a prestigious reputation amongst its members. Many people are reluctant to change; due to AFAC's current reputation, members will be more likely to consider new ideas proposed by AFAC to be beneficial.

WEAKNESSES

- AFAC members purchase primarily individually. Although the products they purchase are similar, they are not entirely interchangeable. In the event of a crisis, lending of equipment between agencies would be hindered.
- AFAC members are purchasing similar products from a wide variety of suppliers. When purchase orders are small, the price of the products is generally higher than for larger orders. If AFAC members purchased together, the larger orders would save everyone money.
- The current needs for product quality are increasing, and are not being met by suppliers. Firefighters are finding the current equipment lacking in performance. There is a need for more robust products, and therefore AFAC members need to explore better suppliers.

OPPORTUNITIES

- The investigation of new suppliers will make more quality products available. This will allow for more effective and safe firefighting, and will also motivate

current suppliers to improve the quality of their products.

- New suppliers in Europe and North America might cost less. Products there will be out of season, therefore lowering demand and dropping prices.
- If the collaboration of the purchasing of the proposed products is deemed successful, more products can be explored for bulk purchasing. This could save organizations even more money, and also make equipment more interchangeable between members of AFAC.
- Collaborative purchases are more effective means of purchasing, which could save members money. Larger purchase orders usually involve cost breaks for buyers, therefore enabling members to purchase more equipment, or simply decrease the strain on their equipment budget. (Monczka)
- By purchasing abroad, AFAC members will help stimulate the global economy.
- Collaborative purchases would build cooperative relationships. According to the Colleges of Worcester Consortium this allows purchasing directors to share valuable information, thus promoting the development of the best purchasing methods.

THREATS

- Current laws governing purchasing may limit the ability to collaborate on purchases because organizations may have conflicting laws.
- Organizations have different means of purchasing equipment which may require them to change their methods of record keeping and distributing paper work. Furthermore, new computer systems will have to be implemented and with this comes the training of employees to use these new computer systems.
- Members of AFAC may already have existing long-term contracts with suppliers and therefore they will not be willing to collaborate on any

purchases.

- Bulk purchasing could potentially take away business from local suppliers. This raises certain ethical concerns pertaining to the local economy.
- Foreign suppliers will require importing of their goods. This will complicate the buying process by slowing down the time it takes to purchase and receive goods. Furthermore, certain taxes may apply to the imported goods, thus limiting the cost effectiveness of using these suppliers.

It can be seen that AFAC possesses many important strengths, which will aid it in future endeavors. These strengths include the pre-existence of collaboration between members, the ability to design based on models of bulk purchasing already in use, the location of their current suppliers, experience in purchasing methods, and a prestigious reputation throughout the fire protection community. The strengths that AFAC has will allow it to easily take advantage of many opportunities which will come as a result of the implementation of a bulk purchasing system. The opportunities which it will see are an increase in quality products from new suppliers, possible price reductions due to purchasing times or from order volume increases, possible addition of more products to the bulk purchasing system, and the sharing of valuable information between purchasing directors for different members.

Although AFAC has many important and unique strengths, it also has weaknesses which prevent it from maximizing its productivity. These weaknesses include the fact that although some pre-existing collaboration exists for purchasing needs, members primarily purchase independently. Also, most of these individual purchases are very similar to others made by different members, which is a poor allocation of resources because it does not allow members to take advantage of price cuts due to high volume orders.

Finally, the needs for better fire fighting equipment are increasing as time progresses and current equipment does not meet specification. There is a need to search out new suppliers who will be able to meet the needs of AFAC.

The weaknesses which AFAC possess are not irreparable, but if they are not handled carefully AFAC might face many obstacles or threats. These threats are the differences between members will cause problems when designing a centralized purchasing authority. Also, any members who have existing contracts with vendors will cause great difficulty in finding new and better suppliers to serve all of AFAC. This also means that new vendors will probably not be local, so the local economy will not have as many orders to fill and so this may have adverse effects on it. In addition, new vendors that are not located locally will require the importing of their goods which will add to the shipping costs and also take more time for orders to arrive.

The needs for a bulk purchasing system to be implemented in AFAC are very clear. This system will be able to help standardize materials and products used by all members, thus allowing them to work together more effectively if a great emergency should arise. But primarily, a bulk purchasing system is aimed at reducing costs of purchases for all AFAC members by buying much more at once than any one member would do individually.

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A.3 Bulk Purchase of Foam Recommendation

Item no: (for AFAC use only)

Item for Decision

Subject: Arrangements for the bulk purchasing of Class A Foam

Background:

Consultation by AFAC with agency personnel shows there is a continuing need for the development of a unified approach to the purchase of Class A foam supplies by agencies, to take advantage of the opportunities for bulk buying (and cost savings) under AFAC's *"Standards: Bulk Purchasing Process"* endorsed by the AFAC Council late last year.

Under this process, a 'Specifications Working Group' will need to be established to develop a 'common specification'.

The 'Specifications Working Group' will need to identify those standards and other features to be included in the 'common specification'.

The output of the activities of the 'Specifications Working Group' will be generic specification with a majority of common features, but which individual agencies can 'tweak' to suit their particular needs.

As with a number of other similar special task groups, the work of the 'Specifications Working Group' will be done by e-mail and teleconference.

Key Issues:

Nomination of a suitable group of persons to comprise the 'Class A Foam Specifications Working Group'. These persons may be required to be drawn from a number of different AFAC Strategy Groups or other specialists within agencies.

Recommendation

A 'Class A Foam Specifications Working Group' be established.

Supporting documentation attached: Not required.

Responsible Officer: Richard Donarski Manager Standards

Home Agency: AFAC

Appendix B - Interviews

B.1 CFA: John McCarthy and Mark Tarbett

Interview with CFA:

John McCarthy
Manager
Protective Equipment Department
Telephone (03) 5278 7066
Facsimile (03) 5278 8457
j.mccarthy@cfa.vic.gov.au

Mark Tarbett
Manager
Finance and Administration
Protective Equipment Department
Telephone (03) 5278 7066
Facsimile (03) 5278 8457
Email m.tarbett@cfa.vic.gov.au

Interview conducted on Monday 9/1/2006
Daniel Caron
Ryan Lewis
David Pesce
11/1/2006

B.1.1 Overview

At the CFA office in Geelong, both John McCarthy and Mark Tarbett spoke about their roles in the purchasing chain for breathing apparatuses. John McCarthy is in charge of purchasing an maintaining protective equipment in all of CFA, which includes breathing apparatus. Mark Tarbett is in charge of the finance department for protective equipment in the CFA. Many issues were discussed, such as the ability and willingness to change to different types of commodities, as well as the structure for purchasing new products and replacement parts.

The main purpose of this interview was to expand the current survey itinerary and to gain experience in the interviewing process. This was successful and many new items and ideas were added to the current list. Some of these items included technological advancements, training for new equipment, and standards used to decide on equipment.

After reviewing the interview it was discovered that additional information is needed. This interview failed to get into detailed specifics in some areas and so a second interview must be scheduled with this CFA office. Some of these areas include the reasons for the allocation of resources (deciding where commodities need to go), the specific standards used by this office, and legislation governing purchasing. This further information will help better differentiate between the various fire services.

B.1.2 Technical Specifications

B.1.2.1 Standards and Practices

The technical specifications that they required were above and beyond the ISO standards (according to them), but it was not discovered which ISO

standards. It was said that an Australian standard has not been written, although one is in the process of being made.

B.1.2.2 Implementation of New Technology

McCarthy and Tarbett both agreed that technology had not changed in almost ten years and they do not see it changing in the near future. They did not describe how these changes are implemented, but they did mention that the awareness of these updates usually comes directly from the manufacturer.

It was discussed when the last major technological advancement in breathing apparatus took place back in 1996. CFA noticed the change in technology and increase safety in 1996 and therefore started purchasing the new generation of breathing apparatus.

B.1.2.3 Suppliers

They purchase breathing apparatus with two different suppliers: Sabre and Dräger. Dräger is an Australian based company and Sabre is an Australian based company but they were recently bought out by American based Scott so changes in the company's infrastructure are foreseen in the near future.

At this point they see no need to add more suppliers into their purchasing. However, they were not opposed to the loss of either supplier if a better one were to be found. It is unclear how they select these suppliers.

B.1.3 Budget

B.1.3.1 Allocation of Resources

Funding comes from two places: about 25% from government agencies and 75% from insurance companies. Roughly 11-12% of their budget goes to the purchasing and maintenance of breathing apparatuses.

The commodities that the CFA owns are distributed out to the smaller agencies across Victoria using a rating system (1-5). These ratings change every year (potentially, they have not changed them recently), and are based mostly on weather patterns and previous data about fire needs in that area.

It is unclear specifically how these ratings are developed. Further analysis of this must be conducted.

B.1.3.2 Quantity Purchased and Decommissioned

There are approximately 2100 breathing apparatuses in stock, with a growth rate of about 100 per year.

These apparatuses have a depreciation of so many per year, although at this time this number is not known. The life of a breathing apparatus is between ten and twelve years, but with the annual refurbishing they last much longer.

B.1.4 Purchasing

B.1.4.1 Procedure

Purchasing is done in small quantities annually. As mentioned, about 100 new units per year are purchased. They felt that purchasing equipment in bulk would not necessarily lower the total cost of a single product. John McCarthy alluded to the fact that he had prior experience with this from other fire services he has observed.

The purchasing of replacement parts for maintenance is done on a continuous, near daily basis. In the initial contract there is an opportunity for fire services to procure these maintenance parts at a discounted price if they purchase a large number of units. It is done as needed by the department. This maintenance is done in their facility in Geelong for smaller items such as breathing apparatuses, but for larger items that are impractical to ship, they send people out to do the repairs on site.

B.1.4.2 Terms of Agreement

There are no existing long-term contracts, and in order to maintain competitive prices they purchase from both suppliers at the same time. They feel that two contracts are enough in order to resist creating a monopoly and still keep prices marginal. These contracts are both short term and non-binding so there are no obligations to either company.

Both McCarthy and Tarbett agreed that by instituting longer contracts with suppliers, it gives the supplier more of an ability to increase prices because it creates a reliance on them. Hypothetically, if the CFA was to limit themselves to one supplier then other suppliers could choose to pull out of the Australian market and this was not something McCarthy and Tarbett wanted. Plus, if the CFA was limited to one supplier then that one supplier could raise prices and the CFA could not do much to protect themselves, as they have no where else to purchase equipment.

B.1.4.3 Legal Obligations

Contracts with suppliers are governed by legislation that states that the CFA must use Australian vendors before using international vendors if

possible. At this time it is unclear specifically how these ratings are developed. Further analysis of this must be conducted.

B.1.5 Effects on Fire Service

B.1.5.1 Training

Currently there is constant training of firefighters to keep them up to date on proper use of equipment. Slight changes occur all the time and are assimilated into the fire brigade as they present themselves.

McCarthy and Tarbett expressed concern for the costs of retraining all of their fire fighters if a new product is introduced to their agency. However this concern is minimal in the opinion of this research group as it would most likely be a slow, phase transition to a new product over a number of years.

B.1.5.2 Union Issues

No union issues were discussed at this time.

B.1.5.3 Reluctance to Change

There would be little to no reluctance to change equipment by fire fighters as long as proper training was to be done. Also it was said that there would be a big demand for a change in equipment if it were safer or better in any way to the existing commodities used.

B.2 CFA: Shane Franklin and John Grech

Interview with CFA:

John Grech
Manager
Engineering Services
Telephone (03) 9262 8391
Facsimile (03) 9262 8631
Email j.grech@cfa.vic.gov.au

Shane Franklin
Manager Contracts & Procurement
Telephone (03) 9262 8288
Facsimile (03) 9262 8533
Email s.franklin@cfa.vic.gov.au

Interview conducted on Thursday, 12/1/2006
Daniel Caron
Ryan Lewis
David Pesce
12/1/2006

B.2.1 Overview

At the CFA office in Burwood East, John Grech and Shane Franklin participated in an interview explaining their roles in the purchasing chain for cab chassis. Grech is a member of the committee to make and review technical specifications for cab chassis, as well engineer responsible for making sure venders meet those requirements. Franklin is the manager of contracts and procurement for all commodity purchases, and is responsible for the terms of the contracts with vendors.

The main purpose of this interview was to create a survey itinerary and to learn the purchasing methods of cab chassis. The interview process was much longer than expected (nearly 90 minutes), but was much more informative than the previous interview.

B.2.2 Technical Specifications

B.2.2.1 Standards and Practices

All manufacturers are required by law to meet the minimum ADR rules and Australian government regulations.

CFA purchases of cab chassis are governed by a CFA committee which forms regularly. The standards are decided upon based on historic performance data and user preferences. Also, as the urban areas begin to spread into rural lands, the needs of the fire troops change, as do the standards set by the committee.

The CFA standards are higher than the government regulated standards, causing manufacturers to customize vehicles to meet the CFA's

requirements. This has not been an issue, as the current manufacturers work with the CFA to meet all of there needs.

B.2.2.2 Implementation of New Technology

Historically, the past 20 years has brought little technology changes in cab chassis. In the near future, the “tank of the future” will be available for purchase, which Grech and Franklin seem enthused about. The details of the new tank are currently unavailable, but more research will be done on behalf of this project group.

When newer technologies develop with cab chassis, the CFA takes the time to compare all the new technical specifications with current ones. A cost benefit analysis is done, and if the new technology seems better than the current chassis, a small amount are purchased as a trial to determine if the investment into the new technology will benefit the fire troops.

At the moment, the CFA purchased one chassis from Mack as a trial to test for its reliability.

B.2.3 Suppliers

The main two suppliers of chassis are Hino and Isuzu. As the Australian market grows, more suppliers are entering the market. With the added competition and the added options available to the CFA, the list of suppliers can be expanded. Even now, the CFA is testing Mack as a possible supplier.

B.2.4 Budget

B.2.4.1 Allocation of Resources

Funding comes from two places: about 25% from government agencies and 75% from insurance agencies. Roughly 8.2% of their budget accounts to the purchasing and maintenance of the cab chassis.

The risk assessment of topography and types of risks determined the resources needed in each area. This assessment also takes into account the historical statistics of fires in each area. Once the amount of resources is determined, the chassis are purchased and given to each area.

B.2.4.2 Quantity Purchased and Decommissioned

The CFA owns 2500 trucks, each having a life of around 20 years with regularly scheduled maintenance. This maintenance is internal, with the parts available from the manufacturers as per a condition in the contract with the suppliers.

The number of chassis owned by the CFA is changing at the moment. The heavy tankers, currently with 635 in stock, are being increased to 668. The medium tankers are being decreased from 620 to 476. The light tankers are being increased from 15 to 58. Also, the number of pumpers is changing. Heavy pumpers will increase from 12 to 31. Medium pumpers will increase from 98 to 125. Light pumpers will decrease from 129 to 21. The new numbers are based on the needs of firefighters, which is changing as urban areas spread across Victoria. This change is scheduled to take place gradually over the next few years.

As the chassis are depreciated over the years, 60 tankers and 10 pumpers are replaced every year.

B.2.5 Purchasing

B.2.5.1 Procedure

Grech, as a member of the committee to set the technical requirements of the cab chassis, is also responsible for finding venders capable of fulfilling those needs.

Franklin is in charge of agreeing with the venders on the terms of the contract. He is also responsible for making sure all the needs for maintenance are fulfilled as well. The purchasing needs are investigated as the existing contracts expire.

B.2.5.2 Terms of Agreement

The CFA is currently in binding contracts with both Hino and Isuzu. The contracts that they form are generally 6-12 month tenders, but Grech and Franklin would like to see an increase to 3-5 years.

B.2.5.3 Legal Obligations

Victorian Industry Participation Policy dictates the laws governing purchasing. Information can be found at ***www.vgpb.vic.gov.au***. Currently there are no chassis manufactured within Australia, making any laws concerning domestic purchasing versus international purchasing not applicable.

B.2.6 Effects on Fire Service

B.2.6.1 Training

The only training necessary would be to the maintenance technicians. This would be of low cost and low burden on the CFA, due to the fact that chassis manufacturers are beginning to make more and more similar products, as far as maintenance is concerned.

B.2.6.2 Union Issues

No union issues were discussed at this time.

B.2.6.3 Reluctance to Change

Both Franklin and Grech feel that there would be no reluctance to change current equipment, as long as the new equipment was of equal or better quality to the existing.

B.3 CFA: Neil Bibby

Interview with CFA Fire Brigades:

Neil Bibby
Chief Executive Officer
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Interview conducted on Monday 12/1/2006
Daniel Caron
Ryan Lewis
David Pesce
01/02/2006

B.3.1 Overview

In this interview, Neil Bibby provided a large scope concept of how the CFA functions. More importantly, he discussed his thoughts on the potentials of the bulk purchasing arrangements. Overall, Bibby was enthusiastic about this project, obviously seeing the potential cost savings involved.

B.3.2 Organizational Structure

Neil Bibby, CEO, reports directly to the board of directors above him. Usual he and the board are working towards the same goals without disagreement, and it is unfortunate when this doesn't happen.

B.3.3 Budget

The entire budget for the CFA is approximately $250,000,000 per year. Across all of Australia, the entire truck purchases account for $200,000,000 annually. At the CFA, the annual truck purchases add up to $18,000,000.

B.3.4 Bulk Purchasing Opportunities

According to Bibby, Australia only makes up around 1% of the global market for fire trucks. With this in mind, European suppliers do not see pursuing the Australian market as being profitable. If a bulk purchasing system were to be used, it would attract more suppliers, bringing better equipment at competitive prices.

In addition, aerial trucks are vast purchases, costing upwards of $1,000,000 per truck. Agencies usually only purchase one a year, depending on the year, so the market is very small. If aerial trucks were considered for

bulk buys, major benefits would be seen, included more suppliers entering the market and lower prices.

B.4 QFRS: John Dodd, Sharon Clark, Andrew Vasta, Malcolm Smith, and Ian Mitchell

Interview with the Queensland Fire and Rescue Service:

Ian Mitchell
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Malcolm Smith
Technical Consultant fleet
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Interview conducted on Friday 13/1/2006
Daniel Caron
Ryan Lewis
David Pesce
18/1/2006

B.4.1 Overview

Five people were interviewed at the QFRS headquarters in Kedron, Queensland. Ian Mitchell, who is second in command of all purchasing, was also head of the committee to decide the technical specifications of different commodities. John Dodd was in charge of overseeing the research on breathing apparatuses and helps to decides on their equipment standards for the breathing apparatus. Sharon Clark and Andrew Vasta investigate the necessities of Wildland PPC's and make their recommendations to the managers, who have the final say in purchases. Vasta also does this for cab chassis, along with Malcolm Smith.

Unfortunately, Albert McLean, the head of research and development for breathing apparatuses, cab chassis, and wildland PPC's, could not attend the meeting as he has been on sick leave for quite some time. Clark and Vasta are filling in for McLean's responsibilities, and McLean would have certainly been able to provide the best answers to the interview questions, according to Dodd and Clark.

Many questions still remain, including who actually makes the decisions regarding the contracts. All of the previous agencies that have been interviewed are separate entities, meaning they did not require permission to sign contracts. The QFRS, on the other hand, is part of a larger government organization, the Department of Emergency Services, and therefore may not have the final say on their contracts. If a bulk purchasing system were to be implemented, the QFRS may need to seek permission from higher authorities before doing so. This may prove to be an obstacle.

Unfortunately, the actual chain of command is still unknown, so further questions remain.

B.4.2 Technical Specifications

B.4.2.1 Standards and Practices

To agree upon the technical specifications regarding breathing apparatuses and cab chassis, committees are formed which contain high-level management, research and development employees, union representatives, and end users. These committees meet regularly to discuss how the current equipment is performing, as well debate the need for higher standards.

In order to decide upon the requirements for wildland PPC's the PPE Advisory Committee was formed in a similar fashion to the committees for breathing apparatuses and cab chassis. The AS standards are a baseline that this committee builds upon to meet their own needs.

B.4.2.2 Implementation of New Technology

Albert McLean is responsible for most of the research regarding new technologies for all commodities. In addition to that, there is a clause in all tenders that venders are responsible for bringing new advances to the attention of the agency. It is also standard practice for member agencies of AFAC to work together and share information with each other regarding equipment.

When the decision is made to upgrade, the changes usually take place gradually. Breathing apparatuses haven't changed in 10 years, PPC's were updated 5 years ago, and new styles of cab chassis have been added to the

inventory on trial basis, before being slowly phased in. As a general rule involving technology advancements, the QFRS is reluctant to make any changes until the reliance of the new products has already been seen. As a result, they usually wait a year before asking other agencies how the equipment is performing before trying it for themselves.

B.4.3 Suppliers

Currently, all breathing apparatuses are Sabre products, purchased through Chubb. The cab chassis are purchased from Isuzu, Mercedes, Mitsubishi, and Scandia. As for wildland PPC's, the current supplier is ADA, although Stuart & Heaton is usually a strong consideration in the purchasing process.

B.4.4 Budget

B.4.4.1 Allocation of Resources

The overall budget is funded nearly 85% by state-wide property taxes paid by house-owners. The rest of the budget is provided by state and federal funding. This money is then divided amongst the different regions of Queensland, based on their needs and fire risks, giving each region its own local budget. The central power of the QFRS assembles purchasing "agreements," which are not properly defined at this moment. Each region can purchase breathing apparatuses and wildland PPC's from the central "agreement" with suppliers from their own budget.

The maintenance for these products is performed and funded by the QFRS central office.

Rural tankers, as well as all trucks, are allocated differently. The funding comes out of the central budget and is considered a capital expense. The cab chassis are purchased, pumps and tanks are installed, and the finished truck is then given to regions, based on the needs of the region. Each region is then in charge of maintenance and depreciation on the trucks. When the truck is due to be retired, the central QFRS office takes the truck back, replacing it with a brand new truck. The old ones are then scrapped or sold.

In addition to this process, local regions are permitted to raise the money to purchase trucks for themselves. These trucks must conform to the technical specifications set by the QFRS, but once purchased, are the sole responsibly of the region.

B.4.4.2 Quantity Purchased and Decommissioned

Currently, there are approximately 50,000 permanent, auxiliary, and volunteer firefighters with the QFRS, supporting 275 stations. The total number of breathing apparatuses is 1500, with 5000 carbon fiber cylinders. The cylinders last 15 years before they must be replaced, but with valves failing and tank damage, they are gradually scrapped over the years anyway. The breathing apparatuses have an annual maintenance program, with a large rebuild after 6 years and a nearly complete rebuild after 12 years. With this schedule, breathing apparatuses last forever, and are only decommissioned as new technology makes them obsolete.

With 50,000 firefighters, each needing 2 complete sets of wildland gear, there are a total of about 100,000 PPC's. The price of these suits is a mere $108, making maintenance unnecessary, except for dry-cleaning as

needed. Damaged suits are replaced, and the overall quantity is only changed as the number of firefighters change.

The number of trucks owned by the QFRS is constantly changing as the urban areas stretch into the rural areas and the needs of the trucks change. Each truck used to last 20 years, but it is being reduced to 15 years.

B.4.5 Purchasing

B.4.5.1 Procedure

Purchasing agreements are all settled centrally. Each region must purchase from these agreements with their own budget to meet their own needs

The agreements begin with a request for tender (RFT), or a submission of the technical specifications by the QFRS. Suppliers then examine the specifications and offer terms of maintenance, price, and other details the QFRS would want out of a contract.

All of the responses that the QFRS receives are then evaluated by a committee of technical engineers and upper management. Each supplier *must* meet all of the technical specifications requested or it will be removed from the list. The remaining suppliers are then organized by historical performance, with the least reliable thrown out. Finally, the remaining are ranked by price and other terms given by the supplier. One is decided upon, and an agreement of terms is reached between supplier and customer.

B.4.5.2 Terms of Agreement

Once agreements are reached, prices and terms are set for 2-3 years. This agreement does not legally bind the QFRS to purchase through this

supplier; however, they will always buy from these agreements as it is bad business practice not to. If the agreement is working well for both parties, it can be extended a year at a time for up to 5 years.

B.4.5.3 Legal Obligations

The only law that governs the purchases of the QFRS states that no purchasing agreement can last more than 5 years without putting out another RFT. This explains why agreements start off lasting 2-3 years and can only be extended to 5 years.

Although no law actually requires the QFRS to do so, it is common practice to purchase locally whenever possible to stimulate the local economy. This is unlike Victoria which enforces this practice.

B.4.6 Effects on Fire Service

B.4.6.1 Training

Skills maintenance for breathing apparatuses are regionally controlled, with classes every 8-12 weeks. With substantial changes, such as with the major technology change 10 years ago, manufacturers help with the initial training.

Maintenance technicians for the trucks are trained regularly, with large, annual training programs to keep everyone up to date.

When equipment with the wildland PPC's changes, a small amount of training takes place. Unfortunately, volunteer firefighters sometimes refuse to train. The QFRS has since enacted a program forcing volunteers to pass a basic standards test. Once they pass the basic tests, volunteers are never required to pass anymore tests.

B.4.6.2 Union Issues

There are little union issues with the QFRS as union representatives are involved in most of the purchasing methods. Because they work together with the common interest of firefighter safety, there are few disagreements between them.

B.4.6.3 Reluctance to Change

The landscape of Queensland requires a different approach to firefighting than as seen in most states. With a large area of rural lands, there is a need for many volunteer firefighters to defend their own neighborhoods. Permanent and auxiliary firefighters are easy to train on new equipment and they always approve of added features. Volunteers, on the other hand, are very stubborn when it comes to change. For instance, some are still fighting fires in their grandfather's wool jacket. There is little motivation for them to change anything they do, and any upgrades would be met with much resistance.

B.5 NSW Fire Brigades: Ted Mlynarz and Hans Bootsma

Interview with NSW Fire Brigades:

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Interview conducted on Monday 16/1/2006
Daniel Caron
Ryan Lewis
David Pesce
18/1/2006

B.5.1 Overview

At the New South Whales (NSW) Fire Brigades office in Greenacre, a suburb of Sydney, NSW we met Ted Mlynarz and Hans Bootsma. Ted Mlynarz is the assistant director of contracts and supply and Hans Bootsma is in charge of purchasing and maintaining protective equipment and fire trucks for the NSW Fire Brigades.

The purpose of this interview was to put the interview itinerary into practice and also get some feedback toward the interview process in order to improve upon it. An added bonus of the trip included a tour of the site which boasted the largest fire truck maintenance facility in Australia. The tour offered specific details about the products being dealt with in this project.

After reviewing the interview it was discovered that additional information is needed. This interview failed to get into detailed specifics in some areas and so a second interview which can be conducted over the phone or through email must take place. Some of these areas include the specific prices for products and more detailed information on the purchasing process. This further information will help better differentiate between the various fire services.

B.5.2 Technical Specifications

B.5.2.1 Standards and Practices

Before going out on tender the NSW Fire Brigades first decides on technical specifications setting up a functional requirement. To do this, they look at various standards such as Australian fire standards and other international standards such as the NFPA and ISO if needed. They

addressed required areas that include Australian Design Rules and Occupational Health and Safety laws. When they make their functional requirement they do not look toward other fire services standards and specifications, instead they only address their own needs and avoid collaboration with others in this area of business. Major functional requirements include safety and cost.

Once they have their functional requirement they go to the marketplace and find the best supplier that suits their requirement. One area that was emphasized was that they include their own electrical standards when they go out on tender because they feel this is a concern of the highest degree with respect to safety.

B.5.2.2 Implementation of New Technology

To stay up to date with technology the NSW Fire Brigades attend trade shows and invite suppliers to their offices to do demonstrations. They also receive countless magazines and are always updated when new technology comes about in the marketplace. Even though they have their own way of practicing business they do look compare products with other fire services.

B.5.3 Suppliers

To acquire suppliers the NSW Fire Brigades deliberate over a few items. Compatibility of pre-existing equipment is very important to them in that if they purchase equipment that is incompatible with their other equipment then it could cost them and immense amount of money to upgrade all their other items. Most important is that they choose their suppliers that best meet their functional requirements.

For breathing apparatus, the NSW Fire Brigades use 3 suppliers and they are MSA, Dräger, and Sabre. They perform all the maintenance for breathing apparatus within the organization and there are facilities scattered throughout NSW. For wildland clothing NSW Fire Brigades use CTE only. They pay CTE for dry-cleaning and any other repairs needed for any type of clothing. The same goes for their fire trucks. They emphasized the "turnkey" method that they have been practicing for a few years. Instead of purchasing the cab chassis and then building the back on it, they instead pay a vendor to do all of this for them. They are active in choosing the cab chassis and all the other components of the truck, but when they receive a fire truck it completely finished, hence the "turnkey" approach. Furthermore, they do not do any of their own maintenance instead they send the truck back to where they bought it from when repairs are needed. Even though they do not deal directly with these manufactures the main three cab chassis in their fleet are Isuzu, Scania, and Valley Commanders.

B.5.4 Budget

B.5.4.1 Allocation of Resources

To determine where to tactically place each of their resources, the NSW Fire Brigades have a Strategy Planning Department. This department takes into account many factors, such as risk analysis, which looks at all regions in the state and assess where fires will be most prevalent. They also take into account where previous fires have occurred in order to prevent fires from starting in those same places. The Strategy Planning Department performs constant analysis and is always searching for new ways to best place their equipment.

B.5.5 Quantity Purchased & Decommissioned per Year

There are approximately 3,500 breathing apparatus, 900 trucks (eighteen of which are rural tankers), and 13,000 PPC's in stock in the NSW Fire Brigades. These numbers seem a bit illusory so an email will be sent to the NSW Fire Brigades confirming this fact. Bush fire jackets usually have a life span of about 5 years or longer depending upon the wear and tear. Breathing apparatus can last forever if the necessary upgrades and maintenance is performed but the NSW Fire Brigades choose to replace their breathing apparatus every ten years. Fire trucks usually last about fifteen to twenty years and about one fire truck per week is decommissioned and replaced by a new one.

B.5.6 Purchasing

B.5.6.1 Procedure

The basic procedure for purchasing within the NSW Fire Brigades is they develop a functional requirement as described above that can include their own standards and other national and international standards. For the most part the functional requirement is based on their current needs and Mlynarz and Bootsma suggested that the state of NSW has different needs then other states in Australia. Once they have the functional requirement, they survey the market and look to go out on tender with the best supplier that meets their requirement. Much like other fire services, purchasing is done in small quantities. Whole units and maintenance parts are shipped almost daily and usually never come in bulk quantities.

B.5.6.2 Terms of Agreement

One constant is that all of their tenders are five years. They believe five years is long enough to develop a strong relationship with the manufacture and at the same time short enough so they are not bound to the same supplier for too long of a period. Ted Mlynarz was looking to extend tenders past five years he will be further contacted by the authors to better understand his reasoning for this. Other than the five year constant length of the contract the NSW Fire Brigades do not follow any other restrictions when they go out on tender.

B.5.7 Effects on Fire Service

B.5.7.1 Training

Like many other fire services the NSW Fire Brigades constantly train their firefighters. They do this with two training centers, one major training college, and two semi-trailers that travel the country side in NSW. Every time a new truck is delivered the firefighters at that particular fire station are trained to the specifics on that new truck. Ted Mlynarz and Hans Bootsma expressed great concern about the introduction of new equipment into the NSW Fire Brigades because of the amount of training that would have to occur.

B.5.7.2 Union Issues

With regards to purchasing, Mlynarz and Bootsma agreed that the NSW Fire Brigades have a good relationship with the Firefighters' Union. The union is allowed to voice its opinion in what products the NSW Fire Brigades purchase. For the most part if the firefighters do not like a certain product then the NSW Fire Brigades will not purchase that product.

B.5.7.3 Reluctance to Change

When asked about how the firefighters embrace new products Mlynarz and Bootsma agreed they usually think highly of new products and do not complain too much. A transition to a new product is usually a slow process and in this current age of the continuous advancement of new technology changing from product to product must be a frequent occasion. This is another reason why the authors believe switching suppliers for the reason of bulk purchasing would not be that big of a hassle.

Mlynarz was very reluctant toward the bulk purchasing of fire equipment, but believed the project showed some promise. He thought if all the players stayed optimistic then something positive could take place. He agreed that the implementation of a universal product could pay dividends for the all the fire services in Australia. He mentioned an event when the CFS (Country Fire Service of South Australia) traveled to NSW to help contain a bush fire and their fire hoses could not connect to the fire hydrants because of incompatibility issues. If there was a universal product then this misfortune would not have taken place.

Specifically, Mlynarz believes there is a realistic possibility for the bulk purchasing of breathing apparatus because all the fire services use similar devices. Cab chassis would be a more difficult task because there is a broader range of vehicles that the fire services use. Furthermore, the all of the fire services tend to have different ways of purchasing trucks, for example the NSW Fire Brigades purchase their trucks in the “turnkey” fashion which is unlike any other fire service. He also mentioned fire protecting foam and this

is a topic that had come up in other discussions with other fire services. This is a topic the authors will further research.

B.6 MFB: Terry Hitch

Interview with MFB:

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Interview conducted on Wednesday 18/1/2006
Daniel Caron
Ryan Lewis
David Pesce
18/1/2006

B.6.1 Overview

Terry Hitch is the commander of the Manager Equipment Development Department at the Metropolitan Fire Brigade (MFB) in Melbourne. He explained about his role there, saying that his department did research and development for the MFB. They are in charge of finding new technologies in the products that the MFB purchases; this is done through various methods, such as contacting other agencies or by following the market through conventions, trade shows, and publications.

The purpose of this interview was to determine the methods and practices used by the MFB when purchasing breathing apparatus and wildfire clothing. It was discovered that the only specific wildfire clothing they use is a wildland jacket which replaces the firefighter's structural jacket during a wildfire. The rest of the equipment is kept the same; this helps to minimize equipment carried by firefighters.

The MFB does not carry rural tankers, so any cab chassis purchases made by them is not relevant to the research of the bulk purchasing project at hand.

B.6.2 Technical Specifications

B.6.2.1 Standards and Practices

Technical specifications are determined through the use of a committee, which is made up of people from the Fire Fighters Union, OHS, and operations. These specifications are first based upon standards written for the particular commodities (BA and Wildfire PPC's); these standards are

first based upon the Australian Standard, but if one is not applicable they then look at European and NFPA Standards.

After looking at the standards, additional testing is required by the committee for new products to ensure that it will satisfy the needs of the MFB. Most standards look thoroughly at testing of fabrics and materials, but do not look at the physiological strains put on a person actually using the equipment. For this reason it is sent out for additional testing, which has been defined in the specification, and is therefore required before a supplier can be used.

B.6.2.2 Implementation of New Technologies

The implantation of new technology is indeed a very important task in order to keep firefighters safe in the face of danger. The MFB agrees with this point of view and is constantly updating their equipment in order to have the best possible. Their procedure for this is to use a method of constant upgrades for their breathing apparatus. This simply means that as new updates in technology become available, they are implemented into each breathing apparatus during a maintenance procedure. So as it is continually updated, there is no need to replace it since it is becomes almost an entirely new product.

It is written into the tender that these technological upgrades must be provided. This provides for a smaller use of the budget per year, reducing the so called “spikes” seen when a large order for new commodities is placed at a single time. This also means removing and decommissioning products in a similar way so that the supply stays constant.

B.6.3 Suppliers

Breathing apparatus are supplied to the MFB by Dräger. The evaluation process to determine which supplier to use is done through the use of setting up a request for tender once their current contracts have ended. Then, each company who responds with an offer is evaluated. They must meet the current specifications or they will not be considered, then price is evaluated. If a product is considered seriously, an operational field trial is requested by the MFB in order to see how their firefighters like the equipment.

For the wildfire clothing, only the jacket is specifically designed to be used for wildfires. The rest of the wildfire equipment (gloves, boots, helmet, pants) is used in structural fires as well, reducing the number of items of equipment that must be carried by a single firefighter. Also, this reduces the amount of equipment that must be purchased. The reason that the MFB can do this is because they almost never have to fight wildfires due to the miniscule amount of rural area in their jurisdiction.

The process for the selection of suppliers goes through a similar process of evaluation as the breathing apparatus. As mentioned in the technical specifications section, new types of fabric must undergo a physiological testing where the heat stresses on a person wearing the commodity are recorded in order to see if it will be able to be use in the Australian climate. These tests are performed on a heat-test “dummy”, similar to those used in crash tests; however, these “dummies” are equipped with heat sensors in order for the company to record information. The “dummy” is equipped with the garment or equipment and is then subjected to increasing temperatures, and the information is recorded. This information is then

analyzed, and from it they can determine if the fabric will be too heavy for the high temperature climates of Australia.

B.6.4 Budget

B.6.4.1 Allocation of Resources

The MFB uses a centralized budget in which they are responsible for the supply and maintenance of equipment for all the different brigades in their jurisdiction. This budget is re-evaluated every year, but will generally remain about the same. About 75% of the budget for the MFB comes from insurance agencies, 12.5% from the local government, and the other 12.5% is unknown but most likely the federal government. Although these amounts are determined by a government board each year, they remain about the same for the most part. If a large order needs to be placed, then it is possible that the government will award more money and these ratios could change slightly.

The actual decision on how many of each commodity to be sent to a location is based on the number of firefighters at that location and also the number of appliances. To determine the number sent a Strategic Location Analysis is performed based on a risk assessment and historical data. They send one wildfire jacket per firefighter and breathing apparatus are distributed in accordance to where there is a greater risk of prolonged indoor exposure to fires, such as areas with large buildings. This analysis is an on-going procedure but was first implemented about fifteen years ago.

B.6.4.2 Quantity Purchased and Decommissioned

The MFB uses a gradual process of replacing older items in order to keep the budget relatively stable from year to year, moving away from their old process of buying in bulk at once and replacing all of the commodities that have reached the end of their useable life. They find that this is more beneficial as it allows for a smaller budget each year, and is also easier to do because it means a manufacturer is more likely to be able to meet their demands each year.

The MFB is made up of around 1,700 firefighters. Every one of the firefighters in the MFB has a wildfire jacket, so there are 1,700 of those in stock. They have a cost of about $100 AU each, and are replaced only after being damaged in a wildfire, which is very rarely.

For the breathing apparatus, the MFB holds about 400 open-circuit breathing apparatus in stock at all times. They have around 900 cylinders for use with these, which grow at about forty per year. The quantity of the mechanism itself does not generally increase, except for when a new product is introduced. Over the past five years, they have introduced these new Draeger models over their old Mine Safety Appliances (MSA) models. This has also phased out any closed-circuit breathing apparatus that were in stock, which they said were not being used enough to be practical to carry in stock.

B.6.5 Purchasing

B.6.5.1 Procedure

The procedure for purchasing has already been briefly described in section earlier in this interview summary. It begins when a Request for Tender (RFT) is placed. Once this is done, suppliers will then respond with bids for their products. Any supplier who submits a bid is then evaluated by

using the technical specifications which were written for this specific tender. If the product passes all of the specifications, it will then undergo an operational field test in order to determine how useful it is. The cost of the item is also evaluated, which helps in the final decision process. A committee then decides the best valued product (looking at performance versus price) and a selection is made.

The operational field test for a wildfire jacket is performed with about 50 to 100 jackets sent by the company. They are distributed out to people in the operations department who try them out, usually during the summer period which lasts two to three months. The operational field test for the breathing apparatus is done a little bit differently as it is written into part of the tender. Any company who makes a bid on the tender will have to send four breathing apparatus to be tested. These are sent to the MFB station in South Melbourne who are the breathing apparatus specialists. They put them through an eight to twelve week trial in which all aspects are evaluated. For both of these tests, an analysis form is filled out in order to gain feedback for the purchasing committee.

B.6.5.2 Terms of Agreement

The MFB selects only a single supplier to provide them with the product they are looking for (breathing apparatus or wildfire jacket) and the contract with this supplier is a long-term one. The current ones are ten years long for the breathing apparatus and a new one has just gone in for the clothing which is not in use yet.

B.6.5.3 Legal Obligations

The MFB follows the Victorian Industry Participation Policy (VIPP) set forth by the Victorian Government Policy Board (VGPB). Although the MFB is a statutory authority they still follow this policy in order to avoid any kind of problem with the government. This policy allows local companies to have a stronger influence in the market, however no such companies exist to provide to the MFB so it is not an issue.

B.6.6 Effects on Fire Service

B.6.6.1 Training

Training is a constant thing for MFB firefighters. They have station drills every so often in each station in order to keep all the firefighters up to date on use of products. Also, when a new product is introduced it is gradually put into place. This allows training to happen much easier because only a few people at a time need to be trained on the new product. The training generally comes from the company, at least initially, as a clause set in the tender.

B.6.6.2 Union Issues

Hitch mentioned certain aspects of the Firefighters Union, but never spoke in detail about any major problems that they could pose in the purchasing process. He suggested that union involvement is very important in any process that the MFB uses, especially purchasing and creating technical specifications. He said that the new equipment procured from a bulk purchase must be better than the current equipment in order for the union to have any strong consideration of it.

B.6.6.3 Reluctance to Change

Hitch suggests that there is no real problem for the firefighters to change their equipment as long as training sessions are provided and it is not brought on all at once. By changing too quickly, the firefighters can find they overwhelmed and would be uncooperative with the purchasing committees and officials.

B.7 SACFS: Euan Ferguson

Interview with SACFS:

Euan Ferguson
Chief Officer
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Ferguson.Euan@cfs.org.au

Interview conducted on Tuesday 31/1/2006
Daniel Caron
Ryan Lewis
David Pesce
1/2/2006

B.7.1 Overview

Euan Ferguson is the Chief Officer of the South Australian Country Fire Service (SACFS). Ferguson's role is obviously an important one, he is in charge of the organization and reports only to the South Australian Fire and Emergency Services Commission Board and its minister. This means that Ferguson is able to develop budgets and spend with little or no approval needed.

The purpose of interviewing Ferguson was to gain understanding of the roll of the CEO in the organization and to learn of how his thoughts and understanding of purchasing differ from the people directly in charge of doing it. Also, Ferguson was able to give accurate information regarding different types of budgeting, budget and resource allocation, and also thoughts on the advantages/disadvantages of a bulk purchasing system. He was also given the data collection sheets so that he could pass them to the appropriate people to be filled out.

B.7.2 Organizational Structure

The organizational structure of the SACFS is not incredibly complex. The South Australian Fire and Emergency Services Commission Board sit on top of the organization with a minister in charge of it. This board is in charge of overseeing budgeting and political issues for all of the emergency services in South Australia. Below this board is Ferguson's position of Chief Officer; he is in charge of overseeing the SACFS. Below him are the different services: Operations, Business Services, and Strategic Services; each of these contains management and staff.

The South Australian Country Fire Service breaks their territory into six different regions which are then headed by different commanders. They report to the Operations department and this allows for easy control of the fire fighting forces. This also helps when allocating resources as each region can be dealt with individually; it provides better asset management for the SACFS as well.

B.7.3 Budget

B.7.3.1 Types of Budgets

The budget for South Australia is very similar to other states in Australia. They are allotted two budgets at the beginning of the fiscal year: capital works budget and recurrent budget. The capital works budget is used for large purchases, such as the purchasing of vehicles, large orders of wildfire protective clothing, or large orders of breathing apparatus. This budget is not under the total control of the SACFS and must be approve by the South Australian Fire and Emergency Services Commission Board before it can be used for any purchases.

The other type of budget, recurrent, is under the total control of the SACFS. This budget is allotted at the beginning of the fiscal year but can be spent as needed. It covers the maintenance of the breathing apparatuses and also the wildland personal protective clothing.

B.7.3.2 Allocation of Resources

The SACFS owns the vehicles which are then distributed to the different brigades. This is to ensure that maintenance is kept up on the vehicle, as well as that the vehicle will meet the specifications set forth by the

SACFS. Ferguson noted that when they first took over owning the vehicles a few years ago, many brigade owned vehicles that were obtained were not maintained at all. He believes this was because that the brigades knew the government was taking them and so figured that they did not need to worry about them anymore. Ferguson said this was a big problem and that they needed to move forward and do this for all of the important equipment to ensure that it is up to code.

The breathing apparatus was a local purchase, much like the vehicles, so a brigade owned and maintained its own breathing apparatus; however, they are now moving to a system where the SACFS owns and maintains the breathing apparatus because they had similar problems as described with the vehicles.

The wildland personal protective clothing is a locally owned commodity for each brigade but is purchased off of a central commodity. Ferguson said that he thinks that within the next few years these will become a centrally owned commodity too. This will allow them greater say over what equipment each brigade can have and will ensure that the clothing is kept up to code and maintained; this will lead to greater fire fighter safety.

B.7.4 Contracts/Tenders

The tendering process for the South Australia Country Fire Service is similar to other agencies; they use a tendering committee who decides what the best value is for money and goes with that as a purchase. However, the SACFS uses something called a “panel contract” which allows them to hold multiple tenders at the same time. These are between multiple suppliers at the same time and last for between three and five years. They make it easier

to get a good price on a purchase because when a purchase is needed they simply go to the panel and put up a request for purchase. All of the companies on the panels then give them a price and they are able to go with the best price. This means that all of the tendering is done beforehand for multiple companies, which saves time later on.

Ferguson argues that this is the best way to approach purchasing because it makes sure that a "broad build base" is created. This means that if a company on the panel contract is to go out of business or be unable to produce the requirements of the SACFS, then it raises no issues and they can use a different supplier on the panel. If they were dependent on a single supplier it would mean that if they went out of business or had production problems, the SACFS would have to go back out on tender in order to find a new supplier, and this process can take up to six months. This would cause a huge problem, especially if the new equipment was critically needed by the agency.

B.7.5 Comments and Suggestions

B.7.5.1 Commodities

Ferguson mentioned that he thinks the breathing apparatus would be the easiest commodity to bulk purchase across Australia because it is the one with the most commonality between agencies. He also recognizes that it would be easy and cheap to bulk buy wildland personal protective clothing because of the national standard that already exists and so commonality is getting closer. He mentioned that some agencies have specialized requirements for the protective clothing, mentioning New South Wales as an example. He said that they do not use the suspenders to hold the pants up

but instead have a belt; also, they have different pocket requirements because they feel it helps to add to functionality. Ferguson said that if all that was figured out, it would be easy to bulk buy them.

For cab chassis, Ferguson said that it would probably the hardest of the three to bulk buy, but would generate the most savings because of the large price tag for each. Other recommendations he made were to bulk purchase fire suppressive foam, communication radios, and aerial vehicle appliances.

B.7.5.2 Suppliers

Ferguson said that the hardest part about trying to implement bulk purchasing in Australia will be in showing people that one product is as useful as another and trying to shift them away from their current suppliers. For vehicles, a big problem will be the servicing and spare parts he said. Holding multiple suppliers makes it more difficult to stock the appropriate parts and this could be a deterrent for many members.

Having multiple suppliers is a necessity, though, Ferguson argued. He believes that having only one supplier leaves the organization vulnerable because the supplier might not be able to meet building requirements, or it could even result in a great loss of money if the supplier were to go out of business. He recommends having more than two suppliers for any given commodity.

B.8 Tasmanian Fire Service: Michael Brown

Interview with Tasmanian Fire Service:

Michael Brown
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Interview conducted over the phone on Tuesday 31/1/2006
Daniel Caron
Ryan Lewis
David Pesce
1/2/2006

B.8.1 Overview

This interview was conducted over the phone with Michael Brown who is in charge of purchasing Wildland PPC and also has a good overview of the whole purchasing department at the Tasmanian Fire Service. John Gledhill, the CEO of the Tasmanian Fire Service personally appointed Michael Brown to conduct this interview.

The purpose of this interview was to put the interview itinerary into practice and also get some feedback toward the interview process in order to improve upon it. The newly created data sheet was emailed to Mr. Brown before the interview and it was emphasized to him that it should be completed in a timely manner. The information that the data sheet will provide will present valuable facts that will be used in the final report of the bulk purchasing findings.

This interview failed to get some specific information but this was because Mr. Brown was not familiar with some of the inner workings of the Tasmanian Fire Service. This additional information can be collected through email with some of Mr. Brown's coworkers who could be more helpful with the specifics that were asked. These areas include the purchasing process for cab chassis and the allocation of the budget.

B.8.2 Technical Specifications

B.8.2.1 Standards and Practices

Before going out on tender the Tasmanian Fire Service first decides on technical specifications by setting up a functional requirement. To do this, they look at various standards such as Australian fire standards and other

international standards such as the NFPA and ISO if need be. They address required areas that include Australian Design Rules and Occupational Health and Safety laws. For Wildland PPC they strictly follow the Australian standard that has been set for this particular type of equipment. Since they are such a small fire service they look toward other larger fire services with pre-existing contracts and the Tasmanian Fire Service "piggybacks" on these contracts which helps them save time on drawing up the contract. Furthermore, it helps keep costs down because many of their orders are small and this can cause the supplier to drive up- the cost.

B.8.2.2 Implementation of New Technology

To stay up to date with technology, the Tasmanian Fire Service attends trade shows and invites suppliers to their offices to perform demonstrations. They also receive countless magazines and are always updated when new technology comes about in the marketplace. Technology used by other fire services is also a good indication of the new and different products that can be purchased.

B.8.3 Suppliers

To acquire suppliers the Tasmanian Fire Service deliberates over a few items. They try and find the best supplier that meets their needs which include much of the same as other fire services. Cost, safety, and compatibility all play a role in the purchasing of new equipment.

For breathing apparatus, the Tasmanian Fire Service uses one supplier, Dräger. They perform all the maintenance for breathing apparatus within the organization and there are two facilities in Tasmania, one in the

north and one in the south. The fire truck maintenance is also performed at these two sites. Isuzu is the supplier the Tasmanian Fire Service uses for their heavy tankers. They also have medium tankers made by Mitsubishi and light tankers made by Toyota. For wildland clothing, the Tasmanian Fire Service uses Stuart and Heaton only and this is a contract they "piggyback" off of the Rural Fire Service. They use commercial launders to perform maintenance on their wildland PPC.

B.8.4 Budget

B.8.4.1 Allocation of Resources

To determine where to tactically place each of their resources, the Tasmanian Fire Service performs what they call brigade classification. This process takes into account many factors, such as risk analysis, which looks at all regions in the state and assess where fires will be most prevalent. They also take into account history of previous fires and population. Brigade classifications are updated continuously to ensure their resources are positioned strategically.

B.8.4.2 Quantity Purchased & Decommissioned per Year

There are approximately 300 everyday firefighters and 4000 volunteer firefighters in the Tasmanian Fire Service. Specifics on the quantities purchased of each item will be sent to us through our data sheet.

B.8.5 Purchasing

B.8.5.1 Procedure

The basic procedure for purchasing within the Tasmanian Fire Service is they develop a functional requirement by looking first at Australian standards and then looking elsewhere if Australian standards are lacking in a certain area. Since they are a small state, Tasmania looks toward other states to see if it can “piggyback” on their pre-existing contracts. Once they have the functional requirement, they survey the market and look to go out on tender with the best supplier that meets their requirement. Purchasing of vehicles is done in rather small quantities to replace old vehicles. However, the purchasing of Breathing Apparatus is done in bulk about every ten years. Just recently, Tasmanian Fire Services purchased 400 breathing apparatus from Sabre and Mr. Brown said the agency received a low price and attracted many potential suppliers because of the large quantity of the purchase.

B.8.5.2 Terms of Agreement

One main constant in of the agreements in the Tasmanian Fire Service is that they follow state government protocol for all purchases. This includes giving every supplier a fair chance to compete for the contract. They generally look for a domestic supplier first, before looking at the international market. There is no law for this but if a purchase was made outside the country without considering a domestic purchase first, then this would not reflect well on the Tasmanian government.

B.8.6 Effects on Fire Service

B.8.6.1 Training

Like many other fire services the Tasmanian Fire Service constantly train their firefighters. Every time a new truck is delivered the firefighters at that particular fire station are trained to the specifics on the new truck. Every ten years or so when new breathing apparatus is introduced into the fleet there is extra training to ensure that every firefighter knows what they need to about the new equipment. For wildland PPC, videos are administered to all the firefighters on how to properly use equipment.

B.8.6.2 Union Issues

With regards to purchasing, Mr. Brown said that the Tasmanian Fire Service has a high-quality working relationship with the firefighter's union. The union is allowed to voice its opinion in what products the Tasmanian Fire Service purchase. For the most part if the firefighters do not like a certain product then the Tasmanian Fire Service will not purchase that product.

B.8.6.3 Reluctance to Change

When asked about how the firefighters embrace new products, Mr. Brown said they usually think highly of new products and do not protest too much.

B.9 MFB: Peter Whelan and Peter Akers

Interview with MFB:

Peter Whelan
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Peter Akers
Chief Executive/Chief Officer
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Interview conducted on Wednesday 1/2/2006
Daniel Caron
Ryan Lewis
David Pesce
3/2/2006

B.9.1 Overview

Peter Whelan is the director of technical services at the Metropolitan Fire and Emergency Services Board. He is in charge of overseeing purchasing for the MFB. As the director of technical services, Whelan has many purchasing agents working for him.

Peter Akers is the Chief Executive/Chief Officer (CEO) for the MFB. His role at the MFB is to oversee all of the departments, and he also has control over the budget usage. This makes him important in the purchasing areas, and he also has great interest in seeing bulk purchasing work.

B.9.2 Organizational Structure

The MFB is organized into several different sections. It is a statutory authority so it is organized by a private board that then has control over the CEO, Peter Akers. Peter Akers is in charge of overseeing the heads of all of the departments, one of which is Technical Services. Peter Whelan is in charge of this department and the people who work for him are in charge of the purchasing processes for the breathing apparatus, the cab chassis, and the wildland personal protective clothing and equipment.

The MFB is in charge of the metropolitan areas of Melbourne, except for the outskirts because that is currently under the authority of the Country Fire Authority.

B.9.3 Budget

B.9.3.1 Types of Budgets

The budget for the MFB is very similar to other fire agencies in Australia. They are allotted two budgets at the beginning of the fiscal year: capital works budget and recurrent budget. The capital works budget is used for large purchases, such as the purchasing of vehicles, large orders of wildfire protective clothing, or large orders of breathing apparatus. This budget is not under the total control of the MFB and must be approve by the board that oversees the MFB before it can be used for any purchases.

The other type of budget, recurrent, is under the total control of the MFB. This budget is allotted at the beginning of the fiscal year, but can be spent as needed. It covers the maintenance of the breathing apparatuses and also the wildland personal protective clothing.

B.9.3.2 Allocation of Resources

The MFB owns the vehicles which are then distributed to the different brigades. This is to ensure that maintenance is kept up on the vehicle, as well as that the vehicle will meet the specifications set forth by the MFB. The breathing apparatus is a similar purchase in that the MFB centrally owns them, but they are lent out to the brigades. The MFB also is in charge of maintaining them.

The wildland personal protective clothing is a locally owned commodity for each brigade but is purchased off of a central contract. Whelan said that these can be purchased off of the capital works budget if there is a large order, but generally it comes out of the recurrent budget.

B.9.4 Contracts/Tenders

The tendering process for the MFB is very important, according to Whelan. He said that he is required to go out to a tendering process by order of the Victorian Government Procurement Board. This process varies in length depending on the amount of money being spent on the products; cab chassis usually take the longest. Some tenders can performed by the VGPB and so the MFB can take advantage of those and not have to go through the whole process, but for most fire fighting commodities, the VGPB does not look into them so the MFB must do it themselves.

The tenders that are set up by the MFB typically last for three years, with the option to extend it by twelve months, and an additional twelve months after that. This allows them to prolong going back out the tender if need be, but does not reduce their options of getting out of a bad deal with a company that is not meeting demands.

B.9.5 Comments and Suggestions

B.9.5.1 Commodities

Whelan said that he did not think that any of the commodities would work. He mentioned that the MFB has to follow the guidance of the VGPB and is restricted to the regulations of it. He said that if there was a tender/contract set up by AFAC or any other company, it would be useless because he would have to go out on tender for the MFB due to regulations. Whelan said that it would be illegal if he were to attempt to buy off a private contract without tendering first. He mentioned there were pre-existing agreements between certain states that let him go around this; for example, he said that he would be able to purchase off of a contract set up by

Queensland without tendering because the purchasing boards in each state has agreements between them already.

B.9.5.2 Purchasing Procedure

Whelan believes the most difficult task of bulk purchasing will be to get all of the purchasing boards across Australia to agree upon a standardized procedure. He mentioned repeatedly that all of the states and territories in Australia have different government boards that control purchasing procedure for the state, and interstate purchasing is only allowed between states whose boards have pre-existing agreements. Whelan says that if bulk purchasing is to be given any consideration, there must be uniform purchasing laws implemented throughout Australia.

B.9.5.3 Union Issues

It has been requested that this information is kept off the record.

B.10 CFA: Mark Connell and Shane Franklin

Interview with CFA:

Mark Connell
Director Asset Management
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Shane Franklin
Manager Contracts & Procurement
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Interview conducted on Monday 02/02/2006
Daniel Caron
Ryan Lewis
David Pesce
03/02/2006

B.10.1 Overview

This interview took place at the CFA headquarters in Burwood East. Both Connell and Franklin were in the room for the interview and each took equal part in the process. Connell is the acting Director of Asset Management and plays a major role in the procurement process. Franklin is the Manager of Contracts and Procurement and reports to Connell.

The conversation was drastically different than the interview with Peter Whelan. Unlike Whelan, Connell and Franklin were excited about the potential opportunities of bulk purchasing and maintained a very optimistic attitude.

B.10.2 Technical Specifications

B.10.2.1 Standards and practices

All the technical specifications are provided to Franklin by John McCarthy, who is in charge of the maintenance and specifications for breathing apparatus. McCarthy is constantly working hands-on with the equipment and has is own process of evaluating the performance of the equipment and the need for different items as necessary. The specifications start with the AFAC specifications and international standards and are improved on where necessary.

B.10.3 Budget

The Wildland PPC's are purchased with the central CFA budget. A central inventory is maintained and the quantity only grows as the number of active firefighters does. Dry cleaning is locally funded by operational budgets; when major damage is done to the clothing, it may be repaired by the

manufacturer, used only for training, or replaced depending on the extent of the damage.

B.10.4 Comments on Bulk Purchasing

B.10.4.1 Opportunities

Connell expressed the obvious benefits of bulk purchasing. Cost savings is clearly at the top of the list, but also interagency support will benefit. Short-term support arrives completely self-sufficient, but having a similar product owned by neighboring agencies will ease the process of long-term support.

Connell also showed his knowledge of economics by stating how the control of the market would shift towards the buyers with the added leverage of bulk purchasing.

B.10.4.2 Obstacles

Connell also noted that he had some fears about bulk purchasing that should be kept in mind. He worried about the difficulty of assuring proper and timely delivery, the ability of manufacturers to meet the demands of purchasing spikes, and even just getting AFAC members to agree upon the terms of contract.

When asked about the Victorian Government Purchasing Board, Connell said it might be a barrier, but not something that couldn't be worked around. He provided the contact information for Nick Tamburro at the VGPB who works with the CFA from time to time and would be able to provide the details on the laws affecting this bulk purchasing process.

B.11 FESA: Frank Pasquale

Interview with Fire and Emergency Services Western Australia:

Frank Pasquale
A/FESA Executive Director Business Services
Fire & Emergency Services of Western Australia
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Mike Duyckers
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Ron Zatella
A/Manager Fleet Services
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Interview conducted over the phone on Tuesday 3/2/2006
Daniel Caron
Ryan Lewis
David Pesce
3/2/2006

B.11.1 Overview

This interview was conducted over the phone with Mike Duyckers, Frank Pasquale and, Ron Zatella. Originally the interview was to be conducted with the CEO of Western Australia Fire and Emergency Services, Bob Mitchell, but he could not attend. Instead, he set up a committee that he felt could best answer questions on his behalf. The purpose of this interview was to get some general knowledge of the inner workings of the Western Australia fire department and to discuss the data sheet and how important it is that they fill it out and send it back in a timely manner. The newly created data sheet was emailed to Mr. Mitchell before the interview to ensure there is enough time for it to be completed. The information that the data sheet provides will present valuable facts that will be used in the final report of the bulk purchasing findings.

After reviewing the interview, it was discovered that the discussion was for the most part a success. The conversation accomplished many goals and much was learned about how Western Australia could fit into a bulk purchasing system.

B.11.2 Technical Specifications

Before going out on tender, Western Australia first decides on technical specifications by setting up a specifications requirement. To do this, they look at various standards such as Australian fire standards and other international standards such as the NFPA and ISO if need be. They address required areas that include Australian Design Rules and Occupational Health and Safety laws.

Western Australia has a broad range of different terrains and they have a few organizations to handle the vast landscape such as the bushfire group, state, and local fire brigades. Just recently has the Western Australian government been able to join these organizations together and thus purchase as one. They felt this was a great success but taking the next step and joining all of Australia together would provide no benefits. They pointed out that their own state cannot agree on certain types of commodities so how could Australia agree on any products together.

B.11.3 Suppliers

This information is on the data sheet, which is yet to be received. It should be in by the end of the week of 6/2/2006.

UPDATE Data Sheet found in section Appendix C -.

B.11.4 Budget

The budget of Western Australia Fire and Emergency Services works a lot like Queensland. The department of treasury ultimately controls the budget of all things fire related. If there were to be a change in purchasing the department of treasury would have to be convinced the change would be for the better. Although the interviewees believed Western Australia would not be interesting in buying with other states, the CEO, Bob Mitchell has expressed interest in bulk purchasing in an earlier meeting at AFAC.

B.11.5 Purchasing

B.11.5.1 Procedure

The basic procedure for purchasing within Western Australia is they develop a functional requirement through a committee by looking first at

Australian standards and then looking elsewhere if Australian standards are lacking in a certain area. Once they have the functional requirement, they survey the market and look to go out on tender with the best supplier that meets their requirement. Purchasing of breathing apparatus is done in rather large quantities. They replaced their whole fleet from 2000 through 2004 and this is done in similar fashion about every 15 years. Since Western Australia is the biggest state, land wise, they have a vast amount of terrain. Mr. Franklin said the choice of a cab chassis was more a choice to the user than anything else. There are many applications for cab chassis in the Western Australia Fire Service thus there are many different types and they are used at the user's discretion. Cab chassis are bought in small amounts in order to update the fleet, and the life expectancy of a truck is around 20 years.

B.11.5.2 Terms of Agreement

One main constant in the agreements in the Western Australia Fire Service is that they follow state government protocol for all purchases. This includes giving every supplier a fair chance to compete for the contract. They look for a domestic supplier first, before looking at the international market. Since the department of treasury controls all purchase they are required by law to purchase from a supplier within the state of Western Australia before purchasing elsewhere.

B.11.6 Effects on Fire Service

B.11.6.1 Training

Like many other fire services the Western Australian Fire Service constantly train their firefighters. Every time a new truck is delivered the

firefighters at that particular fire station are trained to the specifics on the new truck. The interviewees expressed great concern about new equipment because it would cost them a lot of time and money training all of the firefighters.

B.11.6.2 Union Issues

With regards to purchasing, the interviewees said they have a high-quality working relationship with the firefighter's union. The union is allowed to voice its opinion in what products they purchase. For the most part if the firefighters do not like a certain product then it will not be considered as an option for purchase.

B.12 NSW Rural Fire Service: Paul Springett

Interview with NSW Rural Fire Service:

Paul Springett
Procurement Manager
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Interview conducted over the phone on Tuesday 6/2/2006
Daniel Caron
Ryan Lewis
David Pesce
7/2/2006

B.13 Overview

This interview was conducted over the phone with Paul Springett who is the procurement manager at the New South Whales Rural Fire Service. Mr. Springett is the contact for wildland PPE, cab chassis, and breathing apparatus for the organization.

The RFS is a major player in the fire services because New South Whales has the largest population of all the states in Australia. With over 70,000 volunteer firefighters the Rural Fire Service purchases more equipment than any of the fire service in Australias. The newly created data sheet was emailed to Mr. Springett before the interview and it was emphasized to him that it should be completed in a timely manner. The information that the data sheet will provide will present valuable facts that will be used in the final report for the analysis of a bulk purchasing system in Australia

After looking back on the interview it was deemed a success because most of the interview itinerary goals were met. The interview captured the basic information about how the process of purchasing takes place at the Rural Fire Service. The most important information will come from the data sheet so much of the success will be levied on the completion of this facet. When asked his opinion on the project, Mr. Springett seemed very optimistic but agreed there were some major obstacles to overcome.

B.13.1 Technical Specifications

B.13.1.1 Standards and Practices

To determine the required technical specifications of products before they are purchased, the Rural Fire Service has their department of engineering services generate the requirements. For larger purchases, there will be a committee set up to determine the specs for a large purchase. Like other fire services the Rural Fire service follows the national PPE standard, but they also add a little to the standard to fully meet their own needs. In support of cab chassis, they are required to follow Australian Design Rules and they also look at standards around the world such as European standards and standards from the NFPA. Tenders in the Rural Fire Service are always open unlike the CFS in the state of South Australia.

B.13.1.2 Implementation of New Technology

For updates on the latest technology and the safest equipment, the Rural Fire Service keeps in close contact with suppliers. The technical committees within the organization bring in new products to meetings and they also attend trade shows and receive magazines for new information on products.

B.13.2 Suppliers

To acquire suppliers, the Rural Fire Service goes out on an open tender and evaluates the suppliers so to fill their technical specifications to the best of their ability. Specifics on the suppliers of the Rural Fire Service can be seen on in the data sheet.

B.13.3 Budget

The budget of New South Whales only has a recurrent section and all capital purchases are done through this section as well. To determine where to tactically place each of their resources, each district in New South Whales of over 140 manage there own budget. Each district purchases what they need for fire equipment from their budget and they can also raise money privately and purchase equipment that way.

B.13.4 Purchasing

B.13.4.1 Procedure

After the Rural Fire Service determines their technical specifications they go out on open tender. If a Purchase of over $150,000 is made, then the New South Whales Department of Treasury has ultimate authority if that transaction is to take place. Purchases under $150,000 the Rural Fire Service can perform themselves without scrutiny from the department of treasury. They are required to go on the market and acquire at least three price quotes before making a decision about which supplier they will choose. As stated above, all tenders are open and there are cash incentives if a local supplier is chosen but out-of-state and international suppliers are not disregarded.

B.13.4.2 Terms of Agreement

One main constant in of the agreements in the Rural Fire Service is that like all other fire services, they follow state government protocol for all purchases. Like the New South Whales Fire Brigades, tenders are usually for three years with an option for a fourth and fifth year.

B.13.5 Noted Obstacles

Mr. Springett was mostly positive about the whole project but noted there would be much difficulty in getting the fire services to agree on a single product. He recommended first there would have to be a national standard on all the equipment so that all the fire services could follow this guideline. When reminded of the national wildland PPE standard, Mr. Springett expressed this was a great initiative and perhaps wildland PPE would be a fine place to start having fire services collaborate on purchases.

Moreover on the subject of national standards, another reason to stress this matter is take away incompatibility issues with interagency help. For example fire brigades on state borders have to carry adapters and fire hoses that fit both state's fire hydrants. National standards for all fire equipment could avoid this confusion and potentially save money because less fire hoses and adapters would have to be purchased.

On the subject of cab chassis, Mr. Springett thinks there is a potential major cost savings as trucks account for a large amount of the budget for firefighting equipment. In previous interviews, fire service representatives expressed that there were no potential cost savings in bulk buying, but Mr. Springett thinks there is a lot of money to be saved if all the fire services purchased cab chassis together.

Training was another obstacle Mr. Springett mentioned but agreed with the authors about this not being a great concern. Clearly, there would not be a huge shift in products so to avoid disarray in the field. This would avoid massive amounts of training of firefighters and maintenance crews. Mr.

Springett was afraid that if bulk purchasing were to commence then it could hurt suppliers and thus unintentionally create monopolies. The authors agree with this hurdle and this is something to largely consider if a bulk purchasing system is ever to be implemented.

Appendix C - Data Spreadsheets

C.1 Breathing Apparatus

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Bulk Purchasing Project
AFAC

Breathing Apparatus

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Drager Fibre Wrap 9 Litre	207 Bar	570	50 Per Year	15 Years	[redacted]	250 Cylinders	2005
	Drager Carbon Fibre 6.8 Litre	300 Bar	540	2003/04 - 240 2004/05 - 100 2005/06 - 100 2006/07 - 100	15 Years	[redacted]	Nil	2003/04 - 240 2004/05 - 100 2005/06 - 100 2006/07 - 100
B A Sets - Face Mask and Accessories	Drager PA 90 Series	n/a	240	Nil	10 to 20 Years	[redacted]	Nil	2002/03
	Drager PSS 100	n/a	440	2003/04 - 140 2004/05 - 100 2005/06 - 100 2006/07 - 100	10 to 20 Years	[redacted]	Nil	2003/04 - 140 2004/05 - 100 2005/06 - 100 2006/07 - 100

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 25/01/2006

Completed by: x

Printed Name: MICHAEL BROWN

Agency: TAS FIRE SERVICE

Date: 06-02-06

Signed off by: x

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 13.2.06

Bulk Purchasing Project
AFAC

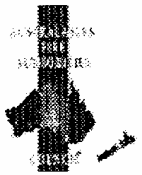
Breathing Apparatus

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	LUXFER	300 bar / 6.9 ltrs	111	20	15 years	[redacted]	$57,000	2003
	EFIC	300 bar / 6.9 ltrs	93					
	SCI	300 bar / 6.9 ltrs	88					
Face Mask and Accessories	SABRE							
	CONTOUR	N/A	77	6	12 Years	[redacted]	$82,520	2001
	CENTURION		30					

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x [signature]
Printed Name: Russell Shephard
Agency: ACT ESA
Date: 2-Feb-06

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06



Breathing Apparatus

Bulk Purchasing Project
AFAC

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Luxfer - (Carbon Fibre LG2E/6) SCI - (Carbon Fibre) GC - (6/54324/03 Sabre Steel)	All 9 Litre WC @ 200 bar	In Service = 5207	400	15 years Carbon Fibre 30 years Steel	[redacted]	750	2001
Face Mask and Accessories	1. Sabre Centurion 2. Draeger PA 94	N/A	1527 525	70	10 years	[redacted]	380	2000

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x [signature]
Printed Name: John McCarthy
Agency: CFA
Date: 6/01/2006

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: [illegible]

Breathing Apparatus

Bulk Purchasing Project
AFAC

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	9 litre FRP	205bar	40	As req'd	15 years	[redacted]	Unknown	NA
Face Mask and Accessories	Sabre Centurion	205 bar	Nil	Less than 10	12 years	[redacted]	1200+ sets	Unknown

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x [signature]
Printed Name: TINDALL
Agency: SACFS
Date: 10/02/2006

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-2-06

NOTES:

1 Quantity in stock represents estimated current stock held by the supplier.

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 31-1-06

Completed by: x (F. Pasquale)

Printed Name: Mike Duyckers

Agency: FESA

Date: 14/02/2006

Signed off by: x

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06

Breathing Apparatus

Bulk Purchasing Project
AFAC

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	LUXFER 6.8 LITRE AA6061	300 BAR	2400	MINIMAL	15 YEARS WITH HYDROSTATIC TESTING EVERY 3 YEARS AFTER THAT	[redacted]	MINIMAL	ALL BA REPLACED BETWEEN 2000 & 2004. REPLACEMENT PROGRAM COMPLETE
Face Mask and Accessories	MSA BD96	N/A	920	MINIMAL	15 YEARS	[redacted]	MINIMAL	ALL BA REPLACED BETWEEN 2000 & 2004. REPLACEMENT PROGRAM COMPLETE

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x R. Zatella
Printed Name: Ron Zatella
Agency: FESA
Date: 14/02/2006

Signed off by: x L Foster
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-3-06

Bulk Purchasing Project
AFAC

Breathing Apparatus

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Draeger (Carbon Fibre - 6.0 Litre)	300 bar	900	50	10 - 15 Years	$[redacted]99 Prices)	250	1999
Face Mask and Accessories	Drager (Futura Face Mask)	N/A	400	Spare Parts	10 - 15 Years	[redacted](1999 prices)	ongoing spares	1999
BA Sets	Drager (PA94, Open Circuit Positive Pressure)	N/A	400	Spare Parts	10 - 15 Years	[redacted](1999 prices)	ongoing spares	1999

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x T.O. Hitch
Printed Name: T.O. HITCH
Agency: MFESB
Date: 8/7/06

Signed off by: x L Foster
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-3-06

Bulk Purchasing Project
AFAC

Breathing Apparatus

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Chubb (Model:1182451) Drager (Model:3540070)		100	660	15 years	$[redacted]0	2500	2005/06
Face Mask and Accessories	Drager (PSS90) Sabre (Duo) MSA (BD96)	N/A	50	200	3 years	$[redacted]53	1000	2005/06

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x T M Lynarz

Printed Name: T. MLYNARZ

Agency: NSW FB

Date: 17 FEB 2006

Signed off by: x

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06

Bulk Purchasing Project
AFAC

Breathing Apparatus

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Luxfer Racal Heiser	200 bar 300 Bar	1700 x 9 Lt 200bar 410 x 6.8 Lt 300 bar 67 x 2 Lt 200 bar	For 2006 142 cylinders will be replaced as they will be out of life	15 years	200 bar = [redacted] 300 bar =	Programed replacement is 1176 cylinders	
Face Mask and Accessories	Sabre SE400	N/A	2616 Sabre 138 SE 400	As required	12 Years	[redacted]	As required	1998

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: [signature]
Printed Name: John Dodd
Agency: Fire & Rescue Service
Date: 1/31/2006

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06

Breathing Apparatus

Bulk Purchasing Project
AFAC

	Make + Model	Cylinder Pressure	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Air Cylinders	Sabre Contour/Luxfer	200bar		$39590 (91 cylinders)	5 years	[redacted]	unknown	
Face Mask and Accessories	Vision 3	N/A		$2,559.20	5 years	[redacted]	unknown	

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x
Printed Name: Paul Springett
Agency: NSW Rural Fire Service
Date: 6/02/2006

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 30.2.06

Cab Chassis

Bulk Purchasing Project
AFAC

	Make + Model	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Isuzu FTS 750	13 T 3000 L	Nil new in stock	2006/07 15 of	20 years	[redacted]	2006/07 x 15 2007/08 x 15	N/A
Medium Tankers	Mitsubishi Canter 4x4 Crew Cabin	6 T 1400 L	30	2005/06 (currently in build)	20 years	[redacted]	2008/2009 x 30	N/A
Light Tankers	Toyota	3.7 T 540L	Nil	2004/05 50	20 years	[redacted]	3 p.a = 15	2005/2006

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 25/01/2006

Completed by: x
Printed Name: MICHAEL BROWN.
Agency: TAS FIRE SERVICE.
Date: 06-02-06

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06

Bulk Purchasing Project
AFAC

Cab Chassis

	Make + Model	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Isuzu FTS single and crew cab 4x4, Isuzu FSS crew cab 4x4	FTS single - 13000kg 4050 litres, FTS crew - 13000kg, 3300 litres, FSS crew- 10 000kg 2000 litres		$10 000 000	25 years	[redacted]	60-80 units per annum	n/a
Medium Tankers	Fuso Canter single and crew cab 4x4	Canter single - 8000kg 1500 litres, crew cab - 6000kg 1100 litres		$5 000 000	25 years	[redacted]	60-70 units per annum	n/a
Light Tankers	Toyota Landcruiser single cab modified 4x4	3500kg 600 litres		$1 100 000	25 years	[redacted]	20-30 units per annum	n/a

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x [signature]
Printed Name: Paul Springett
Agency: NSW Rural Fire Service
Date: 6/02/2006

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06

Bulk Purchasing Project
AFAC

Cab Chassis

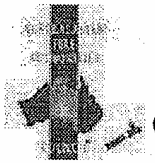
	Make + Model	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Ultra Heavy Tankers	Volvo FM9 CAFS	8000	2	N/A	15 years	[redacted]	Unknown	Jun-05
Heavy Tankers	Isuzu FTS 750 CAFS	3,300	3 on order	1	15 years	[redacted]	5 Depending on budget approval	2004 / 2005
	Hino Ranger 8Z	3,500	2					
	Isuzu various models	3,000 - 4,0000	19					
Medium Tankers	Isuzu FSS 550 CAFS	2,000	5	N/A	15 years	[redacted]	Unknown	2004 / 2005
Light Tankers	Toyota Landcruisar	500	25	2	10 years	[redacted]	10 Depending on budget approval	Jun-05

CAFS = Compressed Air Foam System

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x
Printed Name: Russell Shephard
Agency: ergency Services Authority
Date: 8/02/2006

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06



Cab Chassis

Bulk Purchasing Project
AFAC

	Make + Model	Carrying Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Hino: Ranger Pro 8Z (4x4) Crew Cab; 13,900 GVM for CFA	6	50 (at two body builders)	Generally yes; however, it will vary based on the new CFA firefighting vehicle Typology (e.g. 2004/05 to 2008/09, approx 25 cabs per annum)	At least 20 years; however, this is currently under review.	[redacted]	74 (next 3 years)	Qty 25 in Sept04; 15 in Dec 04
Medium Tankers	Hino: Ranger Pro 5Z (4x4) Crew Cab; 10,700 GVM for CFA	6	0	No	At least 20 years; however, this is currently under review.	[redacted]	62 (next 3 years)	1998/99
Light Tankers	Isuzu: NPS300 (4x4) Single Cab; 6,500 GVM for CFA	3	0	No	At least 20 years; however, this is currently under review.	[redacted]	27 (next 3 years)	Sep-05

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: [signature]
Printed Name: John Grech x 9262 8319
Agency: CFA
Date: 1-Feb-06

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10.2.06

Bulk Purchasing Project
AFAC

Cab Chassis

	Make + Model	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Currently ISUZU FTS 750 Crew	13,000kg +, 3000litres	Nil	Up to 30	20 years	[redacted]	200	NA
Medium Tankers	Currently Mitsubishi Canter Crew	6000kg, 1000 litres	Nil	Up to 10	15 years	[redacted]	10	NA
Light Tankers	Currently Toyota Landcruiser	3700kg, 500 litres	Nil	Up to 5	15 years	[redacted]	5	NA

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x [signature]

Printed Name: TINDALL

Agency: SACFS

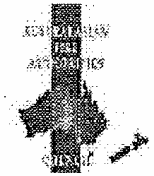
Date: 10/02/2006

Signed off by: x [signature]

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06



Cab Chassis

Bulk Purchasing Project
AFAC

	Make + Model	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	ISUZU FTS 750 & HINO 8Z, SINGLE AND CREW CAB	13,000 KG WITH TANK CAPACITIES OF 3,000 AND 4,000 LITRES DEPENDING ON APPLIANCE TYPE	129	1-2 UNITS	16-20 YEARS	[redacted]	5 TO 10	N/A
Medium Tankers	ISUZU FSS 550 AND HINO 5Z, SINGLE AND CREW CAB	10,000 KG WITH TANK CAPACITIES OF 2,000, 2,200 AND 2,700 LITRES DEPENDING ON APPLIANCE TYPE	268	30-40 UNITS	16-20 YEARS	[redacted]	100	N/A
Light Tankers	LANDROVER DEFENDER, TOYOTA LANDCRUISER, MITSUBISHI CANTER, ISUZU NPS 300	3,700 TO 6,500 KG AND TANK CAPACITIES OF 534, 1000 AND 1500 LITRES DEPENDING ON APPLIANCE TYPE	428	26-30 UNITS	5-7 YEARS & 16-20 YEARS DEPENDING ON APPLIANCE TYPE	[redacted]	140	N/A

NOTES:

1 Quantity in stock interpreted as "Rolling Stock of Appliances"
2 Quantity in stock owned by FESA (HT = 18, MT = 42, LT = 152)
3 Quantity in stock granted to Local Government but built by FESA (HT = 111, MT = 226, LT = 276)
4 Cab chassis prices are for cab chassis only and do not include "pre & post build upgrades" e.g. rated tow points, bull bars, aluminium door handle plates, alternator upgrade, etc.

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x
Printed Name: Ron Zatella
Agency: FESA
Date: 14/02/2006

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-2-06

Bulk Purchasing Project
AFAC

Cab Chassis

	Make + Model	Carrying Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike In Purchasing
Heavy Tankers	Water Tankers (3000 litre 4x2) Iveco acco / SEM	3000l	10	0	10 - 15 years	[redacted]	0	2002/03
Medium Tankers								
Light Tankers								

Urban / Rural Interface
Appliance.
- Volume made 2000 LPM @ 700kPa
- Pass made 6000 LPM @ 1800kPa
- 250 HP. Engine

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date tested: 30/8/2006

Completed by: X

Printed Name: Robert Wilson

Agency: MFB

Signed off by: X

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06

Bulk Purchasing Project
AFAC

Cab Chassis

	Make, Model, Passenger Capacity, Drivetrain	GVM and Tank Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Mills-Tui (complete appliance) - [Isuzu cab chassis]		30	8 to 9	15 years	[redacted]	20	N/A
Medium Tankers								
Light Tankers								

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x T. Mlynarz
Printed Name: T. MLYNARZ
Agency: NSW FIRE BRIGADES
Date: 7 FEB 2006

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-2-06

Cab Chassis

Bulk Purchasing Project
AFAC

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3 PAGES

	Make + Model	Carrying Capacity	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Heavy Tankers	Isuzu FRR 500/550	4000-5000 litres	100	5-6 units	20 years	[redacted]	25	1999/00
Medium Tankers	Isuzu NPS 300	2000 litres	500	35	20 years	[redacted]	175	1999/00
Light Tankers	Nissan Patrol	600 litres	300	15	20 Years	[redacted]	75	1999/00

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 30/01/2006

Completed by:
x
Printed Name: Andrew Vasta
Agency: Manager Rural Operations Services
Date: 3/11/06

Signed off by:
x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10.2.06

Wildland PPC's

Bulk Purchasing Project
AFAC

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Hymark Tiapan (Side Zipper)	Av. 160	Av. 1000	1-10 years	[redacted]	3000	2001
Gloves	FirePro (Wildfire)	Av. 160	Av.2000	Av.2 years	[redacted]	5000	2004
Helmet	Protector (Tuffmaster)	Av. 1000	Av. 500	2-10 years	[redacted]	2500	1999
Jacket	S&H (NSWRFS)	Av.250	Av. 750	Av. 4 years	[redacted]	3000	1999
Pants	S&H (NSWRFS)	Av.250	Av.750	Av. 4 years	[redacted]	3000	1999

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 25/01/2006

Completed by: x
Printed Name: MICHAEL BROWNE
Agency: TAS FIRE SERVICE
Date: 06-02-06

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10.2.06

Bulk Purchasing Project
AFAC

Wildland PPC's

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Highmark Taipan		$1 274 000	2 years	[redacted]	approx 5000 - 6000 per annum	2003/2004
Gloves	Pacific Helmets Firestop - KCU		$280 304	2 years	[redacted]	approx 5000 - 6000 per annum	2003/2004
Helmet	Protector Alsafe HF44NSW		$232 000	2 years	[redacted]	approx 5000 - 6000 per annum	2003/2004
Jacket	Stewart & Heaton J017		$1 008 597	2 years	[redacted]	approx 6000- 8000 per annum	2003/2004
Pants	Stewart & Heaton T025		$793 913	2 years	[redacted]	approx 6000-8000 per annum	2003/2004

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x [signature]
Printed Name: Paul Springett
Agency: SW Rural Fire Service
Date: 6/02/2006

Signed off by: x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10-2-06

Bulk Purchasing Project
AFAC

Wildland PPC's

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Taipan 5072	265	$40,000	2 years	[redacted]	$150,000	2004-2005
Gloves	All Gloves Fire Pro Wildfire	327	$3,500	1 year	[redacted]	$10,000	2004-2005
Helmet	Pacific BR9	200	$32,000	3-5 years	[redacted]	$35,000	2005
Jacket	Stuart & Heaton	179	$26,000	3-5 years	[redacted]	$84,000	2004-2005
Pants	Stuart & Heaton	281	$13,000	3-5 years	[redacted]	$39,000	2004-2005

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x [signature]

Printed Name: Russell Shephard

Agency: ACT ESA

Date: 2-Feb-06

Signed off by: x [signature]

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 10.2.06

Wildland PPC's

Bulk Purchasing Project
AFAC

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Oliver Level 1 & 2 Fire Fighting Boots	Nil	2536	5 years	[redacted]	10000	January 2003
Gloves	All Glove Industries FirePro	Nil	9000	2 years	[redacted]	45000	January 2003
Helmet	Pacific Helmets F3EK2 BR5	Nil	2054	5 years	[redacted]	10000	January 2003
Jacket	Stewart & Heaton Rural Fire Fighter Jacket	120	3215	2 years	[redacted]	16000	January 2003
Pants	Stewart & Heaton Rural Overtrousers	150	4570	2 years	[redacted]	22500	January 2003

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x

Printed Name: S. FRANKLIN

Agency: CFA

Date: 7/2/06

Signed off by: x

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 20-2-06

Wildland PPC & PPE

Bulk Purchasing Project
AFAC

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Various	Nil	Est 2000 pair	5 years	[redacted]	10,000	N/A
Gloves	Various	Nil	Unknown	As required	[redacted]	10,000	N/A
Helmet	Mainly Pacific Helmets (BR5 or BR9)	Nil	Est 2000	5 years	[redacted]	10,000	N/A
Jacket	Stewart & Heaton or Remlap (Wildland)	Nil	Est 2000	5 years	[redacted]	10,000	N/A
Pants	Stewart & Heaton or Remlap (Wildland)	Nil	Est 2000 pair	5 years	[redacted]	10,000	N/A

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x [signature] Tindall

Printed Name: TINDALL

Agency: SACFS

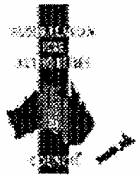
Date: 10/02/2006

Signed off by: x [signature]

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06



Wildland PPC's

Bulk Purchasing Project
AFAC

	Make + Model	Quantity in Stock (1)	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Wildfire L1	Oliver Style 20-292 269 prs (all sizes) Blunderstone 20 prs of each size	Oliver: 1140 Prs B/stone 73 prs	dependent on wear & tear	[redacted]	6000 prs	N/A
Gloves	Wildfire L1	Supplier has 1500 units of various sizes	5370 prs	dependent on wear & tear	[redacted]	Based on renewal of all requirements 27,000 prs	N/A
Helmet	Wildfire L1	Supplier has 68 units of various sizes	734 units of various sizes	dependent on wear & tear	[redacted]	Based on renewal of all requirements 3,670 units	N/A
Jacket	Tunic L1	Supplier has 242 units of various sizes	2043 Units	dependent on wear & tear	[redacted]	Based on renewal of all requirements 10,215 units	N/A
Pants	NG101	Base stocks not kept. All made to order	1801 units	N/A	[redacted]	Based on renewal of all requirements 9000 Units	N/A

Bulk Purchasing Project
AFAC

Wildland PPC's

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Taipan - front zippler, Level 2 (Style 5072/4821 AS/NZS 4821 (Int) 2002)	32	65	SOLE has a shelf life for life	[redacted]		2000/2001
	Taipan - side zippler, Level 2 (Style 5072/4821SZ AS/NZS 4821 (Int) 2002)	85	352	SOLE has a shelf life for life			
	OLIVER - Level 2 (Style 20292 AS/NZS 4821 (Int) 2002)	78	134	Guaranteed 24 months in storage			
Gloves	FIRESTOP *Not individual issue (KCW Level 1 AS2161.6 (Int))	25	77	Wear & tear	[redacted]		Nov. 2003
Helmet	Wildland *Not Individual Issue (BR 5 - Type 1 AS1801:1977)			Subject to annual independent testing scheme	[redacted]		Nov. 2003
Jacket	Wildland (PROBAN 330gsm)	118	224		[redacted]		2-May
Pants	Strucutral F/F (NOMEX)	21	510	5 years	[redacted]		Oct 2000 to March 2001

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x E Beernaerski
Printed Name: Elizabeth Beernaerski
Agency: Metropolitan Fire & Emergency Services Board
Date: 9.2.06.

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 17-2-06

Bulk Purchasing Project
AFAC

Wildland PPC' & PPE

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Oliver - Structural Firefighting Boots (Model 20292)	0	2500	1 year	[redacted]	12500	N/A
Gloves	Shelby - Structural Firefighting Gloves (Model 5009 Type2 (Shelby))	0	1500	Expected 1 year, dependent on number and type of incidents	[redacted]	7500	N/A
Helmet	Pacific (BR9)	0	400	3 to 9 years	[redacted]	2000	N/A
Jacket	CTE (NSWFB specified)	0	1500	1 to 10 years	$[redacted]	7500	N/A
Pants	CTE (NSWFB specified)	0	1500	1 to 10 years	[redacted]	7500	N/A

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 23-1-06

Completed by: x T.Mlynarz

Printed Name: T.MLYNARZ

Agency: NSW FIRE BRIGADES

Date: 7 FEB 2006

Signed off by: x

Printed Name: Len Foster

Position: CEO, AFAC Limited

Date: 17-2-06

Wildland PPC's

	Make	Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Haix	Fire Top Boot	held with supplier	767	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1
Boots	Highmark	DDR5072 lace-in sipper DDR5072 quick release side zip	held with supplier	620 pair	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1
Gloves	Pacific Helmets	Fireman VIII	held with supplier	885 pair	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1
Helmet	Pacific	F4KPQ	held with supplier	657	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1

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Bushfire Jacket	ADA		held with supplier	632 (2005 calendar year)	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1
Jacket	ADA		held with supplier	855 (2005 calendar year)	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1
Pants	ADA		held with supplier	975 (2005 calendar year)	refer Alby McLean after Feb 1	[redacted]	refer Alby McLean after Feb 1	refer Alby McLean after Feb 1

Issued by: Daniel Caron
Ryan Lewis
David Pesce
Date Issued: 23-1-06

Completed by: x
Printed Name: Sharon Clark
Agency: QFRS
Date: 10/02/06

Signed off by: x
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10.2.06

Wildland PPC's

Bulk Purchasing Project
AFAC

	Make + Model	Quantity in Stock	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
Boots	Taipan 5074	250 pr	varies	1 year	[redacted]	n/a	n/a
Gloves	Pacific Fire walker	300	varies	n/a	[redacted]	n/a	n/a
Helmet	Protector HH44	500	varies	as per standard minimum of 3 yrs unless damaged	[redacted]	n/a	n/a
Jacket	AFAC standard SE	200	varies		[redacted]	n/a	n/a
Pants	AFAC standard SE	200	varies		[redacted]	n/a	n/a

Issued by: Daniel Caron
Ryan Lewis
David Pesce

Date Issued: 30/01/2006

Completed by:
x [signature]
Printed Name: A. ~~Andrew Vasta~~
Agency: Manager Rural Operations Service
Date: 31/1/06

Signed off by:
x [signature]
Printed Name: Len Foster
Position: CEO, AFAC Limited
Date: 10.2.06

C.4 Comparative Data Spreadsheets

This section shows the spend data collected from all of the agencies on one spreadsheet for each commodity. This allows for easy comparison between agencies.

Bulk Purchasing Project
AFAC

Breathing Apparatus - Air Cylinder

	Make + Model	Cylinder Size	Cylinder Pressure	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Luxfer EFIC SCI	6.9 litres	300 bar	$11,400	15 years	[redacted]	$57,000	03
CFA	Luxfer LG2E/6 SCI GC	9 litres	200 bar	$212,000	15 years	[redacted]	$397,500	01
CFS	Sabre	9 litres	205 bar	n/a	15 years	[redacted]	n/a	n/a
FESA	Luxfer AA6061	6.8 litres	300 bar	n/a	15 years	[redacted]	n/a	00 - 04
MFB	Dräger Carbon Fibre	6 litres	300 bar	$26,250	10 years	[redacted]	$131,250	99
NSW	Sabre 1182451 Dräger 3540070	9 litres 6 litres	207 bar 300 bar	$415,800 est.	15 years	[redacted]	$15,750,000 est.	05 - 06
QFRS	Luxfer Rascal Heiser	9 litres 2 litres 6.8 litres	200 bar 200 bar 300 bar	$89,460 est.	15 years	[redacted]	$740,880 est.	n/a
RFS	Sabre Contour Luxfer	9 litres	200 bar	$39,590	5 years	[redacted]	n/a	n/a
TFS	Dräger Fibre Wrap Dräger Carbon Fibre	9 litres 6.8 litres	207 bar 300 bar	$76,000	15 years 15 years	[redacted]	$105,000 $0	05 04

Bulk Purchasing Project
AFAC
Breathing Apparatus - Full Sets, Face Mask and Accessories

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Sabre Contour Sabre Centurion	$12,504	12 years	[redacted]	$62,520	01
CFA	Sabre Centurion Dräger PA 94	$62,318 $20,772	10 years	[redacted]	$451,060	00
CFS	Sabre Centurion	$0	12 years	[redacted]	1200 units	94
FESA	MSA BD96	n/a	15 years	[redacted]	n/a	00 - 04
MFB	Dräger Futura Face Mask Dräger PA94	n/a	10 - 15 years	[redacted]	n/a	99
NSW	Dräger Sabre MSA	$22,000 est.	3 years	[redacted]	$1,100,000 est.	05 - 06
QFRS	Sabre SE400	n/a	12 years	[redacted]	n/a	98
RFS	Sabre Vision 3	n/a	5 years	[redacted]	n/a	n/a
TFS	Dräger PA 90 Series Dräger PSS 100	$0 $13,500	10 - 20 years 10 - 20 years	[redacted]	$0	02 - 03 n/a

Bulk Purchasing Project
AFAC

Cab Chassis - Heavy Tankers

	Make + Model	Tank Capacity	GVM	Horsepower	Chassis Length	Minimum Entry / Exit Angle	Annual Purchases	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Isuzu FTS 750 CAFS 4x4 crew cab Hino Ranger 8Z 4x4 crew cab	3,300 litres 3,500 litres	13,000 kilos ***	220 hp ***	7.8 metres ***	25 / ***	$275,000 est.	[redacted]	$1,375,000 est.	04 - 05
CFA ###	Hino Ranger Pro 8Z 4x4 crew cab	3,000 litres	13,900 kilos	212 hp ***	7.6 metres ***	30 / ***	$2,325,000	[redacted]	$11,625,000 est. @@@	04
CFS	Isuzu FTS750 4x4 crew cab	3,000 litres	13,000 kilos	220 hp ***	7.8 metres ***	25 / ***	$2,958,000	[redacted]	$13,050,000	06 - 07
FESA	Isuzu FTS 750 4x4 sng/crew cab Hino 8Z 4x4 sng/crew cab	3,000 - 4,000 litres	13,000 kilos	***	***	***	$160,000 est.	[redacted]	$800,000 est.	n/a
MFB	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NSW	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
QFRS	Isuzu FRR 500/550 4x2 single cab	4,000 - 5,000 litres	10,400 kilos	220 hp ***	7.22 metres ***	***	$500,000 est.	[redacted]	$2,250,000 est.	99 - 01
RFS	Isuzu FTS 4x4 single cab 4x4 crew cab	4,050 litres 3,300 litres	13,000 kilos	220 hp ***	7.48 metres ***	30 / ***	$10,000,000 est.	[redacted]	$40,000,000 est.	n/a
TFS	Isuzu FTS 750 4x4 crew cab	3,000 litres	13,000 kilos ***	220 hp ***	7.48 metres ***	***	$1,800,000 est.	[redacted]	$3,600,000	n/a

*** agencies have declaired this number negotiable with the supplier
the CFA has an added clause in the tender for the manufacter to modify the wheelbase
@@@ this number is estimated based on the three year data supplied by the CFA

Bulk Purchasing Project
AFAC

Cab Chassis - Light Tankers

	Make + Model	Tank Capacity	GVM	Horsepower	Chassis Length	Minimum Entry / Exit Angle	Annual Purchases	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Toyota Landcruiser 4x4 single cabs	500 litres	3,300 kilos ***	129 hp ***	5.3 metres ***	25 / ***	$100,000	[redacted]	$500,000 est.	05
CFA	Isuzu NPS300 4x4 single cab	1,500 litres	6,500 kilos	114 hp ***	6.125 metres ***	***	$0	[redacted]	$1,755,000 est. @@@	05
CFS	Isuzu 4x4 crew cab	1,000 litres	6000 kilos	148 hp ***	5.95 metres ***	25 / ***	$57,094	[redacted]	n/a	83
FESA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MFB	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NSW	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
QFRS	Nissan Patrol 4x4 single cab	600 litres	3,700 kilos	147 hp ***	5.3 metres ***	***	$870,000	[redacted]	$4,350,000	99 - 00
RFS	Toyota Landcruiser 4x4 single cab	600 litres	3,500 kilos	129 hp ***	5.3 metres ***	30 / ***	$1,100,000	[redacted]	$5,859,000 est.	n/a
TFS	Toyota	540 litres	3,500 ###	129 hp ***	5.3 metres ***	***	$1,975,000	[redacted]	$592,500	05

*** agencies have declaired this number negotiable with the supplier
the TFS has an added clause in the tender for the manufacturer to modify GVM from 3,300 (standard) to 3,500
@@@ this number is estimated based on the three year data supplied by the CFA

Bulk Purchasing Project
AFAC

Wildland PPC's - Boots

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Highmark 5072	$40,000	2 years	[redacted]	$150,000	04-05
CFA	Oliver Level 1 Oliver Level 2	$308,400 est.	5 years	[redacted]	$1,500,000 est.	03
CFS	Highmark Oliver	$360,000 est.	5 years	[redacted]	$1,800,000 est.	n/a
FESA	Oliver Wildfire L1	$204,000	n/a	[redacted]	$1,020,000	n/a
MFB	Highmark Style 5072/4821 Highmark Style 5072/4821 SZ Oliver Level 2	$9,977 $59,488 $26,264	n/a	[redacted]	n/a	00 - 01
NSW	n/a	n/a	n/a	[redacted]	n/a	n/a
QFRS	Highmark 5074	n/a	1 year	[redacted]	n/a	n/a
RFS	Highmark	$1,274,000	2 years	[redacted]	$3,500,000 est.	03 - 04
TFS	Highmark	$188,000	1 - 10 years	[redacted]	$564,000	01

Bulk Purchasing Project
AFAC

Wildland PPC's - Gloves

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	All Gloves	$3,500	1 year	[redacted]	$10,000	04 - 05
CFA	All Gloves	$117,000	2 years	[redacted]	$585,000	03
CFS	Pacific Helmets	n/a	n/a	[redacted]	$3,125,000 est.	n/a
FESA	All Gloves Wildfire L1	$72,495	n/a	[redacted]	n/a	n/a
MFB	Pacific Helmets Firestop KCW Level 1	$1,925	n/a	[redacted]	n/a	03
NSW	n/a	n/a	n/a	[redacted]	n/a	n/a
QFRS	Pacific Helmets Fire walker	n/a	n/a	[redacted]	n/a	n/a
RFS	Pacific Helmets Firestop KCU	$280,304	2 years	[redacted]	$756,000 est.	03 - 04
TFS	All Gloves	$22,000	2 years	[redacted]	$55,000	04

Bulk Purchasing Project
AFAC

Wildland PPC's - Helmets

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Pacific Helmets BR9	$32,000	3 - 5 years	[redacted]	$35,000	05
CFA	Pacific Helmets BR5	$338,910 est.	5 years	[redacted]	$1,650,000 est.	03
CFS	Pacific Helmets BR5 + BR9	$260,000 est.	5 years	[redacted]	$1,300,000 est.	n/a
FESA	Protector Alsafe Wildfire L1	$26,350	n/a	[redacted]	n/a	n/a
MFB	Pacific Helmets BR 5 Type 1	$2,000 est.	n/a	[redacted]	n/a	03
NSW	Pacific Helmets BR9	$44,000	3 - 9 years	[redacted]	$220,000 est.	n/a
QFRS	Protector Alsafe HH44	n/a	3 years	[redacted]	n/a	n/a
RFS	Protector Alsafe HF44NSW	$232,000	2 years	[redacted]	$800,000 est.	03 - 04
TFS	Protector Alsafe Tuffmaster	$18,750	2 - 10 years	[redacted]	$93,750	99

Bulk Purchasing Project
AFAC

Wildland PPC's - Jackets

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Stewart & Heaton	$26,000	3 - 5 years	[redacted]	$84,000	04 - 05
CFA	Stewart & Heaton	$315,070	2 years	[redacted]	$1,568,000	03
CFS	Stewart & Heaton Wildland	$236,000 est.	5 years	[redacted]	$1,180,000 est.	n/a
FESA	Stewart & Heaton Tunic L1	$236,068	n/a	[redacted]	n/a	n/a
MFB	CTE Wildland Proban 330gsm	$20,216	n/a	[redacted]	n/a	02
NSW	CTE	$162,000	1 - 10 years	[redacted]	$810,000	n/a
QFRS	ADA	n/a	n/a	[redacted]	n/a	n/a
RFS	Stewart & Heaton J017	$1,008,597	2 years	[redacted]	$770,000 est.	03 - 04
TFS	Stewart & Heaton J017	$80,250	4 years	[redacted]	$321,000	99

Bulk Purchasing Project
AFAC

Wildland PPC's - Pants

	Make + Model	Annual Purchases	Life Expectancy	Cost per Unit	Expected Purchases Over Next 5 Years	Date of Last Spike in Purchasing
ACT	Stewart & Heaton	$13,000	3 - 5 years	[redacted]	$39,000	04 - 05
CFA	Stewart & Heaton	$301,620	2 years	[redacted]	$1,485,000	03
CFS	Stewart & Heaton Wildland	$135,000 est.	5 years	[redacted]	$675,000 est.	n/a
FESA	Stewart & Heaton NG101	$194,436	n/a	[redacted]	n/a	n/a
MFB	na	na	na	[redacted]	na	na
NSW	CTE	$423,000	1 - 10 years	[redacted]	$2,115,000	n/a
QFRS	ADA	n/a	n/a	[redacted]	n/a	n/a
RFS	Stewart & Heaton T025	$793,913	2 years	[redacted]	$2,555,000 est.	03 - 04
TFS	Stewart & Heaton T025	$53,250	4 years	[redacted]	$213,000	99