

# ***THE VOLUNTEER ANNUAL***

Official Journal for The Country Fire Services South Australia

## **INCORPORATING THE CFS MANUAL 1984**

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Country Fire Services  
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S.A. 5034. Telephone (08) 297 6788

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## OUR DUTY IS TO SERVE THE COMMUNITY

Some months ago the Minister of Emergency Services announced the appointment of a "Fire Services Co-ordination Committee". The terms of reference of that Committee are as follows:

- (a) To examine the adequacy of co-operation between the Metropolitan Fire Service and Country Fire Services and to formalise and develop the "Mutual Aid Plan"
- (b) To take all steps possible to effect co-ordination between the services in emergency or disaster situations
- (c) To identify any necessary or desirable improvements in the Disaster Plan (Fire)
- (d) To sponsor and encourage the preparation of local/district Disaster Plans and the integration of such Plans into Divisional Plans
- (e) To make recommendations on other matters affecting both services as specified by the Minister
- (f) Sponsor and encourage liaison between the Fire Services and all other Functional/Emergency Services
- (g) Consider ways in which financial, administrative and purchasing arrangements can be harmonised so as to ensure monies spent on the State's fire services are effectively used
- (h) To report to the Minister on the activities of the Committee
- (i) To examine and report on the adequacy or otherwise of the existing S.A. Metropolitan Fire Service and Country Fire Services Acts in relation to the authority of fire officers to operate in respective fire districts
- (j) To examine the present method of funding the South Australian Metropolitan Fire Service and the Country Fire Services
- (k) To recommend an alternative method(s) of funding the South Australian Metropolitan Fire Service and the Country Fire Services which would be more equitable to all those who are the potential beneficiaries of the Services.

### Membership of the Committee is:

Mr. W. C. Davies	Chairman
Mr. L. C. Johns	Director, C.F.S.
Mr. A. W. Bruce	Chief Officer, M.F.S.
Mr. R. Kilmire	Deputy Commissioner of Police
Mr. D. C. Gerschwitz	General Manager S.G.I.C.
Mr. D. Ross	President, L.G.A.

The Committee has met regularly since establishment and a number of initiatives will be recommended to the Minister of Emergency Services which will, if implemented, *better serve the community we protect.*

The Government, the people and the State can neither afford nor tolerate parochial competition which leads to boundary disputes, duplication of duties and a lack of co-ordinated effort in the vital role we play in maintaining South Australia's fire protection and fire safety.

However, just being a volunteer member of the C.F.S. is not good enough. There must be a commitment to train, to attend meetings, to improve one's skills and knowledge. The technological advances of today bring greater hazards than ever before and the history of our past bushfires will not let us rest on any laurels.

With the resources at our disposal we are both fully committed to supporting you and your metropolitan colleagues to meeting the challenges of tomorrow.



L. C. JOHNS  
Director, C.F.S.



A. W. BRUCE  
Chief Officer, M.F.S.

## A LETTER FROM THE MINISTER



MR. J. D. WRIGHT, M.P.  
MINISTER OF EMERGENCY SERVICES

I would like to take the opportunity afforded by 'The Volunteer' to briefly explain the changes recently announced by the State Government in relation to the Country Fire Services.

As I explained in State Parliament, and subsequently to all C.F.S. Brigades in South Australia, the changes were prompted by the various criticisms of the C.F.S. structure in numerous reports following the Ash Wednesday bushfires of 1983. As I also stated in Parliament the changes were not a reflection on individuals but rather the structures which did not allow decisions to be made in a way that was necessary for running a successful Fire Service.

The plans can be divided up into an interim arrangement to carry us over the present summer and a two pronged long term arrangement. For the present summer an Interim Board consisting of five members will be established to replace the previous ten member board.

This Interim Board will consist of an independent Chairperson, the Under Treasurer or his nominee, a representative from Local Government, a representative from C.F.S. Volunteers, and the Director of the Country Fire Services. The long term plan which the Government hopes to have in place by the end of the summer will have two aspects.

The first is that a Director and Chief Officer will be appointed to run the day to day operations of the Country Fire Services and these two officers will be answerable to the Minister. Both these positions will be advertised in such a way that people with a strong background in fire service and with appropriate managerial qualifications will be attracted to the C.F.S.

The second aspect of the long term plans concerns the establishment of an advisory body to the management of the C.F.S. Because the C.F.S. has been, and will continue to be, a community based organisation, the Government wants to ensure that those groups in the community who have a genuine concern in bushfire prevention are given a voice. Accordingly we have decided to establish a Bushfire Authority which will be an advisory body to the restructured Country Fire Services. The Bushfire Authority will include representatives from such bodies as C.F.S. Volunteers, Local Government, the insurance industry, National Parks and Wild Life, and the Department of Lands.

It will be able to advise the C.F.S. on fire prevention and development of standards of fire cover as well as having some statutory powers in relation to fire prevention. Once the legislation providing for this restructuring of the C.F.S. and the establishment of the Bushfire Authority has been passed by Parliament, the Interim Board will be dissolved and the new structures will take over the management of the Country Fire Services.

The Government is also reviewing the fire fighting role of the C.F.S. and the equipment that is required to undertake that task. The Fire Services Co-ordination Committee, which I set up earlier this year, has already identified areas that need upgrading, and action will be taken before the end of 1984 to implement those recommendations.

The Government is confident that the new C.F.S. structures will streamline the management, improve fire fighting capabilities, and give new impetus to the very important area of fire prevention.

I want to make it absolutely clear that the Government does not want to interfere in the workings of the individual C.F.S. Brigades. It does not want to set up an inflexible bureaucracy and it has no intention of dismantling the volunteer system which has served the State so well for so many years.

As a Government our over-riding concern has been to make the operation of the C.F.S. as efficient as possible for the benefit of the volunteers, and ultimately the community.

The Government appreciates the work done by C.F.S. volunteers. As I have said previously, without the volunteers there would be no C.F.S.

I look forward to your support in making the C.F.S. the best unit possible for fighting fires in the rural areas of South Australia.

19th November, 1984.

Jack Wright  
DEPUTY PREMIER and  
MINISTER OF EMERGENCY SERVICES

# C.F.S. Board Profile

## MESSAGE FROM THE CHAIRMAN

In his letter to all C.F.S. Volunteers in October the Deputy Premier and Minister of Emergency Services the Hon. Jack Wright advised the changes the State Government proposed in relation to the Country Fire Services.

Following the enactment by Parliament of the Government's amendments to the Country Fires Act the Governor in Executive Council has appointed a new C.F.S. Board comprising Mrs. Meredith Crome representing Local Government, Mr. Peter Swann representing C.F.S. volunteers, Mr. Graham Foreman a Senior Treasury Officer, the Director Mr. Lloyd Johns, and myself as Chairman.

Our two main tasks are to fulfil our statutory responsibility "for the organization and control of fire fighting services outside fire brigade districts" and to implement the other changes advised in the Minister's letter to volunteers.

In performing those tasks we will be heavily dependent upon the continuing high level of support and cooperation of the volunteer fire fighters, their Brigades and Local Government Authorities throughout the State.

As stated in the Minister's letter the Board for its part will use its best endeavours to "make the operation of the C.F.S. as efficient as possible for the benefit of the Volunteers, and ultimately the community".

The new Board has held its first meeting and set in train some of the proposed changes of which you will be advised in due course.

We look forward to working with you in this most important and essential activity.

Ken Taeuber, Chairman, C.F.S. Board.



MR. K. C. TAEUBER, A.U.A., F.A.I.V., A.A.S.A.  
CHAIRMAN, C.F.S. BOARD

Mr. Ken Taeuber was educated at Peterborough High School and attended the University of Adelaide.

He has an Associate Diploma in Public Administration; Associate Dip. Australian Society of Accountants; Life Fellow, Australian Institute of Valuers; Fellow, Royal Australian Institute of Public Administration; Formerly Fellow, Australian Institute of Management.

Mr. Taeuber held the offices of Director-General of Lands (1976-1983); Chairman S.A. Land Commission (1973-1982); Commissioner Public Service Board (1968-1973); Commissioner of Land Tax (1961-1968); Deputy Chairman State Government Insurance Commission (1971-1976); Member, S.A. Water Resources Council (1980-1984); Member, National Committee of Inquiry into Housing Costs (1977-1978); Formerly Australian and State President Australian Institute of Management; Representative for Australia at three International meetings on land administration.

Married to wife Dorothy, with five children and seven grandchildren Mr. Taeuber is a veteran of the 1939-1945 war. He flew heavy bombers in R.A.A.F. Bomber command in Europe.



MRS. E. M. CROME  
C.F.S. BOARD MEMBER  
REPRESENTATIVE OF LOCAL GOVERNMENT

Mrs. Meredith Crome holds a Diploma of Local Government Administration and is a lecturer at the Adelaide College of Technical and Further Education.

Mrs. Crome is a member of: the Local Government Advisory Committee; S.A. Local Government Industry Training Committee; Library board of S.A.; Advisory Council for Intergovernment Relations; National Local Government Industry Training Committee; Executive of New Directions for Community Services; Local Govt. Clerks Examination Committee; Local Govt. Assoc. Finance and Economic Development Committee and member of the Environmental Protection Council. Offices are also held of Chairman; A.C.R.O.D. Local Govt. Committee, Local Govt. Assoc. Tax Sharing Working Party, Local Govt. Assoc. Communications Working Party and Immediate Past President, Local Government Association.

Mrs. Crome is involved in many and varied community related projects and sports activities. She received a Jaycee Award, as one of S.A.'s Five Outstanding Young Australians (1983).

In service to local government Mrs. Crome held offices of Councillor for South Ward, Gawler Town Council (1972-1983); Deputy Mayor Gawler Town Council (1978-1983); Delegate (1972-1975) and President (1975) Mid North Local Govt. Assoc.; Delegate (1974-1982) and Chairman (1976) Northern Metropolitan Regional Organisation; Chairman, Gawler Town Council Health, Welfare and Recreation Committee (1978-1979) and Chairman, Gawler Town Council Finance Committee (1980-1981). In addition to other positions held Mrs. Crome was a member of the Review Committee of Country Fire Services (1983-1984) and a member of the State Local Government Legislative Working Party.

Continued page 5.

## C.F.S. Board Profile continued



MR. PETER J. SWANN  
C.F.S. BOARD MEMBER  
CHAIRMAN, S.A. VOLUNTEER FIRE BRIGADES ASSOCIATION  
REPRESENTATIVE OF C.F.S. VOLUNTEERS

Mr. Peter J. Swann, chairman of the newly formed South Australian Volunteer Fire Brigades Association was a past member of the C.F.S. Board (1979-1983).

Mr. Swann's fire service career commenced as an auxiliary fireman (Kapunda F.B. 1960), joined Kapunda E.F.S. (1965) appointed sub-station officer and D/C fire control officer (1966), D/C appointed controller of S.E.S., station officer and district council fire supervisor (1967); district officer (1968), qualified at Mt. Macedon as rescue instructor (1969). Elected volunteer regional officer C.F.S. Region 2 (1968-1980)—until position became redundant, served as an executive member Lower North Fire Fighting Association (1968-1983), vice-president (1968), re-elected (1971) elected to district council of Kapunda (1970-1972) and (1973-1979), was mid-north local govt. S.E.S. representative, past C.F.S. board member (1979-1983) and member of past C.F.S. Board Committees.

He was awarded Life Membership of Kapunda Brigade (1976); British Fire Service Long Service medal—10 years (1975), Australian National Medal (1978), British Fire Service Long Service medal—20 years (1982) and the British Fire Service Centenary medal (1983)—seventh in Australia.



MR. G. FOREMAN B. Ec.  
C.F.S. BOARD MEMBER  
REPRESENTATIVE OF TREASURY

Mr. Graham Foreman since graduating with a Bachelor of Economics from Adelaide University (1967) has worked largely in the central departments of the South Australian Government for Treasury, Premier and Cabinet and Public Service Board.

Mr. Foreman has also worked in the private sector, the Engineering and Water Supply Department was consultant to the Federal Government Inquiry in Canada and member of the S.A. Local Government Grants Commission (1977-1979).

He currently holds the office of Director (Budgets) in the budget branch of Treasury. Mr. Foreman is married with two children.



MR. L. C. JOHNS  
C.F.S. BOARD MEMBER  
C.F.S. DIRECTOR

Mr. Lloyd C. Johns prior to his appointment as C.F.S. Director in 1979, had 18 years service with the New Zealand Fire Service, was Director of Training (1972-1976) and Commandant of the Fire Service Training College in Wellington. He introduced decentralised training programmes throughout New Zealand.

Mr. Johns is a Fellow of the Institution of Fire Engineers (U.K.) and an Associate of the N.Z. Institute of Management, the Australian Institute of Management and the Australian Institute of Personnel Management.

He is a Winston Churchill Travel Fellow and has studied fire fighting and administrative procedures in Europe and the U.S.A.

Born in New Zealand, Mr. Johns is married and has two daughters and one son.

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## EDITORIAL

### "BUSINESS AS USUAL"

In spite of three administrative and five operational inquiries into the Country Fire Services in the last three years, there has been a strict policy at C.F.S. Headquarters of "Business as Usual".

During the period since the Ash Wednesday II fires, a number of initiatives and/or activities have been addressed by Headquarters personnel. For example, the imposition of 24 hour fire bans resulted from representations by several fire fighting associations to the C.F.S. Board. The development of a Mutual Aid Plan came from the need to ensure that the community is not disadvantaged by C.F.S./M.F.S. boundaries.

The establishment of the South Australian Volunteer Fire Brigades Association marks a cornerstone in the future development and welfare of the Country Fire Services. The increased penalties will hopefully act as a deterrent to the negligent and careless.

In all, nearly twenty activities and initiatives have been addressed—aimed at both providing a more efficient service to the community, and better serving the C.F.S. Brigades throughout the State.

The forthcoming festive season brings joy and hope to Australians everywhere. For the C.F.S. it brings the knowledge that it's going to be a long hot summer!

LLOYD C. JOHNS,  
Director  
S.A. Country Fire Services

# Letters to the Editor.

## TRAINING BY TELECOM

Dear Sir,

In response to a request a fire safety training session was recently carried out at the Coromandel Valley C.F.S. Brigade by the Senior Fire Safety Officer, Telecom Australia S.A. & N.T., and accordingly, this report is forwarded for your information.

The format of the training session was as follows.

A broad description of the various types of Telecommanned and unmanned communication buildings and associated fire protection, prevention methods was outlined.

A practical demonstration illustrating the functions of thermal, early warning (smoke) and halon suppressant fire detection systems was demonstrated, and the recently Telecom designed detector "Tell Tale Detector Indicator" was introduced. With the aid of a portable fire indicator board, procedures required when attending a fire alarm from an automatic FIB were demonstrated.

The practical application of portable hand fire extinguishers as provided for in Telecom occupied premises was demonstrated, and the Telecom film, "Extinguishers" was shown.

The subject of training Telecom personnel in precautions to be taken when working in bush fire prone areas was discussed and the Telecom film, "Survive the Bushfire" was shown.

The number of C.F.S. personnel who attended, the standard of questions asked, and the general interest shown in the subjects was encouraging to the speaker. It was also pleasing to see the number of Telecom employees actively associated with this worthy volunteer organisation.

Yours sincerely,

M. V. BAMPTON  
for STATE MANAGER  
Telecom Australia

## SEEKING EQUIPMENT

Dear Sir,

Earlier in the year I purchased from the Athelstone brigade an old ex-N.S.W. Dennis pump which is now about to be restored. Also in my museum are various items related to fire brigades and the business of fire detection and extinction, many of the items coming from overseas, which will serve to complement the Dennis appliance.

It may well be that others of your brigades have from time to time bits and pieces of equipment, serviceable or otherwise, that are surplus to requirement and I would welcome the opportunity to consider purchase of items, other than fire trucks for which there is a severe limitation on space, that may be nominated for disposal.

To address my comment to Brigades on an individual basis would seem to be very much in the nature of a "round the houses" approach so to this end would it be possible for my interest to be conveyed to your brigades through the pages of the Volunteer?

Yours faithfully,

S. G. Young  
(Curator)  
The Morphett Collection  
8 Creighton Avenue  
MORPHETT VALE 5162  
Telephone (08) 382 3519

## CONGRATULATIONS

S.A. Country Fire Services members and friends congratulate Jo and Tony Chrichton on the birth of their second boy, Cass. Born 23rd November 1984 at Ashford Community Hospital. Weight 9 lb 1½ oz.

Tony holds the position of Assistant Chief Officer Technical Services (previous title: Superintendent, Research Division) at C.F.S. Headquarters.

Front cover:

## Aerial Retardant Program

The State Government in its budget this year provided the Country Fire Services with funds to conduct an aerial retardant program, as further protection for South Australia.

The agricultural aircraft to be used will be similar to the one pictured on front cover.

The aircraft featured is a D.H.C. 2 Beaver, with 450 h.p. radial motor supplied on loan, courtesy of South Australian Agriculture Aviation of Virginia. The beaver carries between 900 to 1,000 litres of fire retardant.

This aircraft or similar will be on standby this summer for immediate initial attack and support to ground forces.

It is anticipated that the aircraft will be airborne within 2 minutes of call, and in inaccessible areas it is most likely that the first load of retardant can be dropped at the head of the fire prior to the arrival of the first fire appliance.

The aircraft operating through C.F.S. Headquarters will be available for use by any of the other emergency services on request.

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## NOTICE TO BRIGADES AND MEDIA SMOKEY'S BIRTHDAY PARTY 1985

Smokey's birthday party will be held on Wednesday 23rd January 1985, at Colley Reserve, Glenelg.  
The fun begins at 10.00 a.m. . . be early.

## NEW CENTRAL BODY FOR FIRE FIGHTING ASSOCIATIONS.

**The eighteen regional Fire Fighting Associations in South Australia have come together under a new central body, the South Australian Volunteer Fire Brigades Association.**

The formation of the new co-ordinating body took place at the annual conference of the regional fire fighting associations held at Country Fire Services headquarters on 1st October 1984.

The new association's inaugural Chairman, Mr Peter J. Swann, of Kapunda, said that up until the present the 18 regional groups had acted independently, without any central parent body.

"Our new association, representing the State's 15,000 registered C.F.S. volunteers, will allow us to speak with one voice," Mr Swann said.

The Volunteer Fire Brigades Association's objectives are:

- (1) To make recommendations to the Country Fire Service Board and other appropriate authorities, and to promote public concern in measures to be taken in the interest of Fire Prevention and Fire Extinction in the Saving of Life and Property.
- (2) To recommend to the Country Fire Service Board measures for consideration in the development and efficient operation of the Country Fire Service.

Mr Swann said that what up until now has been the annual conference of the regional fire fighting associations each September, would in future become the new Association's annual meeting.

Vice president is Mr Frank M. Miller, of Lamerook; and Secretary is Mr Graham Koch, of Bordertown.

The Country Fire Service is going through major changes and the support of every member will be required to give the Service the status it deserves.

There are many benefits to be gained from co-operation and inter-action with the Fire Services in other States, said Mr. Swann.

*"Hoping all Country Fire Service Members will give the new South Australian Association their full support."*

### FIRE FIGHTERS' NEW EXECUTIVE



The South Australian Volunteer Fire Brigades Association three-man executive is pictured above from left: the secretary Mr. Graham Koch of Bordertown, the inaugural Chairman Mr. Peter J. Swann of Kapunda and Vice President Mr. Frank Miller of Lamerook.

## REGIONAL F.F.A. DELEGATES CONFERENCE

### Brief Report

Several items discussed and resolutions passed at the final annual conference of Regional Fire Fighting Association Delegates held on Monday October 1st 1984, are listed below:

#### APPLIANCES:

Following the members endorsement of specifications for a minimum standard pump for inclusion in the C.F.S. Board Appliance Equipment Specifications, a later meeting by the Board approved 5 types of standards for fire appliances (i.e. type 1 to type 5), to assist brigades in complying with the "Standards of Fire Cover".

#### HAZARD MAPPING:

A programme of hazard mapping initiated jointly by the C.F.S. and Department of Environment & Planning will identify fire risk areas in terms of risk categories.

The Adelaide Hills which presents the greatest risk is being covered first. In due course hazard mapping will be introduced across the state.

Guidelines will cover adequate road access—in and out, elimination or reduction of fuel sources, building design requirements for bushfire prone areas, fire resistant materials in construction of homes, etc. Hopefully leading to a more rational approach to subdivision planning and siting, for fire protection.

#### PROTECTIVE CLOTHING:

##### Balaklava—

The use of a balaklava as a regular part of the fireman's protective clothing is not recommended.

The head is the most effective part of the body's cooling system. To interfere with the free evaporation of perspiration from this area leads to an extreme increase in the heart rate and to premature heat exhaustion and stress.

##### Gloves—

The recommendation is that gloves should be available to C.F.S. firefighters, to be worn as, and when required so as to prevent injuries to the hands.

##### Overalls—

Independent tests have found that when comparing wool to cotton as a protective garment for fire fighters, provided the fabrics are fire resistant, it is the *thickness* of the material that provides the degree of protection.

Overalls for rural fire fighters therefore require a compromise between total protection from radiated heat and no restrictions on the normal body functions (perspiring etc)—so fire fighters are not placed at risk through stress and heat exhaustion.

##### Caps—

It has been recommended to the Uniform Committee that C.F.S. members be allowed to wear yellow peaked caps, bearing the C.F.S. insignia, when on passive duty.

#### OCCURRENCE BOOK:

All brigades in the state are to be issued with an "occurrence book" which they will be encouraged to use to record all of their movements, in relation to fire calls and other emergencies, so that reliable "information" will be available for them to use in the event of a coronial enquiry.

Continued page 10.

## FIRE BANS IN FORCE: *HEAVIER PENALTIES*

Fire bans for this bushfire season are now in force in South Australia. They started as from Monday, November 5.

Country Fire Services Director, Mr. Lloyd Johns, said that the start of the fire season had brought with it substantially increased penalties for breaches of the Country Fires Act.

**Also, for the first time, fire bans will now extend for a 24-hour period, from 7 a.m. to 7 a.m.**

Previously the bans were from 7.00 a.m. to midnight.

Under the old system there had been nothing to stop a person legally lighting an incinerator or other type of fire between midnight and 7.00 a.m. This had caused concern to fire services, especially in the high fire danger areas.

The 24-hour bans could be imposed in any of the state's 15 fire-ban districts.

The "Red Alert" still remains for days of extreme fire danger when the whole of the state including the Inner Adelaide fire ban area would be under a total fire ban for 24 hours.

Referring to the heavier penalties for breaches of the Country Fires Act, Mr. Johns said that in general these had been increased ten-fold and now included gaol terms.

"For lighting a fire on a day of extreme fire danger (a total fire ban day), the penalty for a first offence is \$10,000 or 12 months gaol; and for a second offence, the penalty rises to \$20,000 or two years' gaol.

"Lighting a fire in the open during the fire danger season may bring a fine of \$5,000 or six months gaol; failing to extinguish a fire at the direction of a fire control officer, or lighting a fire contrary to the direction of a fire control officer, both carry penalties of \$5,000, or three months gaol, for first offenders."

Mr. Johns said the substantial upgrading of the penalties had followed public concern expressed after the Ash Wednesday II fires in 1983.

### **Other offences and penalties include:**

'Burning off' on a Sunday or public holiday—\$2,500 first offence; \$5,000 second offence.

Lighting a fire in a council area where fires have been prohibited by notice—\$5,000 or six months gaol first offence; \$10,000 or 12 months gaol for second offence.

Lighting a fire contrary to regulations—\$2,500 first offence; \$5,000 second offence.

Using a vehicle or flammable material contrary to regulations—\$2,500 first offence; \$5,000 second offence.

Using a caravan not equipped with a fire extinguisher in a country area—\$1,000.

Smoking in the open near flammable material—\$1,000.

### **Offences continued . . .**

Throwing burning material from a vehicle—\$2,500.

Failure to comply with a notice to prevent fires—\$5,000.

Failure to remove flammable debris following notice—\$5,000.

Failure to clear undergrowth following notice—\$5,000.

Hindering a fire control officer—\$5,000 or three months gaol.

Hindering a C.F.S. brigade—\$5,000 or three months gaol.

Falsely pretending to be fire control officer—\$2,500.

Failure to give name and address—\$1,000.

Covering a fire hydrant—\$2,000.

Damaging a fire alarm—\$5,000.

### **D/C takes the Initiative**



The District Council of Willunga in conjunction with local C.F.S. brigades have taken the initiative and produced Total Fire Ban roadside signs as pictured above.

These signs will be on permanent display in the Willunga District throughout the fire danger period.

In the manufacture of fire fighting appliances,  
we offer . . . .

**QUALITY**

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## South Australian Volunteer Fire Brigades Association

Continued from page 7 . . .

Earlier this year Mr. Swann attended a meeting in Western Australia to discuss establishment of the Australian Volunteer Fire Brigades Association.

Following discussion, an Executive was formed to follow up and produce a Constitution. Those elected were:

- President — Frank Whittington  
President of Western Australian  
Volunteer Fire Brigades Association
- Vice President — Peter Swann  
South Australian Country Fire Services
- Secretary — Rod McNally  
Western Australian Volunteer Fire  
Brigades Association (W.A. Board  
Member)



The Australian Volunteer Fire Brigades Association Executive, pictured above from left: Messrs Rod McNally, Secretary; Peter J. Swann, Vice President; and Frank Whittington, President.

## NATIONAL PARKS EXERCISE

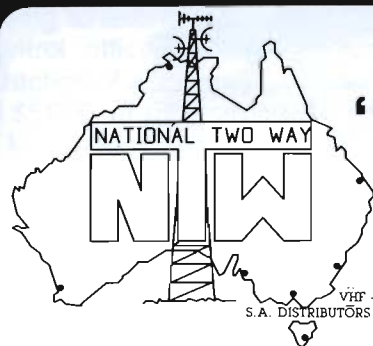
National Parks and Wildlife service annual fire training and equipment familiarization day was held at Black Hill Conservation Park on Wednesday 7th November, 1984.

Field trials covered: wet canvas hose; Toyota alarm race; units filling from creek; ladder and chainsaw events; compass, map reading and navigation skills; rake hoe line event; knapsack event; driving skills; vehicle maintenance and field repairs; wheel change; and first-aid.



National Parks and Wildlife Service personnel tackle the rakehoe line event—preparing a fire break.

Photograph reproduced courtesy Mr. Alan Morsman, Adelaide Art Engravers.



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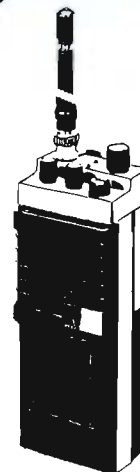
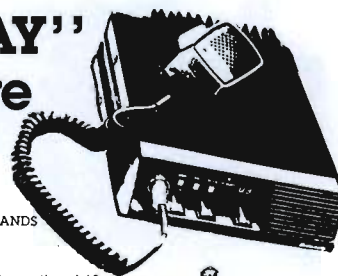
☐ C. B. Radios

☐ Marine Radio

☐ H.F. Radio

☐ AM/SSB Radio

NATIONAL SALES MANAGER — TERRY COTTON (08) 281.1888 or 258.3953



# Communications

## USE OF STATE FREQUENCIES

*Various enquiries have been received regarding the use of state frequencies. The following notes may be used as a guide.*

- \* The use of any frequency needs tight control and supervision for maximum effectiveness during fire operations.
- \* Ch 2—used for high priority control/coordination traffic, especially in multi-frequency operation. Ch 2 may be used base to base for urgent traffic, but telephone used if possible.
- \* Ch 3—for fire fighting purposes i.e., appliances and forward controls only, in preference to bases as well. Ch 3 is best used as a second sector frequency at one fire, or as an alternative frequency when a second fire occurs in close proximity to the first within one Channel 1 area.
- \* IT IS ESSENTIAL THAT BASES MAKE MINIMAL TRANSMISSIONS ON CH 3 & 2 (or any frequency for that matter).

### \* PERMISSION FOR USE

Proper use of state frequencies in accordance with these guidelines does not need approval—however, it is suggested that a check with C.F.S. Headquarters, Adelaide, or Regional Office will—

- (a) provide the maximum protection for a network from being overcome by another "lower priority" network.
- (b) provide information on who else is already on air, thereby affecting your decision to use a particular frequency.

\* However fragmented the statewide network may seem, C.F.S. is all *one organisation* with *one aim*—effective fire fighting.

No one party has more right to any frequency than the other and it is essential that the way frequencies are used is aimed at maximum effectiveness on the fire grounds firstly, followed by the broader network. On days like 16th February, 1983, this is the only policy which will work. If to achieve one district's effectiveness one causes another's to fail—all fail.

### REGION 1

ATHELSTONE	10
BURNSIDE	10
EAST TORRENS	10
HAPPY VALLEY	8
MEADOWS	8
MITCHAM	4
MONARTO	7
MOUNT BARKER	10
MURRAY BRIDGE	7
NOARLUNGA	7
ONKAPARINGA	9
PT ELLIOT/GOOLWA	8
STIRLING	5
STRATHALBYN	8
VICTOR HARBOR	14
WILLUNGA	14
YANKALILLA	14

### REGION 2

ANGASTON	11
BAROSSA	11
EUDUNDA	16
GUMERACHA	11
KAPUNDA	16
LIGHT	19
MALLALA	19
MANNUM	11
MT PLEASANT	11
MUNNO PARA	9
OWEN	19
WAKEFIELD DIST.	12
RIDLEY	11
RIVERTON	12
ROBERTSTOWN	16
SADDLEWORTH	12
SALISBURY	6
TEA TREE GULLY	6
TRURO	16

### REGION 3

BUTE	4
CENTRAL Y.P.	4
CLINTON	4
KADINA	4
KINGSCOTE	13
MINLATON	7
WAROOKA	8
YORKETOWN	8
DUDLEY	13

### REGION 4

BLYTH	20
BURRA BURRA	15
CARRIETON	—
CLARE	15
CRYSTAL BROOK	20
GEORGETOWN	18
GLADSTONE	18
HALLETT	15
HAWKER	—
JAMESTOWN	18
KANYAKA/QUORN	6
LAURA	18
ORROROO	18
PETERBOROUGH	18
PIRIE	20
PORT BROUGHTON	20
PORT GERMEIN	17
REDHILL	20
SNOWTOWN	20
SPALDING	15
STIRLING NORTH	17
WILMINGTON	17

### REGION 6

CLEVE	5
ELLISTON	8
FRANKLIN HARB.	13
KIMBA	10
LE HUNTE	7
LINCOLN	15
MURAT BAY	4
STREAKY BAY	9
TUMBY BAY	14

### REGION 7

BARMERA	7
BROWN'S WELL	—
GLOSSOP	7
KAROONDA	8
LAMEROO	4
LOXTON	5
MORGAN	16
PARINGA	5
PEAKE	7
PINNAROO	7
WAIKERIE	5

### REGION 5

BEACHPORT	6
COONALPYN	7
LACEPEDE	10
LUCINDALE	10
MENINGIE	7
MILLICENT	6
MOUNT GAMBIER	11
NARACOORTE	15
PENOLA	15
PT MACDONNELL	11
ROBE	10
TATIARA	7
REGIONAL CHANNEL	18

## STANDARD CHANNEL NUMBERING VHF

### CHANNEL FREQUENCIES

	1	C.F.S. H/Q
	2	163.120
	3	163.240
	4	163.300
	5	163.210
	6	163.270
	7	163.090
	8	163.150
	9	163.420
	10	163.060
	11	163.360
	12	163.075
	13	163.165
	14	163.285
	15	163.195
	16	163.570
	17	163.405
	18	163.510
	19	163.525
	20	163.540
	21	162.850 Tx
		163.540 Rx

## H.F. SSB FREQUENCIES

Frequency (kHz)	User	
2580	Stirling North Hawker	(Fire) + V.H.F.
	Northern Territory Bushfire Council	(Fire)
	North East F.F.A.	(Night)
	Stirling North Hawker	(Fire)
2660	Northern Territory Bushfire Council	
	North East F.F.A.	(Command)
	Stirling North Hawker	
3372	National Parks & Wildlife Service	(Night)
	C.F.S. Headquarters	(Night)
5127	Northern Territory B.C.	(Day)
5945	National Parks & Wildlife Service	(Day)
	C.F.S. Headquarters	(Day)
7956	National Parks & Wildlife Service	

## REGIONAL TRAINING SCHOOLS

Regional Training Schools are proving to be very popular and worthwhile for those C.F.S. volunteers who attend. The schools are open to *all* fire fighters who wish to increase their skills and knowledge about fire fighting.

The full course is made up of 4 schools—Stages 1, 2, 3 and 4 which must be taken in sequence. If you have successfully completed a 2nd Class Firemanship Course since 1980, you may be exempt from Stage 1 and eligible to start the course at Stage 2.

Listed below are the schools planned for all regions.

For further information, contact your Regional Officer or R.O. Bruce Hogan, Training Officer, at C.F.S. Headquarters.

Nominations close 3 weeks prior to the start of the school.

Region	Dates	Type	Location
Region 1	March 8, 9, 10	Stage 2	Keswick
	April 12, 13, 14	Stage 4	Aldinga Beach
	May 3, 4, 5	Stage 1	Keswick
	May 31; June 1, 2	Stage 3	Keswick
	June 28, 29, 30	Stage 1	Aldinga Beach
	October 18, 19, 20	Stage 4	Keswick
Region 2	Contact R.O. B. Menadue for details		
Region 3	April 19, 20, 21	Stage 3	To be advised
	Further schools are planned—contact R.O. D. Batten for details		
Region 4	March 22, 23, 24	**“Grass Fires”	Crystal Brook
	* This school to be attended only by personnel who have completed Stage 4*		
	March 29, 30, 31	Stage 3	Crystal Brook
	June 14, 15, 16	Stage 4	Crystal Brook
Region 5	Contact R.O. M. Sherwell for details		
Region 6	April 26, 27, 28	Stage 3	North Shields
	October 18, 19, 20	Stage 1	Ceduna
Region 7	April 19, 20, 21	Stage 3	To be advised
	October 25, 26, 27	Stage 4	To be advised

Regional Training Schools are held over 2½ days:

Day 1 . . . 1830-2230 hours

Day 2 . . . 0800-2230 hours

Day 3 . . . 0800-1700 hours

## NEXT ISSUE . . .

*The Volunteer in the next issue . . . will publish an “inside story” on the Stage 4, Fire Control Officers’ training school held on 23rd, 24th and 25th November, at Karingal near Wrattenbully, in the South East.*

Practical exercises conducted at the Stage 4 school involved the extinguishment of a simulated oil fire with the application of water sprays, a staged fire situation at the Naracoorte silos and an accident/cliff rescue.

NEXT ISSUE continued . . .



Pictured above the “Red Team” attack the oil fire.

## HAZARD REDUCTION STILL BEST FIRE PROTECTION

**Hazard reduction—the cleaning of undergrowth—is still one of the best methods of fire protection in South Australia’s fire-prone areas.**

Country Fire Services Assistant Chief Officer Technical Services Division, Mr. Tony Crichton, says vegetation is the fuel on which a bushfire feeds and grows.

Reduce that fuel content, by hazard reduction as part of an overall planned approach to vegetation management, and the potential danger is reduced.

Mr. Crichton said some people believed that by planting fire-resistant tree and shrub species in the right positions on a property, they would be providing adequate fire protection.

However, species selection was relatively unimportant when compared with the management of fuels.

“If hazard reduction is not carried out, the effect of species selection alone in reducing fire intensity will be practically negligible,” he added.

Mr. Crichton pointed out that the removal of all trees and shrubs from around a home could increase the fire danger. Trees reduce wind speed and, therefore, slows fire intensity and the rate of spread.

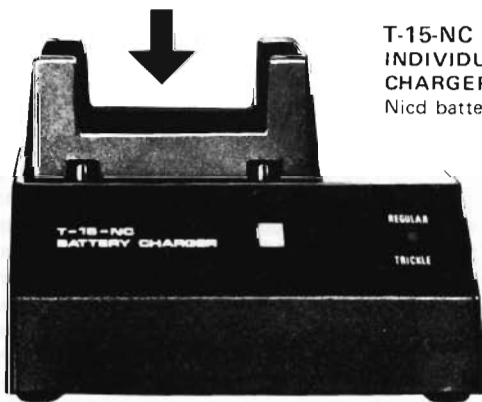
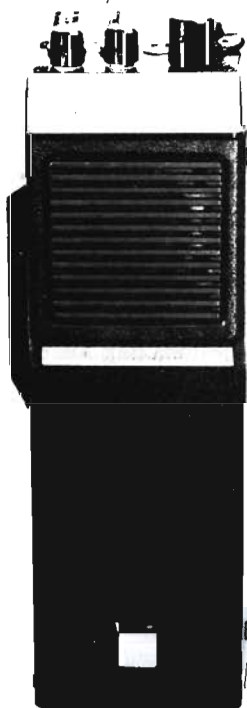
Trees should be spaced so that there is not a continuous canopy or line of flammable undergrowth from bushland to house.

The greatest danger to trees and, therefore, to houses and other buildings, comes from burning undergrowth and fallen or dead tree litter igniting the tree.

“Naturally, it is essential that any ground fuel or other flammable materials including rubbish, be removed from around houses and other buildings and any trees located near buildings be lopped so that there are no overhanging limbs,” he said.

# MIDLAND LMR SYNTHESIZED RADIOS

## TAMAPHONE Portable Radio



T-15-NC  
INDIVIDUAL  
CHARGER for  
Nicc battery set

The intelligent  
choice in  
2-way business  
communications.



The MIDLAND SYN-TECH® radio was designed to provide the most versatile, practical, and effective communications capability available in the world today. The local reprogrammability of this series of radios, its broadband capability, up to 36-channel capacity in all LMR bands, and wide selection of field-plug-in options provides a communications product which can be easily tailored to present needs and allows incorporation of options as requirements change.

### Trunk-mount installation

The control head of the trunk-mount version of the MIDLAND SYN-TECH® radio is one of the smallest and lightest in the world at 352 cc (21.5 cu. in.) and 0.8 kilograms (1.8 lb.). The speaker is equally small and light: only 770 cc (47 cu. in.) and 0.7 kilograms (1.5 lb.). The trunk-mounted mobile itself is the same size as the dash-mount version. The cable uses gold-plated connectors, which require no soldering.

### Dash-mount installation

Extremely compact, the mobile models are ideal for installation in today's smaller vehicles: The dash-mount mobile is only 65 mm high, 185 mm wide and 280 mm long (about 2½" × 7¼" × 11"). Also, it incorporates a built-in front-firing speaker; no room has to be found for a separate speaker.

### Easily field-converted from one mobile mount version to the other.

By simply removing four screws, the front panel of a dash-mount MIDLAND SYN-TECH® unit can be replaced by a trunk-mount front panel, control system, cables and remote speaker. This unique feature is particularly useful in larger mixed-mount fleets because it can substantially reduce the number of spare radio units kept in stock for installation or replacement.

## AVAILABLE FROM

18 MAGILL ROAD, NORWOOD, SOUTH AUSTRALIA. TELEPHONE (08) 42 6666 TELEX 88234

P.O. BOX 187 NORWOOD, 5067



**TRANSCIVER  
SERVICES** PTY. LTD.  
Incorporated in South Australia



# Children and bushfires

## CHILDREN PAY UNKNOWN PRICE

**Give red-haired Fiona Fleming a spare moment at school and she'll get out the most vivid red and the blackest of black colors to paint her old home.**

At five, Fiona can't forget the horrific fires which swept through her family's house at Tarpeena in the South-East and the devastation which disrupted her life—despite the fact her parents now have a new house.

She persistently paints the blackened shell of her old home.

"It was yuk," Fiona said of the Ash Wednesday fires.

"And my bike got burnt."

Fiona and most Tarpeena Primary School students sheltered on the nearby oval as fire swept through the town on February 16, destroying 21 houses and killing Peter Howe, 47, a farmhand.

A Flinders Medical Centre study of emotional trauma last year showed a 70% increase in psychiatric problems among schoolchildren in the South-East. It also revealed that children were still suffering from nightmares, stomach aches, depression and headaches 10 months after the fires.

The school's principal, Mr Geoff Munt, believes a therapy course—providing as much opportunity as possible to discuss or draw the events of Ash Wednesday at school in the past year—has helped the healing process.

But other schools such as Kalangadoo Primary have understandably closed ranks and shun all publicity, fearful of reviving the tragedy for its students. Kalangadoo lost 25-year-old Gavin Rogers who died while trying to save a family.

The family, Mrs Mary Williams and her four children, also of Kalangadoo, perished in the fire. Another three men also died on the outskirts of the town.

Another student of Tarpeena Primary School, Greg Green, 11, escaped the fire on crutches as it sped towards his parents' property just outside Tarpeena.

Ten-year-old Lionel Anderson remembers discovering an incinerated chook at his home: "It was still in the shape of running to escape the fire," he said.

But like many S-E children physically and psychologically affected by the trauma of Ash Wednesday, there is a bright side.

Fiona used the brightest greens, blues and yellows to paint her new house.

"And I've got a new BMX," she said.

Article reproduced courtesy The Advertiser.

## THE REACTIONS

by Dr. A. C. (Sandy) McFarlane  
Lecturer in Psychiatry, Flinders Medical Centre

In any major bushfire, one of the most immediate concerns is to people who might be in the path of the fire. There is much evidence from previous disasters that people frequently ignore warnings, or do not take the necessary precautions for their safety. This means that when a fire is burning at its height, some people will not have made adequate plans for their safety and as a result panic and confusion are not uncommon. Children are one particularly vulnerable group in such circumstances. They are at risk because they tend to become totally dependent on the direction of those adults around them or in the absence of supervision become immobile or panic.

**It is important for those adults who have care of children in bushfires to have a prior plan about any action they may have to take.**

The experience of the Ash Wednesday fires proved that mothers or fathers in charge of young children can do relatively little as fire fighters because of the need to protect and care for their children. The children require close proximity and frequent reassurance and it is impossible for this to happen if the adult is simultaneously trying to fight the fire.

## THE REACTIONS cont. . .

A number of fire fighters after the Ash Wednesday fires commented that one of the more difficult problems they had to deal with was the protection of women with young children. For this reason it seems that the early evacuation of women and children to positions of safety should be a priority. Furthermore it seems that those women who were trapped by the fire with children in places of extreme danger suffered more prolonged psychological effects than others. Because they were unable to defend their homes or protect other property they often felt useless. This leads to subsequent guilt and depression.

Similarly, schools need to have clear plans for the evacuation from the fire area or to move the children in to a building known to be relatively fire resistant, such as a school hall.

**Children are placed more at risk by going away from the school with their parents into the fire affected area, rather than being kept on the school property.**

One of the major problems in this context, is the wish of parents to be with their children during a bushfire. Many fire fighters will know the problems that they have had with people insisting that they rejoin their family despite the considerable risks of injury or death involved. For this reason it is important for schools to have policies about the procedure to be taken on days of a high fire risk and in particular what parents should do if a fire is burning in the district.

Research carried out into the effects of the Ash Wednesday bushfires on primary school children in the south-east has been able to provide some recommendations by defining what were the most harmful experiences for the children. Those children who were left in charge of the school, even if they were not reunited with their family until the next day, seemed to have suffered little because of this experience. It was generally more traumatic for children to be directly exposed to the fire. Often this occurred in circumstances where there was an extreme threat of death or injury to the children and their parents. The experience of witnessing their own parents' fear seemed to be often detrimental to the child. If a child has been separated from its parents in the hours immediately surrounding a disaster it is important that they are reunited quickly.

**Generally speaking children's immediate after reactions to disaster are greatly influenced by the way their parents have been affected by the experience.**

Children very much need a feeling of being contained and cared for by their parents in the first days after a fire. For this reason it is important that children are reunited with their parents as quickly as possible after a fire. They should not be left staying with relatives for several days because, despite reassurances to the contrary, children may fear that parents or brothers and sisters have been killed.

Sometimes, it is tempting to imagine that children are too young to know what is going on in a major fire. This would appear to be far from the case as there are reports of children as young as the age of two having suffered major emotional and behaviour problems after the experience of the Ash Wednesday fires. The effects of exposure to fires on children can often go unnoticed because in the first months after such an event the children may be better behaved and more withdrawn. They do not show their distress visibly, rather they keep it to themselves. Often they are aware of their parents' grief about losses sustained in the fire and in their own way attempted to make things easier. The signs of stress and strain also often manifest indirectly as headaches and stomach-aches. The adverse consequences only slowly become apparent with time.

Continued page 15.

# Children and bushfires

*THE REACTIONS* . . . Continued from page 14.

**The effect of the fire on parents seems to play an important role in the children's long term psychological adjustment.**

Some parents after such a disaster become overprotective and fearful of a range of unpredicted accidents affecting their children. Children are very aware of whether parents have come to terms with their experience even though the issues may go unspoken within the family.

**For this reason it is very helpful for children if the parents are able to talk with them and attempt to resolve their feelings about their exposure to the fire and losses.**

Particularly if fire fighters have had a close brush with death, they may find it very difficult to discuss their experience with their family because of the distresses it involves. Despite attempting to keep these memories to themselves, the spouse is very aware of what is going on and can feel resentful about not being taken into their confidence. For some, this leads to marital problems which have a direct impact on the children. Thus it is very difficult for a fire fighter to protect his or her family from his/her experience. The more quickly these issues can be resolved, the less likelihood there will be adverse effects for the fire fighter and the family. It is important that people are generally made aware of these issues although these problems only arise in a minority of families.

**Schools also have an important role in helping children adjust after being exposed to major fires. In the first days they can provide a useful babysitting function if the adults are needing to attend to the destruction of stock and emergency refencing. Schools are aware of the need to help the children discuss their experience and help this process using media such as painting and other forms of artwork.**

**SUMMARY:** There are four issues about children in bushfires:

1. Families with children should have detailed plans for how to react in a major bushfire. These should include what steps will be taken if a child is at school when a major fire breaks out.
2. Fire fighters need to have prior plans about how to deal with parents with young children in a major disaster as they are likely to need particular assistance in either evacuation or protecting their property.
3. Families should be reunited with their children as soon as practical after a major fire. Proximity with parents is a paramount reassurance for young children.
4. Emotional or developmental problems arising out of exposure to the fires in children, often have a delayed onset. A priority after a major fire is for the whole family to talk through their whole experience because children are often affected by the unspoken anxieties and preoccupation of their parents.

*To obtain the above findings 458 children from various schools in the South-East were surveyed. The South-East had been chosen for the survey because the schools were not scattered like in the Adelaide Hills . . . Editor.*



Pictured above Smokey The Koala (left) with pantomime narrator Mr. Jim Dooley (A.F.P.A. member) on stage, entertain children at Westfield shoppingtown Kilkenny.



In the television commercial on "Living in the Hills" one of the fire safety protection measures recommended by Smokey The Koala is "KEEP GUTTERS CLEAN." (Refer page 17 . . .)

# FIRE PREVENTION CAMPAIGN 1984/85

## Smokey the Koala's fire safety education programme

### STICKERS: For Children—

#### CHILDREN'S BUSHFIRE PANTOMIME:

A children's pantomime currently in use teaches young children fire safety and not to play with matches.

The pantomime involves Smokey The Koala, Fierce Fred Flame, a script and 10 picture story board panels.

©Smokey The Koala, a larger than life size character of Smokey who has been South Australia's fire prevention symbol since 1961, has been introduced to teach children and the public fire safety.

It is proposed over the next few years to utilize Smokey The Koala in each of the 7 regions of our state in promotion of fire protection/fire safety messages on hazards common to specific areas.

We believe Smokey's efforts will play a significant role in helping to reduce the incidence of fire, and the demands made on the Country Fire Services' volunteer fire fighters.

Requests for Smokey The Koala must be made through our local C.F.S. Regional Officer.

Subject to the demand placed on the costume and wearer, a yearly schedule of appearances will then be prepared for each region. Consideration will be given to programmes that involve large numbers of children.

Primary school children requesting fire information from C.F.S. Headquarters for school projects . . . receive by return mail a covering letter with their material—a personal fire prevention message from Smokey The Koala.

#### THEME:

The fire prevention theme for 1984/85: **LEARN FIRE SAFETY** has been adopted to cover fire safety messages on Home and Property Protection, Fires in the Home and Outdoors and Survival in a Car.

©Smokey The Koala is featured in caricature form in all literature designed for children.

#### CHILDREN'S MATERIAL:

An A3 leaflet folded to A4 size (210 mm wide x 297 mm deep) covers advice to children on fire safety for the home, property protection, fires in the home and outdoors and survival in a car.

The messages from Smokey are presented in a cartoonised style for children to first read and then color-in if they wish.

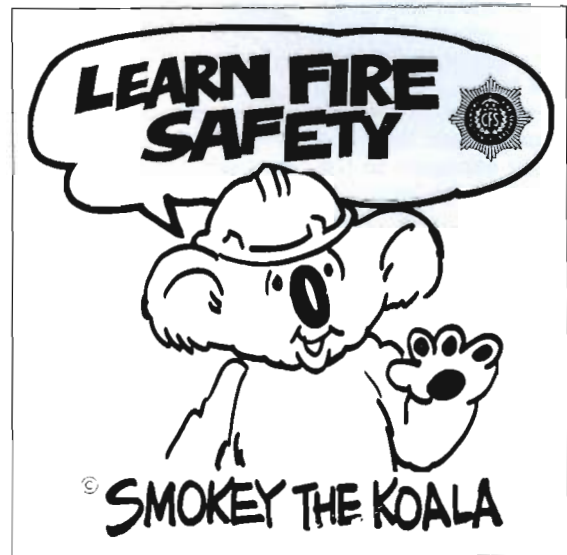
### STICKERS: For Brigades—



Car bumper stickers carrying the above message "Learn Fire Safety" have been delivered to all District Councils and all C.F.S. Regional Headquarters for brigade use.

The sticker is printed in black light fast ink with the copy, Learn Fire Safety in red ink, on a white background.

Size: 345 mm wide x 50 mm deep.



A limited supply of the above Learn Fire Safety stickers also featuring the caricature of Smokey The Koala have been delivered to all District Councils and C.F.S. Regional Headquarters at Jamestown, Port Lincoln and Naracoorte.

The sticker is printed in black light fast ink with the copy, Learn Fire Safety in red ink, on a white background.

Size: 95 mm wide x 92 mm deep.

**YOUR LOCAL C.F.S. REGIONAL HEADQUARTERS HAS STOCKS OF BOTH TYPES.**

©Smokey The Koala, copyright Country Fire Services South Australia.

Continued page 17.

# FIRE PREVENTION CAMPAIGN 1984/85

## LITERATURE:

The South Australian Country Fire Services Board has produced and issued to all District Councils and C.F.S. Regional Headquarters stocks of the following fire prevention circulars and literature:

Adelaide Fire Ban District Map—Key No. RD7/84

Barbecues and Campfires—Key No. RD1/84

Buildings for Bushfire Safety

(Siting design and construction guide lines for building in bushfire prone areas of South Australia—jointly produced by the Department of Environment and Planning and Country Fire Services South Australia.)

Burning Off—Bush and Stubble—Key No. RD2/84

\*Bushfire Safety and Survival—Key No. RD4/84

Farm Fire Protection—Key No. RD6/84

Incinerators and Burning Rubbish—Key No. RD12/84

Mount Lofty Ranges Fire Ban District

Map—Key No. RD9/84

Protect your house from Bushfires—Key No. RD5/84

Some Important Features of the Country

Fires Act—Key No. RD10/84

Sprinklers for Bushfire Protection—Key No. RD3/84

State Fire Ban District Map—Key No. RD8/84

\* The four color Bushfire Safety and Survival leaflet is also available from R.A.A. branch offices.

### Message to Councils and C.F.S. Brigades:

*Please dispose of all old literature in stock and replace with the current circulars listed above.*

## RADIO SCRIPTS:

Radio scripts also convey the theme Learn Fire Safety with messages on the following:

Definition of Red Alert (Key No. BFS1)

Bushfire survival in a car (Key No. BFS2)

Home protection measures (Key No. BFS3)

Stay in the house (Key No. BFS4)

Survival steps (Key No. BFS5)

Fire protection plan (Key No. BFS6)

Plan of action (Key No. BFS7)

Establish independent water supply (Key No. BFS8)

Install auxiliary power (Key No. BFS9)

Typography and bushfires (Key No. BFS10)

Tree selection in fire prone areas (Key No. BFS11)

Don't panic in bushfires (Key No. BFS12)

Protection around your home (Key No. BFS13)

In a car—survival steps (Key No. BFS14)

Fire Ban announcements (Key No. BFS15)

Fire causes—beware (Key No. BFS16)

Report bushfires (Key No. BFS17)

Survival in a vehicle (Key No. BFS18)

Are you within the law? (Key No. BFS19 and BFS27)

Burning Off (Key No. BFS20)

Heed fire bans (Key No. BFS21)

Caravanning this summer? (Key No. BFS22)

Sprinklers for bushfire protection (Key No. BFS23)

Children with matches (Key No. BFS24)

Caravanning (Key No. BFS25)

Fire ban districts (Key No. BFS26)

Protect National Parks (Key No. BFS29)

C.F.S. Volunteers protect you (Key No. BFS30)

Farm Fire Protection Scripts—

Maintain Farm Fire Fighting Units (Key No. BFS28)

Farm Layout (Key No. BFS31)

Fire Breaks (Key No. BFS32)

Fuel Supplies (Key No. BFS33)

Haystacks (Key No. BFS34)

Water Supplies (Key No. BFS35)

Fuel Reduction (Key No. BFS36)

## TELEVISION SCATTERS (COMMERCIALS):

4 x 60 second fire safety messages on 'Home and Property Protection' and 'Survival in a Car', featuring singularly Smokey The Koala and SAS Channel 10 T.V. personality Fat Cat, will be 'aired' through this fire season on television.

Existing television commercials on: Daily Fire Ban Broadcasts reminder (Key No. CFS/FB1/82 x 45 sec); The Volunteer (Key No. CFS/FB8/82 x 30 sec); Fire Reporting by Motorists (Key No. CFS/B123/30 x 30 sec) and Burning Off (Key No. CFS/BF21/82 x 45 sec), will also be aired.

A new 30 second scatter explaining the term Red Alert day and when a 24 hour fire ban applies; has also been produced and will be aired on television.

This fire season on days of extreme fire danger when the whole of the state including the Inner Adelaide area is under a total fire ban a special 20 second RED ALERT announcement scatter (Key No. CFS/RAD/83—television and RE/1—radio) will go to air through all television and radio stations in the state as a community service announcement.

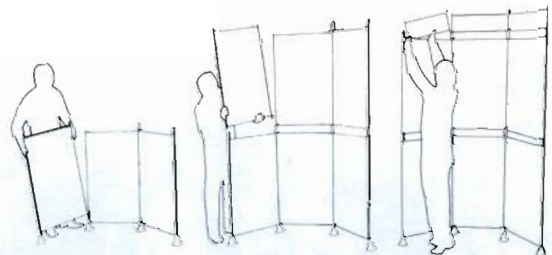
Special thanks is expressed to C.F.S. Regional officer Bruce Hogan (Training) his wife Heather and sons Christopher (9 years) and Matthew (7 years) for their involvement as the "talent" in the Fire Safety Rules—survival in a car T.V. commercial, and to Mr. Geoff Battersby of Teringie Heights for the use of his property to film the House Protection commercial.

Acknowledgement is made to the support and service provided by the SAS Channel 10 crew, staff officers, Fat Cat, Lyn Weston and Mike Mortimer.

... Editor

## DISPLAY KIT/PANELS:

### Display Kit—



An easy to assemble light weight display kit with felt panels packed in an aluminium carry case has been issued to each of our 7 C.F.S. Regional Officers for use at school activities, brigade fund-raising fairs, and other community programmes.

Each display kit consists of 6 chromium plated 10 mm diameter steel frames, with double sided light weight felt panels clipped into the frames, 3 topstrips, 3 in-fill panels with 3 in-fill felt fillers, 4 plastic foot pads and connectors with assembly instructions.

### Panels—

A set of 12 picture panels accompany each display kit. The panels carry messages on house/property protection; property layout; causes of fires in the home and outdoors; Smokey The Koala pantomime; report smoke sightings; know your local fire number; listen to fire ban broadcasts; burning off—rules to follow; farm fire protection; C.F.S. volunteers role and fire survival in a car.

Presented by the Smokey The Koala caricature, the picture panels convey the theme: Learn Fire Safety.

All the panels have been mounted and laminated for protection and to ensure longevity. Velcro tape temporarily affixes the picture panels to the felt on the screen panels.

## ACKNOWLEDGEMENTS

The Country Fire Services acknowledges the valued support from Petaluma Pty. Ltd., Piccadilly and Booth Wine Transport Pty. Ltd., Lonsdale, ... Mitsubishi Motors Pty. Ltd., Lakeland Dairies Pty. Ltd., Mount Gambier, and Hardie Containers of Athol Park.

... Editor

## State Finals

Almost 1,000 people including 178 C.F.S. competitors from 15 brigades throughout the State attended the 1984 fire fighting drill championships at Balaklava on Sunday, 30th September, 1984.

It was the first time the championships were held at Balaklava. Organisers were the Lower North Fire Fighting Association Committee in conjunction with The Balaklava C.F.S. Brigade.

The official opening was performed by the then C.F.S. Board Chairman Professor Peter Schwerdtfeger.

### Championship results:

Mr. Les Butler of Yorketown won the One Man Hose Drill for the seventh consecutive year.

A Grade Hose and Pump Drill—Government Cup and Pennant was won by Blackwood (81.27 secs); runner up was Nuriootpa (81.41 secs).

A Grade Pump Drill: 1st—Clare (26.66 secs); 2nd—Blackwood (27.20 secs).

B Grade Dry Hose Drill: 1st—Nuriootpa (62.20 secs); 2nd—Eden Hills (63.76 secs).

C Grade Dry Hose Drill: 1st—Waikerie (34.43 secs); 2nd—Clare (40.95 secs).

One Man Hose Drill: 1st—L. Butler, Yorketown C.F.S. (18.16 secs); 2nd—G. Rohrlach, Nuriootpa C.F.S. (19.75 secs).

Portable Pump Alarm Race: 1st—Belair (33.48 secs); 2nd—Nuriootpa I (35.28 secs).

One Man Ladder Drill: 1st—D. Wheedon, Evanston Gardens C.F.S. (10.06 secs); 2nd—G. Warde, Waikerie (10.13 secs).

Four Man Wet Ladder Drill: 1st—Buckleboo, Capt S. Atkinson (17.33 secs); 2nd—Nuriootpa, Capt T. Wedge (17.90 secs).

Best and Most Efficient C.F.S. Appliance and Crew: 1st—Nuriootpa; 2nd—Eden Hills.

### BLACKWOOD "A" GRADE TEAM



Blackwood C.F.S. "A" Grade Hose and Pump Drill Team are pictured being presented with the "winners prize" the Government Cup and Pennant, at the State Championships, at Balaklava on Sunday, 30th September, 1984. The presentation was made by Mr. Bob Norton Deputy Chief Officer, N.S.W. Fire Brigade.

### WINNER—7 YEARS IN A ROW



Mr. Les Butler of Yorketown C.F.S. had the honour of being presented with the D.A. Dickens Trophy for winning the One Man Hose Drill for the seventh consecutive year.

### NURIOOTPA TAKES TROPHIES



Pictured above Nuriootpa B Grade team shows the stamina and skill that won them the B Grade Dry Hose Drill event. Nuriootpa C.F.S. also took first place for the Best and Most Efficient Appliance and Crew and was placed second in the A Grade Hose and Pump Drill, One Man Hose Drill (G. Rohrlach), Alarm Race, and Four Man Wet Ladder Drill.

### WAIKERIE C GRADE TEAM— "A" ONE



The Waikerie C.F.S. has good reason to be proud of its cadets as another trophy now adorns their fire station—the perpetual A.F.P.A. Shield. Pictured above Mr. Ken Boyce S.A. Chairman of A.F.P.A. presents the shield, pennant and certificates to the Waikerie cadets; winners of the "C" Grade Dry Hose Drill.

### CADETS LEND TO HAND



These cadet members of the Mitcham Hills Country Fire Services brigades found that working together soon made light work of winding up fire hoses at the C.F.S. State fire-fighting drill championships at Balaklava.

From left, Bryan Cock, 15, of Belair, David Sims, 14, Liz Merritt, 14, and Darren Cock, 14, all of Blackwood.

They travelled to the championships with the Mitcham Hills teams.

Continued page 19.



Pictured above Mark Hodgson a cadet of the Nangwarry C.F.S. runs out the hose in the "C" Grade Dry Hose Drill State finals. Mark with his "family team" represented Region 5 at the Championships. The team consisted of Miss Michelle Hodgson, her brother Robert, her mother Mrs. Wilhemia Hodgson, Mrs Doreen Hodgson and her son Mark.  
Photograph reproduced courtesy The Plains Producer, Balaklava.



There were proud smiles from the Nangwarry cadets (pictured above) as they received their individual trophies, presented by C.F.S. Director Lloyd Johns at the Region 5 competitions in 1984.

Photograph reproduced courtesy The South Eastern Times, photographer Heather Carthew.



The star attraction for children at the State Championships was Smokey The Koala. To meet the girls and boys Smokey hitched a ride on the Balaklava fire truck.

P.S. Smokey did not have a cold . . . someone had wrapped a Redlegs (Norwood Football Club) scarf around his neck, thinking he was their mascot.

## Fire Fighting Equipment/Suppliers

The following items are under contract and will receive subsidy from C.F.S. Headquarters.

### HOSE

Item	Supplier	Cost
64mm x 30m Non-Percolating Hose, complete with light-weight alloy couplings.	Fire Fighting Equipment 118 Glen Osmond Road, Parkside S.A.	\$180.00
38mm x 30m Non-Percolating Hose complete with lightweight alloy couplings.	Fire Fighting Equipment 118 Glen Osmond Road, Parkside S.A.	\$160.00
38mm x 30m Percolating Hose complete with lightweight alloy couplings.	Fire Fighting Equipment 118 Glen Osmond Road, Parkside S.A.	\$132.00

### KNAPSACKS

Item	Supplier	Cost
16 litre colour yellow	Fire Fighting Equipment 118 Glen Osmond Road, Parkside S.A.	\$60.90

### FIRE EXTINGUISHERS

Item	Supplier	Cost
9 litre water stored pressure type.	Chubb Fire 211 Morphett Street, Adelaide S.A.	\$44.20
9 litre AFFF stored pressure type.	Fire Fighting Equipment 118 Glen Osmond Road, Parkside S.A.	\$53.20
9 kg dry chemical stored pressure type.	Chubb Fire 211 Morphett Street, Adelaide S.A.	\$69.75
1½ kg B.C.F.	Chubb Fire 211 Morphett Street, Adelaide S.A.	\$27.70
3 kg B.C.F.	Chubb Fire 211 Morphett Street, Adelaide S.A.	\$56.25

LLOYD C. JOHNS  
Director, Country Fire Services.

## FIRE PREVENTION WEEK

### *A.F.P.A. Spearheads Fire Prevention Week*

National Fire Prevention Week is observed in late October each year by the Australian Fire Protection Association as a timely reminder that fire safety should be practised all year round.

The Association also collates and circulates information on fire prevention and protection, statistical information on fires and losses of both lives and property through fires.

The organisation sponsors national conferences and seminars on subjects related to fire protection and suppression.

The 1984 theme of "People and Fire" has added emphasis with the onset of the summer fire season and the inherent serious threat of bushfires in the months ahead.

S.A. Fire Prevention Week committee chairman Mr. Ken Boyce, said this year's theme was to emphasise the fact many fires are started by people.

"It is a sad commentary on life because fire, when properly used, is one of man's greatest allies," he said.

"We must all remember fire awareness begins with each and everyone of us."

### *Fire protection*

We are all bitterly aware of the damage toll caused by the Ash Wednesday fires of 1983, but we must remain aware of the toll which results in our State every summer.

In 1983-84 C.F.S. units attended a total of 1,223 fires which caused losses of \$3.9 million in South Australia; there were fires in 163 houses, 43 factories, nine schools, two hospitals and two motels. More relevant to us, there were 896 scrub and grass fires, causing \$720,000 damage and burning 13,114 hectares of land. Some 1.53 kilometres of fencing was destroyed, and hay losses amounted to 342 tonnes.

What caused the fires in rural areas? Burning off accounted for 142 calls; rekindling of fires, 74; children and matches, 63; incinerators and rubbish heaps, 84; rubbish dumps, 19; and arson, 42. All of these are avoidable.

We must remember there are three main causes of fire—men, women, and children.

Fire Protection Week is the time to start not only planning but also acting to reduce fire hazards. The late winter and spring rains have put an entirely new complex on the likely bushfire outlook for the summer months, but with the onset of warm to hot weather in the coming weeks, there will once more be a considerable build-up of ground fuel. By summer this will be a fire hazard and the responsibility must be with the owner-occupiers to clear the hazard.

Some people believe that by planting fire-resistant trees and shrubs in the right positions on a property they will be providing adequate fire protection. However, species selection is relatively unimportant compared to the management of fuels.

Trees of course do have their value. The removal of all trees and shrubs from around a home could increase the fire danger; trees reduce windspeed and therefore slow fire intensity and the rate of spread. They should be placed so there is not a continuous canopy or line of flammable undergrowth from bushland to house.

We urge residents to show their respect for the C.F.S. volunteers by clearing fire hazards from their properties (occupied or other) and to brush up on fire protection advice in case of a fire.

Article reproduced courtesy The Northern Argus.

### *Opening at St. Michael's house.*



The ruins of St. Michael's House, Mount Lofty destroyed in the 1983 Ash Wednesday II bushfires—the backdrop for the opening of Fire Prevention Week on Friday, 19th October, 1984, served as a stark reminder of the destructive forces of bushfires.

The Minister of Agriculture Mr. Frank Blevins officially opened the "Week" and viewed a comprehensive fire fighting and rescue demonstration by the Country Fire Services, the S.A. Metropolitan Fire Service and the St. John Ambulance.

The combined fire services demonstration covered a stretcher casualty rescue using flying fox equipment; a demonstration of the S.A.M.F.S. Water Dragon pumping equipment; a hi-expansion foam exercise; and a breathing apparatus rescue drill.

Some 150 school students from nearby Adelaide Hills schools attended the opening. Guests were addressed by the Chairman of the Fire Prevention Week Committee Mr. K. S. Boyce and the Chairman of the Stirling District council Mr. L. C. Leah.

Mr. Boyce said "the week" is designed to create fire awareness among the community at large, and to also focus attention on the annual bushfire hazard which faces a large part of South Australia's rural and Hills area each year."



The combined fire services demonstrate their fire power.

Continued page 21.

## FIRE PREVENTION WEEK

*Opening* continued.

*Ablaze with talent*



C.F.S. and S.A.M.F.S. personnel wearing breathing apparatus rescue a "victim" from a house fire. The fire was extinguished by foam before the evacuation exercise took place.



St. John officers and C.F.S. officers administer "first aid" to the 'patients' before transporting to hospital.

*Nuriootpa leads procession*



Nuriootpa C.F.S. the state winner of the Best and Most Efficient Appliance and Crew for 1984, led the city parade of fire units, on Saturday, 27th October. Some 70 co-emergency service vehicles and 680 personnel attended. C.F.S. units came from as far away as Keith, Pinnaroo, Waikerie, Clare, Bute and Clinton. The salute was taken by the Minister of Emergency Services Mr. Jack Wright.



The impact on young children of the destruction caused by fire and the demands made on fire fighters in putting out fires, were two of the messages highlighted in this year's B.P. Creative Arts and Crafts poster competition. The competition attracted more than 600 entries from many parts of S.A.

Naracoorte High School students scooped the pool in the secondary schools section. John Manton won the Fire Fighting Enterprises perpetual trophy for most outstanding entry and \$100 for best entry in the 14-16 years class. Belinda Monfries came second and Chris Page came third. Kathy Rainbow won the 11-13 years class, Jon Edmondson came second and Ty Henschke shared third prize with Eudunda Area Schools student Mark Takzorke.

Pictured above poster competition judge Ms. Barbara Leslie with Naracoorte prize winners Jon Edmondson, Chris Page, Ty Henschke, John Manton, Kathy Rainbow and Belinda Monfries.

The winners received their prizes in the form of State Bank passbooks.

Judge Ms. Leslie awarded a special prize for design to Jason Hunter from Basket Range Primary and special prize for effect went to Nancy Gardner and Darren Harris from Regency Park Centre for Young Disabled.

*Other highlights of the 1984 programme were:*

The unfurling of a F.P.W. banner in Rundle Mall (S.A.M.F.S.) followed a Pyre Lighting ceremony (S.A.M.F.S.); B.P. Creative Arts and Crafts Competition (A.F.P.A.), Seminar on "People and Fire" (A.F.P.A.), Fire Technology Certificate course launching (A.F.P.A./S.A. Education Dept), Evacuation Exercise at Adelaide Children's Hospital (S.A.M.F.S.), Annual City Parade of Fire Units (C.F.S.), Displays/demonstrations on burn prevention (Nurses' Thermal Injury Group), and static displays and appearances by "Smokey The Koala" at Westfield Kilkeny and Colonnades Shopping Centres.



SAMFS firemen unfurled the new Fire Prevention week banner in the Rundle Mall, Adelaide before abseiling.

# Lessons for the future

A paper presented to  
The New South Wales Board of Fire Commissioners  
and  
The Institution of Fire Engineers

"Centenary Seminar"

by

Lloyd C. Johns, F.I.Fire E., AFAIM.  
Director

S.A. Country Fire Services  
September 1984

For the purposes of this paper, I will outline some of the lessons we believe we have learned and what action we have taken, or plan to take in response.

I have divided the issues into the following subject headings:

1. Conditions prior to and on the day
2. Fire fighting operations
3. Fire fighter's protection
4. Publicity and public education
5. The next Ash Wednesday fire

## CONDITIONS PRIOR TO AND ON THE DAY

The State of South Australia is divided into 15 "Fire Ban Regions" over which, according to conditions of the day, bans on the lighting of fires in the open may be collectively or selectively placed.

The Country Fires Act provides for the commencement of the "Fire Danger Season" to extend from 1st November through to 30th April. Councils may vary the Fire Danger Season according to climatic and geographical conditions within their areas.

The Bureau of Meteorology, under the authority of the Country Fire Services Board, announces the fire bans each day at 0700 hours. Factors taken into account by the Bureau include such things as estimated maximum temperature, wind speed and direction, relative humidity, degree of fuel curing and days since last rainfall.

In very broad terms, bans generally commence in the Western part of the State in early to mid October and spread eastward as curing of ground fuels occurs. The last areas to become fully cured are inevitably the Lower South Eastern parts of the State and the wetter parts of the Mount Lofty Ranges, usually by late December to early January.

During these periods selective bans are frequently daily occurrences and it is only on rare occasions that the imposition of a ban in all areas of the State becomes necessary. In the past eleven years this has occurred only on 14 days.

Prior to Ash Wednesday, no special steps were taken on the rare occasions when State Fire Bans occurred.

As a result of the fires the situation has changed, and hence lesson number one has been heeded.

If a total ban day is likely, a conference is held between Country Fire Service and Meteorology senior officers at around 1600 hours on the day prior. Discussions revolve around weather information and patterns likely to give rise to total bans across the State.

The final decision is taken at between 0640 and 0645 the next morning when the Senior Forecaster and the Director of Country Fire Services confer by telephone.

The imposition of a State-wide ban initiates a "Red Alert Day" and a train of pre-planned events begins. The Bureau telexes to all media contain information advising of the Red Alert situation. All radio stations have been given pre-recorded standard taped messages and all television stations have a similar video-recorded message. These pre-recorded messages are in every city and country media centre.

Every C.F.S. Brigade in the State has been requested to provide a standby crew for the duration of the alert. The fixed wing fire-spotting aircraft which regularly flies the Adelaide Hills during fire bans in that area is scrambled earlier than normal and aerial fire spotting is supplemented by the use of the State Rescue Helicopter.

Starting this year an agricultural aircraft loaded with retardant chemicals will be placed on standby at Adelaide Airport to be despatched to all smoke sightings within 50 km of Adelaide.

The Metropolitan Fire Service, which operates under a mutual aid programme with the Country Fire Service suspends all routine activities and adopts a rapid response mode for the urban fringe areas.

It is proposed that the State Emergency Operations Centre, located at Police Headquarters and established under the State Disaster Act, and the State Control Centre (Fire) located at Metropolitan Fire Headquarters, will be placed in the "Alert" stage.

The purpose of the "Red Alert" is twofold:

1. To warn the public to take extra care and that fire conditions are extreme, and
2. To place fire crews and surveillance systems on standby to enable early detection and very rapid response to provide the greatest chance of quick knockdown and extinguishment.

To date, only one Red Alert day has been declared since Ash Wednesday II and we look forward with interest to further tests of the results of this particular "lesson learned".

The events of 20th February 1980 and 16th February 1983 proved once again that fires which get away on extreme days are virtually impossible to control whilst the extreme conditions continue and only an abatement of such conditions is conducive to control and containment. On such days South Australia has developed the approach of maximum public warning and awareness, early detection, rapid response and quick and maximum knockdown.

The rate of spread of some of the fires has led us to more closely examine previously established fire behaviour models for both grasslands and forests. In the south-east, for example, the theory that the rate of spread increases as the fuel-load increases could not be supported. A fire which started in grassland of less than two tonnes, and in some cases less than one tonne, per hectare travelled a distance of 65 km in 4 hours with flame heights seldom exceeding 5 metres, whilst flame heights in nearby forested areas reached as high as 200 metres, with energy releases which must have been quite extraordinary.

Many people were lulled into the misconception that "the State wouldn't burn" because the winter drought had severely restricted fuel loadings in most, if not all, areas of the State.

The common belief that houses "explode" was found to be untrue, but it is a fact that the public in affected areas cannot rely on the fire service as their saviour. They must take action to reduce fuel levels around their properties, to build homes more resistant to the onslaught of a fire front, and be prepared to stay behind to extinguish spot fires after the fire front has passed through.

## FIRE FIGHTING OPERATIONS

Each of the eight fires which occurred on Ash Wednesday II were major fires in their own right. In the south-east the fires spread so rapidly that fire fighting forces, like Napoleon's supply line in Russia, were stretched across too great an area. In the Adelaide Hills six fires spread too few resources over too many fires and as if the conditions weren't bad enough, the dust storm which blanketed the State made the situation conducive to successful fire fighting virtually impossible.

Communications were a serious problem. We have been developing the VHF system throughout the State, together with a UHF command system. Grouping of brigades is important to ensure proper control through communication and senior volunteer officers must realise that they are the key to command and co-ordination and must not become personally involved in individual fire attack strategies.

Continued page 23.

## Lessons for the future continued. . .

### COLD FRONTS

One of the most important future developments is seen as the establishment of a programme to locate and track cold fronts as they come onto the West Coast of South Australia from the Great Australian Bight.

The arrival of cold fronts in the areas of major fires is a vital aid to the control and extinguishment of fires on extreme days.

The Great Australian Bight is often void of accurate weather data and it is proposed on total fire ban days—Red Alert Days—using an aircraft with equipment capable of locating and tracking the passage of a cold front and relaying the information back to the fire authorities in both South Australia and Victoria. Such information will greatly assist with increasing the accuracy of intelligence gathering and dissemination and real time fire plotting, thus enabling decisions to be made as to resource deployment and evacuation of areas in the path of fires.

### AUTOMATIC WEATHER STATIONS

We are most interested in the establishment of automatic weather stations at each of the radio communications transmitter sites. In all we are hoping to establish around 15 of these stations, feeding relevant, on the spot, weather data down UHF links to C.F.S. Headquarters at regular intervals or when interrogated. We hope to use this data to assist Bureau of Meteorology forecasts and to provide on the spot information in fire areas adjacent to the appropriate station.

### REAL-TIME FIRE SPREAD PREDICTION AND MAPPING

Pre-plan has provided a most useful basis for the prediction of fire-spread and we are developing programmes, in conjunction with the Department of Environment and Planning, for use in South Australia, first for the Adelaide Hills and hopefully for the whole State.

Using Pre-plan as a basis, we hope to develop a computerised real-fire mapping system. Such a project has the ability to impact greatly on the whole process of fire fighting and control.

For the Country Fire Service it will lead to the emergence of a new breed of "specialist"—the Intelligence Officer, whose function it will be to interpret weather and cold front information, real-time fire mapping graphics and provide advice and assistance to fire fighters and support services alike.

### CLOSED CIRCUIT TELEVISION

We have run some tests with a portable video camera and infrared equipment carried in the State Rescue Helicopter which can relay fire scene video directly back to the C.F.S. Headquarters Control Centre. There is some more work to be done in this area and at this point in time transmission is restricted to a radius of about 40 km from Adelaide.

### CADMAS

The Computer Assisted Disaster Management System currently being developed by Digital Computers in Victoria must surely impact on world wide disaster management. South Australia is looking to the system with great interest. It appears to have the capability to assist both combat and support agencies to a level never before envisaged.

*Refer article page 26.*

### THE PROTECTION OF FIRE FIGHTERS

Immediately following the fires there was a great deal of interest shown in woollen overalls on the premise that woollen protective clothing was far more effective than the current standard cotton or proban treated cotton overalls.

Quite independently of each other a number of tests have been conducted on wool and other fabrics and contrary to past beliefs, the ability of both fabrics to protect the wearer from radiated heat is dependent upon the thickness of the fabric and not the nature of the material.

### PROTECTION cont.

The Country Fire Service participated in experiments designed to test a woollen ensemble suit at the Commonwealth Institute of Health. The ensemble consisted of a woollen undergarment, woollen overalls, gloves, balaclava and goggles.

The results were quite startling and further supported Dr. Graeme Budd's findings from field trials in Western Australia as part of Project Aquarius. Under the test conditions the most significant results were greater sweat loss but interference with the dissipation of metabolic heat; greater strain on the heart, increased skin and deep body temperatures.

It has been shown that the constraints of some types of protective clothing affects seriously the physiology of the bush fire fighter and any protective clothing will be a compromise between its ability to protect the wearer from radiant heat and the impediments to the proper physiology of the wearer.

In-built fire truck protection has also been closely examined. South Australia's Country Fire Service has long paid attention to crew protection with high sides on vehicles and vehicle spray bars. In 1980 a prototype appliance with a high technology pumping system and a central crew haven with fire proof blanket for protection was introduced into the Service.

The concept has caught on and some thirty to forty appliances of this type have since been built. C.F.S. vehicle specifications now include crew protection as a necessity.

One Melbourne inventor is developing a crew protection system built into the tank-system of the vehicle. This system, yet to be tested, represents one of the more serious concepts developed as the result of the Ash Wednesday fires.

### PUBLICITY AND PUBLIC RELATIONS

One of the most glaring examples of "lessons learned" was the realisation that in spite of vast sums spent over the years on publicity, too many people did not know the rules for personal safety and survival—in cars, in the home and caught in the open. Simple rules such as keeping areas around the home clear, boxing in eaves, using metal fly screens and so on were just simply ignored in many cases by an incredibly apathetic public.

There is an urgent and pressing need for a whole new approach to the question of education, information dissemination and publicity and "public relations".

We have learned much from our interstate colleagues as a result of a recent nationwide trip by Assistant Chief Officer Technical Services (former Superintendent Research) and C.F.S. Publicity Officer to examine and evaluate how they have approached the problem.

We have formed the opinion that:

1. A public education programme is essential to the future of positive public awareness. People must be educated, beginning at pre-school level, on the various aspects of safety, survival and action during bushfires. I must comment most favourably on the approach of the N.S.W. Bushfire Council on this matter.
2. The establishment of common approaches, terms, glossary and so on on a national basis will do much to enhance total public awareness *Australia wide*.
3. Information exchange at national and international level is also essential.
4. Recognition of the difference between information and publicity is important in the formulation of effective marketing strategies.
5. Need for marketing surveys.

The lessons for the future of publicity, public relations and education must be addressed and are being so from South Australia's point of view.

*Continued page 24.*

# Lessons for the future continued . . .

## THE NEXT ASH WEDNESDAY

The potential for further major conflagration in South Eastern Australia will be with us for many years to come. Everybody expected that something would happen, but few, if any—both fire fighter and the public alike—in their wildest imagination believed that what happened could happen.

Bushfire is a land management problem—if there is no fuel, there is no fire. The Country Fire Service has taken both a preventative approach and an affirmative action approach.

Fire Prevention in the rural environment is enhanced though the co-ordination of hazard reduction.

South Australia differs somewhat from Western Australia and Northern Territory, where large scale hazard reduction is accomplished through regular prescribed burning programmes. South Australia contains, apart from National Parks and forested areas, very little open, undeveloped bushland.

The Country Fire Service is not a land manager as it neither owns, nor is directly responsible for the management of land. It can, however, influence both public and private landholders to hazard reduce in order to minimise fuel loadings and uncontrolled fire spread.

To aid both hazard reduction and identify the various classifications of risk areas, the Country Fire Service and the Department of Environment and Planning have initiated a programme for "Hazard Mapping", which we believe will have an application in other bushfire prone areas of Australia.

The initial purpose is to identify those areas of the Adelaide Hills which present the greatest hazard for bushfire purposes. In this way the Country Fire Service and Metropolitan Fire Service, through the Mutual Aid Plan can ensure pre-planning of a high priority for these areas.

Perhaps of more importance is the need to ensure that in those very high hazard areas, guidelines are brought down to ensure such things as adequate road access—both in *and* out, the elimination of highly combustible fuel sources, a requirement to site, design and construct buildings appropriate for bushfire prone areas, the use of fire resistant materials and to ensure, in specific terms, the safety of people living in these areas.

It is hoped that such guidelines for consultation with C.F.S. will lead to a more rational approach to sub-division planning, siting of houses, layout of properties, methods and materials of construction, the value of the use of roof sprinklers and landscaping for fire protection.

One of the most disappointing aspects of Ash Wednesday has been the appalling lack of interest and support for continuing research into bushfire related subjects.

There is so much which can be done to help both prevent and mitigate bushfire damage and destruction.

Certainly individual authorities which have Research Divisions have continued with levels of applied research relative to day to day organisational problems, but the two main research centres for Australian bush and forest fire research are in serious trouble.

The CSIRO Division of Forest Research "Project Aquarius" has had a funding cut of two-thirds of the budget required to complete the field trials into the use of large aircraft for aerial fire suppression and the National Centre for Rural Fires Research, based at Chisholm Institute of Technology is being starved out of existence because of lack of funding and support from both State and Federal resources.

In one research area alone, the Country Fire Service in South Australia was spared the expense of purchasing woollen overalls at a cost of \$3.6 million when it was found that the standard fire fighter cotton overalls were still the most suitable kit.

It is essential that continuing studies in fire behaviour, materials used in building construction, the value or otherwise of retardants, the development of real time fire mapping, cold front and other fire weather meteorological studies and many, many more vital areas of research are both funded and supported.

It is totally frustrating that barely 18 months after such a devastating series of fires, research has been given less than its real priority in the field of bushfire prevention, damage mitigation and personal survival.

## CONCLUSION

There is no doubt that the fire services of the State are more aware and better prepared than at any time in the past.

It will take much more time to establish a vehicle replacement programme so as to minimise break-downs and introduce improved crew protection.

The results of research into fire behaviour and other aspects will need to be progressive and will also take time to produce constructive results. A number of lessons have been instituted, whilst others require time and development.

Much has been learnt, but there is still a long way to go.

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# **An Open Invitation to all C.F.S. Members . . .**

**WHEN YOU ARE IN TOWN CALL IN AND SEE US**

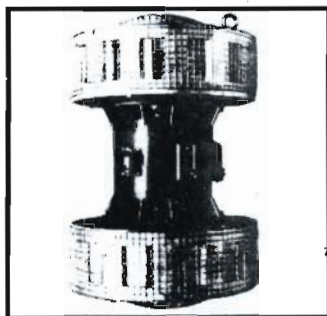


*"Prepare your fire fighting equipment now . . .*

*don't wait  
for a disaster  
to strike.*

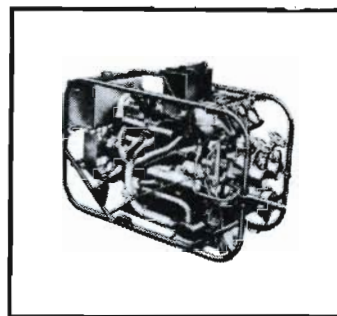


*We have a complete  
range of equipment to  
suit your needs."*

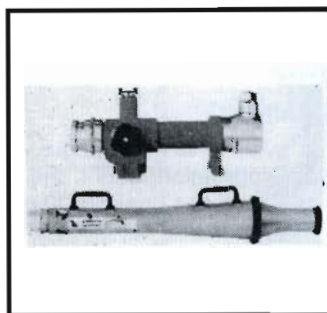


**SIREN**

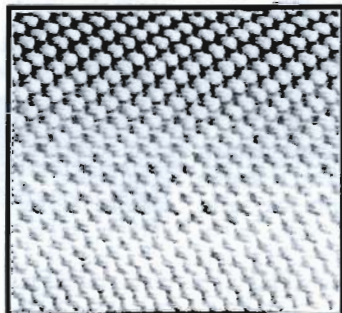
Manufacturers of the  
"Quell" Range of appliances  
Town Fire Sirens  
Complete Range of Medium and  
High Pressure Fire Pumps.  
Holmatro Rescue Equipment  
Nomex Clothing.  
Sabre B.A. Equipment.  
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# C.A.D.M.A.S.

## A new computer system to assist in the battle against disasters.

A new computer system, known as CADMAS (Computer Aided Disaster Management Assistance System), has been designed by a Melbourne computer expert Mr. Andrew Helps.

Representatives from all areas of South Australia's emergency services attended a recent demonstration of the system, at C.F.S. Headquarters.

Mr. Helps already has his system installed in the City of Knox, in the exceptionally fire prone area of the Dandenong Ranges in Victoria.

The pilot project, will standardise and computerize disaster planning for the Dandenong Ranges area. This region, designated Region 13 under the State Disaster Plan, is considered to be one of the greatest risks during the current summer bushfire season.

It takes in the municipalities of Knox, Lilydale, Croydon, Sherbrooke, Upper Yarra, Berwick, Pakenham, Healesville, Doncaster and Templestowe, a population of around half a million people.

### CONTROL

Under the plan, the City of Knox will house the master computer (a digital VAX 11/780). Each of the other municipalities in the region will be linked by their own standalone computer system to the Knox master.

Also linked to the Knox master computer will be terminals for use by all the various authorities involved in counter-disaster activity, such as the Fire Service, Police and Red Cross.

The system, according to Andrew Helps, "will bring disaster combat control up to 1980s technology standards." Mr. Helps, who was the State Emergency Service Controller at Pakenham during the Ash Wednesday holocaust said Ash Wednesday had "literally provided the spark" to set up the computerized disaster plan system.

"That was the catalyst, and now with the pilot project set up in Knox we have made a practical start to getting all of the various emergency services and related agencies working together with new technology," he said.

A massive amount of data will be stored in the computerized disaster system for instant retrieval and reference to on-the-scene emergency services.

Not only will the names and place of residence of every person living in the region be stored in the computer but also a wealth of other information necessary to the combating and post combatant stages of a major disaster—be it fire, flood, earthquake, storm, tidal wave or nuclear attack.

Together with lists of trained counter disaster personnel and a complete inventory of equipment and resources, minute by minute information on prevailing weather conditions and the position and progress of the counter disaster personnel will be available.

### DATA

Micro weather stations will be installed in the hills to provide details of wind speed and direction, temperature, humidity, rainfall and barometric pressure. This data can be compared with previous periods as a warning of impending danger.

Infra-red scanning cameras will also be positioned in known danger areas to pinpoint outbreaks of fire. This will enable fire fighting crews to either retreat from a dangerous situation or to shift the front of their activities.

The computer would also have stored a priority evacuee list registering at-risk groups such as old people, the sick, and school children for early warning.

Also incorporated is the ability to monitor all onground disaster fighting activity.

Through the use of a bar coding system, similar to that used to code supermarket items, the movements of all combating crews and personnel in the disaster force area would be kept under constant surveillance.

Each unit of the combating force would carry a bar coded identification card to be checked in and out of strategic locations.

Keeping tabs on the movements of disaster fighting personnel will be facilitated by the deployment of key command vehicles equipped with hard copy printers. Via the central computer system these will deliver messages that do not rely on radio frequency communications equipment.

Additional information vital to the suppression of a disaster, particularly fire, will be available at the press of a key through the computer network: the location and type of hazardous chemicals and gases and all storages of L.P. gas and similar flammable gases; the status, grading and inclination of all usable roads within known disaster risk areas; and the location of livestock in the event of an outbreak of animal disease during a disaster.

All information relevant to the post-combatant stage of a disaster could also be stored and progressively updated through the system.

This would allow welfare and relief agencies to swing into action immediately and deliver the right sort of relief when and where it is required.

The processing of insurance claims on lost property would be speeded up greatly through the resources of the system.

Special mobile registration caravans with their own power source, computer terminal and linked to the main area computer would be able to register 1000 persons an hour.

The Pilot Project for Region 13 has been made possible due to the co-operative efforts of government agencies and private enterprise.

The experience with disasters of men such as Andrew Helps, the project designer, and Knox S.E.S. controller, Mr. John Mitchell, has been joined by the computer expertise and goodwill of Digital Equipment Corporation (Australia) Pty. Ltd.

This company has committed \$1m in providing the master computer to the City of Knox and a further half a million dollars in software and engineering and maintenance facilities.

To date Digital Equipment have spent \$500,000 and will spend a further \$800,000 in the next 9 months on the project.

### TRAINING

The project is an ideal avenue of job training for the unemployed and a funding application under the Special Municipal Youth Employment Project has provided 10 places for young people to be involved.

These young people will be trained in valuable lifetime computer skills, data gathering and research, and will also form a wider pool of people who are fully conversant with the operation of the Disaster Plan.

By December, 1984, the pilot project will have provided a prototype which Government may assess to decide whether all or any part of the system should be taken up and implemented. Either way, there are many potential lessons that can be learnt along the way.

Article reproduced courtesy Knox Mt. Easterly Newspaper, Victoria (condensed version).

**Footnote:** There are possibilities of being able to store information on all dangerous substances maintained at private dwellings and on farm properties, throughout the state. i.e. L.P.G., Chlorine, Herbicides etc. Also the pilot project at the city of Knox has found vast sources of water supplies in private swimming pools and dams that would be invaluable in the event of bush fires . . . Editor.

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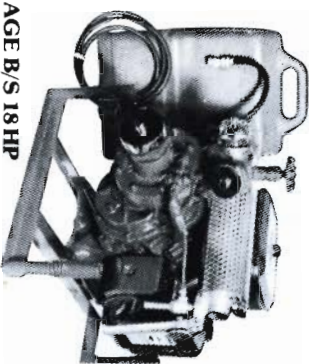
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FIRE APPARATUS

### PORTABLES

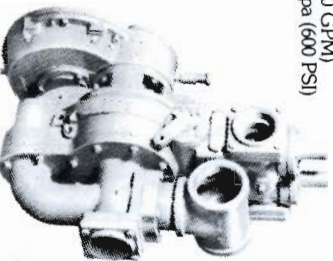
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11, 18, 20 H.P. Petrol  
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Volumes to 1135 lpm (250 GPM)  
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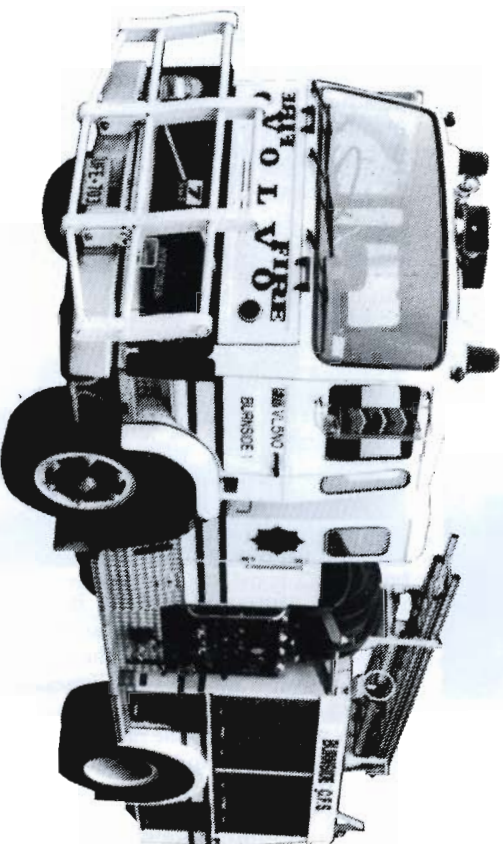
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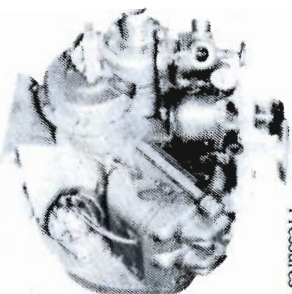
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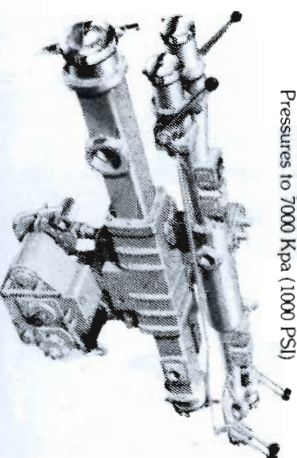
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Volumes from 2250 lpm (500 GPM)  
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Pressures to 7000 Kpa (1000 PSI)



SEH 750 3 STAGE

# REGIONAL NEWS

## Region 1

R. O. Russell Grear.

Hills C.F.S. brigades are on a continuing programme of preparedness for the approaching summer.

Brigade communication and procedures have been improved and C.F.S. members are ready to tackle any disaster.

The C.F.S. urges hills residents to make their houses and property safe and stresses that their co-operation and support is vital.

Since last year's bushfires, C.F.S. headquarters has been busy organising additional permanent forward controls, safe haven areas and training programmes.

Although safe haven areas have been set up the safest place for residents during a bushfire is in their homes. There may be some limited evacuation to these areas, but only on a small scale.

Hills residents should make their houses "passively resistant" against bushfires and not totally rely on the sources of fire fighting.

Residents should seek advice from local brigades, C.F.S. headquarters and councils, to prepare for the bushfire prone summer months.

During a major bushfire it is important people stay in their homes and if children were at school during it, leave them there. The Education Department is aware of this fact and most of its schools are safe because of their large surrounds.

We don't want parents picking up their children from the school, cluttering up the roads, endangering themselves and the C.F.S. Volunteers who would then have to attempt to rescue them.

### Bridgewater urban/rural appliance



VLS-ES BRIDGEWATER 42

Through the support of the Bridgewater ladies auxiliary and donations following Ash Wednesday II, an International 6 tonne, 4 wheel drive cab chassis purchased from Woods and Forests was built up by A. J. Stock Engineering from specifications and layout supplied.

Bridgewater C.F.S. purchased 2 Darley high pressure low volume pumps. One is located at the back of the truck, the other in the chassis attached to a power take off with pump and roll action. Both pumps can operate independently. Tank capacity is 350 gallons or 1675 litres.

The vehicle build-up design allows the tray to be lifted off and placed on another truck, with a minimum of modification.

Primarily designed as an off road bushfire fighting appliance the unit has adequate fire fighting power with 2 pumps, to handle urban fires as well.

Particular emphasis has been placed on crew protection and ease of operation. The appliance can carry a crew of 8 firemen, but it is still a viable fire fighting appliance with a crew of 2.

Specifications:- Chassis: 1974 International, wheel base: 4.34 m, engine: 6 cylinder, 106 Kw, transmission: manual T-17, 4 wheel drive, 5 fwd gears, auxiliary transmission: P.T.O./TC-155, primary pump: Darley HM350 P.T.O., Nominal output: 1300 l at 700 kPa; 300 l at 1700 kPa, independent pump: Darley/onan, nominal output: 500 l at 700 kPa; 225 l at 1700 kPa, primer: Rotary Vane, tank capacity: 1650 l, hose reel: 2-60 m, canvas: 120 m, 38 mm, 120 m, 64 mm.

## Region 1 cont. . .

### Aldinga—training schools '85

#### ENROL NOW

Aldinga Beach C.F.S. will be conducting two regional training schools in 1985.

Stage IV will be held on 12th, 13th and 14th April. Personnel who completed Stage III at Aldinga Beach are eligible for Stage IV. Vacancies will almost certainly be available for other personnel within the State.

A Stage I course will be held on 28th, 29th and 30th June 1985. Nominations will be accepted on the basis of length of service and are open to all C.F.S. personnel in the State.

Both schools will be held at Cooranga Camp, Aldinga Beach. For nomination forms contact: Mr. Bill Voordouw on (085) 56 5674 or by written request to: Box 197 P.O., Aldinga Beach S.A. 5173.

The closing dates for nominations are:

Stage IV on 2nd April, 1985.

Stage I on 18th June, 1985.

### Service recognised

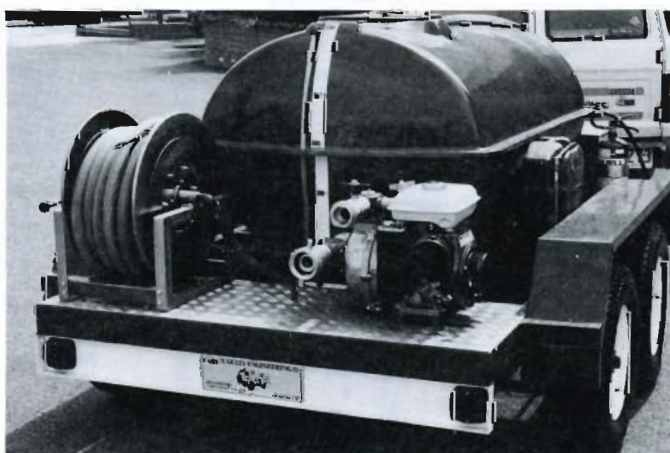


Former captain of Aldinga Beach C.F.S. Mr. Terry Johnson (pictured above: centre) and his wife Carol (left), were presented with a Trophy for service to the brigade. Terry was also honored with Life Membership. The presentation was made by brigade Captain Edgar Bolton.

Terry was elected to the position of brigade captain in July 1984. His years of service and experience will be sorely missed. Carol was one of the brigade's first women fire fighters, and served as an auxiliary member.

Brigade members and friends thank Terry, Carol and daughter Cassie for their contribution to the C.F.S. and wish them the best in Western Australia.

### Tandem trailer



# REGIONAL NEWS

Region 1 cont. . .

Parachilna Fire Fighting Association have taken delivery of a tandem trailer manufactured by Carey Gully Engineering. The fibre glass tank carries 1200 litres, a 30 m x 25 mm hose reel, 5 H.P. Mitsubishi pump with a 38 mm coupling, complete with 2 knapsacks, 2 fire extinguishers, 2 x 38 mm delivery hose and 1 branch.

## Grass fire tactics



National Parks and Wildlife Services personnel undergo a session on Grass Fire Tactics at a regional officers Stage 2 training school, held at C.F.S. Headquarters. Pictured above from left: Geoff Kapusta, Ron Saers, Richard Coombes (centre), Russell Gear (C.F.S. R.O.I-Instructor) and Neville Hollihan.

## Region 2

R.O. Brian Menadue

### Fire Group Command Structure

The planning and establishment of a Fire Group Command Structure is continuing throughout the region. Some areas are more advanced, but the senior officers in each area generally are familiar with the concept.

This planning has led to the development of a "control centre" within each District Council area and the equipping of the centre with basic operational resources.

Exercises are being conducted to train the control centre staff.

#### GROUPS

1. **Para District Fire Group**  
Corporation of the City of Salisbury  
Corporation of the City of Tea Tree Gully  
District Council of Gumeracha  
District Council of Munno Para  
Department of Correctional Services, Northfield  
Two Wells C.F.S.
2. **Light/Mallala Fire Group**  
District Council of Light  
District Council of Mallala
3. **Wakefield Plains Fire Group**  
District Council of Wakefield Plains  
District Council of Hoyleton C.F.S.
4. **Gilbert Valley Fire Group**  
District Council of Saddleworth/Auburn  
District Council of Riverton
5. **Julia Ranges Fire Group**  
District Council of Kapunda  
District Council of Truro  
District Council of Eudunda  
District Council of Robertstown
6. **Barossa Fire Group**  
District Council of Angaston  
District Council of Barossa  
District Council of Mount Pleasant
7. **Murray Plains Fire Group**  
District Council of Cambra  
District Council of Mannum

Region 2 cont. . .

#### AREA

Corporation of the City of Salisbury  
Corporation of the City of Tea Tree Gully  
District Council of Munno Para  
District Council of Gumeracha  
District Council of Mallala—Two Wells C.F.S. Brigade  
District Council of Light—Gawler River C.F.S. Brigade  
Dept of Correctional Services—Northfield C.F.S. Brigade  
GROUP ESTABLISHMENTS

The combined local Government area C.F.S. Officers, Fire Supervisors, and the Deputy Fire Supervisors have completed a **Group Fire Control Plan** for the abovenamed area.

The detail covers operational procedures for Fire Situations:—

- (a) within the group area;
- (b) beyond the group area; or
- (c) liaison with C.F.S. Headquarters at a Command level, when either part (a) or (b) or both are in operation.

The following agreements were reached and actions taken by group brigades to become operational.

1. The adding of adjoining district C.F.S. frequencies to mobiles and portables within the group, where necessary.  
i.e. Salisbury, Tea Tree Gully 163.270 KHz  
Munno Para 163.240 KHz  
Gumeracha 163.360 KHz  
Mallala, Light 163.525 KHz
2. Command Vehicles (non Fire Fighting) used by Fire Supervisors, Deputy Fire Supervisors or C.F.S. Officers within group be fitted with 2 VHF FM radios.
3. Written instructions detailing the procedure to be followed when activating the group.  
(a) a complete list of each District Council's—Supervisors, Deputy Supervisors and C.F.S. Officers, including Name, Rank, Telephone Number, (work & a/hours).  
(b) a list of all group fire appliances and command vehicles—  
(1) Type (2) Water Capacity (3) Radio Call Sign  
(c) the distribution of the Operations Procedure information sheets to each C.F.S. Officer, Fire Supervisor, Deputy Fire Supervisor, each Fire Station and C.F.S. Headquarters.

#### LOCAL PILOTS

4. Each Council area in group to arrange for "local" persons with sound local area knowledge to act as "Pilots" for C.F.S. brigades (other groups) who may be required to assist.

A list of such persons with telephone numbers to be compiled and displayed in each District Radio Base in the group.

#### CALL OUT

(Local Group Fires)

#### Inter District Assistance Request

1. As a District Council area Fire Supervisor Senior C.F.S. Officer requests additional assistance for fire fighting from within the group, he will seek help from adjoining C.F.S. brigades, D/Supervisor, or through C.F.S. Headquarters.
2. Adjoining area C.F.S. Brigades are to advise their Supervisor of the request or response. C.F.S. Headquarters to be advised.

#### Radio Frequency—Fire Fighting

3. The Fire Supervisor in charge of the fire will designate the Radio Frequency to be used. (Selection will be from the frequencies used within the group.)
4. The Supervisor/Senior C.F.S. Officer will establish Fire Control, via a Field Command Post or District Base Control Centre.
5. The Supervisor (OIC of Fire) when necessary, will establish Fire Sectors, allocating local responding Fire Command Vehicle and appliance to sectors as necessary.
6. Fire Control Communications will be—  
(a) units in sectors operate local designated frequencies to the Sector Command Vehicle.  
(b) The Sector Commander will use his second radio on the Command Channel, (3 or 2) to keep Field or Base informed.
7. Additional fires (local) will necessitate, subject to size and urgency the use of other local frequencies not in use or share a less busy local frequency.  
An additional Fire or C.F.S. Officer should take charge of this situation.
8. All Communications between District Fire Base Control, other Services, and C.F.S. Headquarters will be via telephone, or Regional Officers Communications, if available.

Continued page 30.

# REGIONAL NEWS

## Region 2 cont. . .

### OPERATIONS

Para Fire Group—Call Out (Beyond Group boundaries)

#### 1. Advice for Standby

Should a "Major Fire Control Supervisor" or C.F.S. H/Q consider that a fire situation is likely to escalate or continue and further assistance will be required, the "Para District Fire Group" will be placed on "Standby".

The Fire Supervisor/Senior C.F.S. Officer nearest the Fire Area is contacted as he is more likely to be familiar with the type of terrain and equipment most suited for deployment.

#### 2. Standby Action by the Supervisor

Contact the other group Supervisors by radio or telephone and establish:—

- (a) The type of vehicle required?
- (b) How many vehicles available? (i.e. large, small, tankers etc.)
- (c) Number of crew per unit required? (\*ensure sufficient crew remains in district.)
- (d) A Group Command Vehicle (Supv)
- (e) Other equipment as required.
- (f) Rendezvous Point for Group.

#### 3. Standby Detail—Information to C.F.S. Headquarters

C.F.S. H/Q to be advised of Group's action, i.e.:—

- (a) Number of units available responding.
- (b) Names of units.
- (c) Supervisor of Group and his Call Sign.
- (d) ETA & selected RV point, near fire area.

#### 4. Local Pilot's Arrangement

C.F.S. Headquarters requests "Major Fire Control" to arrange a "Local Fire Area Pilot", to guide the group from the rendezvous point during the group's actions in the Fire Area.

Major Fire Control through C.F.S. Headquarters confirms "Pilot" arrangements i.e. Persons Name, Fire/C.F.S. Rank if applicable to Group Supervisor or Group Command Vehicle if mobile.

#### 5. Radio Frequency—Command Vehicles

C.F.S. Headquarters to designate the Command Channel. State Channel 3 or 2 for use by group supervisor and sector commanders between his vehicle, field control and "Major Fire Control."

#### 6. Contact between Major Fire Base and C.F.S. Headquarters to be by:—

- (a) Telephone
- (b) Regional Officers Vehicle Communications
- (c) or Selected Command Channel.

#### 7. As responding groups arrive at the fire line, existing local units who have been involved since the fire's origin, can be withdrawn, vehicles serviced, crews rested and reallocated as a group.

### RELIEF

1. Each Group Supervisor will decide and arrange Relief Crewing, via his own group area.

2. The organisation of Relief may be via the Command Channel to Major Fire Base or C.F.S. Headquarters.

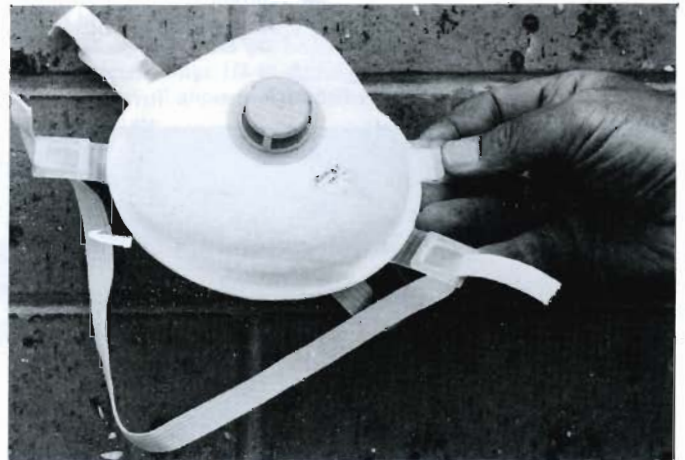
Telephone to be used from Major Fire Base to Group Area, or to C.F.S. Headquarters, Regional Officers Communications may be available and used.

*\*The Para District Fire Group who produced these guidelines implemented, where possible these procedures during Ash Wednesday 11 1983 Anstey Hill/Gumeracha Fire with notable success.*

## Region 3. News

R.O. David Batten

It has been brought to our attention that some C.F.S. Brigades have used disposable type dust/fume masks in situations for which they are *not* designed.



The application of this type of mask is *not* to be used where toxic gases are present, or where there is a likely hood of sparks.

Radiant heat could ignite the flammable material of the mask causing serious injury to the wearer.

### Bute D/C

The District Council of Bute is now under the Yorke Peninsula Fire Ban District.

### Brigades

Alford C.F.S. are building up an ACCO 610, 4x4 vehicle; Bute have commissioned their new Ford F350, 4x4 appliance; Warooka are awaiting delivery of a Ford F350 and Yorketown have received their new supervisors command vehicle.

### Training Schools

A combined Region 3 and 7, Stage 2 training school was held at Barmera on 12th, 13th and 14th October. The *first* training school to be held on Kangaroo Island was a Stage I, at Vivonne Bay on 2nd, 3rd and 4th November.

A breathing apparatus training school was conducted at Port Vincent on 14th, 15th and 16th December.

## Region 4

C.F.S. Regional Officer George Polomka has warned that this fire season has the potential to be a very dangerous one.

C.F.S. crews have been training more extensively in preparation for the season.

There's more potential for fires at this stage compared to the same situation last year.

The lush growth in the Mid North brought on by good rains had created the danger. The growth has now dried out and is a real hazard.

Mr. Polomka urged people to clean up properties and buildings to eliminate danger areas.

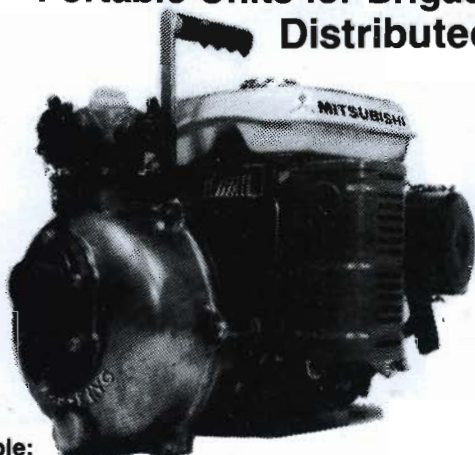
The introduction of 24 hour fire bans which previously had ended on midnight the same day, will now stop people from lighting fires at midnight and leaving them unattended.

Continued page 32.

# **MITSUBISHI POWER PRODUCTS**

# **FIRE PUMPS**

Portable Units for Brigade, Private use and Irrigation.  
Distributed Australia-wide



Example:

## **Model NM HP 40** **1½" High Pressure**

Weight: 29kg

### **"PUMP-KING"**

#### **Model PK 380 H**

- Pressure die cast aluminium pump body.
- Cast iron volute diffuser.
- Cast iron discharge caps.
- Cast iron suction and delivery ports.
- High performance.
- Simply-charged, self-priming design.

## **MITSUBISHI**

### **Engine Model G511 (5 H.P.)**

- Camshaft and crankshaft fitted with ball races both ends.
- Forged steel camshaft.
- Wide helical cut crankshaft and camshaft gears.
- 5mm thick cast iron cylinder sleeve.
- Dual element air cleaner.
- Recoil Starter.
- Electronic Ignition (M.T.I.)



Example:

## **Model NM HPD 407** **1½" High Pressure**

Weight: Less than 45kg with robust roll frame.

Developed from the successful NM HP 40 model, for N.S.W. Bush Fire Brigades.

#### **Some Special Features:**

### **"PUMP-KING"**

#### **Model PK 380 H7**

- Pump passages able to pass 4.75mm particles.
- Other features as for PK 380H.


## **MITSUBISHI**

### **Engine Model G711 (7 H.P.)**

- 7 H.P. engine for extra performance.
- Dual element air cleaner.
- Spark arrestor for safe operation.
- Metallically-shielded ignition system, with water proofing and radio interference suppression.
- Simple, reliable, rope start.
- Contact point type ignition.
- Alternative features on request.

**Optional Extras:** Nozzles, Hoses, Strainers, Floats.

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FIRE	2" B.S.P.	3-WAY	5 H.P.	NM HP 50/40	NM HPD 50/40
FIRE	1½" B.S.P.	3-WAY	7 H.P.	NM HP 407	NM HPD 407
FIRE	2" B.S.P.	3-WAY	7 H.P.	NM HP 50/407	NM HPD 50/407
GENERAL	2" B.S.P.	2" B.S.P.	5 H.P.	NM HP 50	NM HPD 50
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# REGIONAL NEWS

## Region 4 cont. . .



Pictured above R.O. George Polomka shows children at the Orroroo Area School how fire extinguishers are used.

Orroroo and Carrieton C.F.S. members also attended a mock fire at the school and showed children how to put out the fire using extinguishers and hoses. A workshop held earlier for brigade members covered "C.F.S. powers and responsibilities during a fire."

Photograph reproduced courtesy The Transcontinental.

### Marree C.F.S. formed

With the withdrawal of the Australian National Railways fire services to the town of Marree, which numbers a 100 in population, the Marree Progress Association purchased the A.N.R. fire engine and the Marree Country Fire service unit was born.

Since their first meeting in 1983 the brigade's membership numbers have increased from 9 to 14, along with a Cadet membership of 7.

The fire appliance is reaching a standard of efficiency due to voluntary maintenance and proceeds from a trash and treasure market.

Regular meetings, drill practices and a recent successful call-out search and rescue has further sharpened the brigade's skills.

### B.A. Donation

Through the generosity of the Jamestown Lions Club, Jamestown C.F.S. have taken delivery of 2 sets of breathing apparatus.



Pictured above at the handover ceremony on 27th September—back row, from left: Members of the Lions Club Messrs G. Rosie, M. Hancock (Brigade Captain), K. Smart (Lion President), R. Rasheed, D. Graefe, J. Bennet and W. Crawford. Front row: Jamestown C.F.S. members Messrs F. Smith, B. Davis, T. Cooper, G. Cornish.

## Region 5

### The Mad Rabbit

During October and November C.F.S. brigades from the South East districts of Millicent, Naracoorte, and Tatiara were "tested" at training days.

Tatiara fire fighting Association's recently acquired running fire simulator was put to good use training fire fighters in grass fire control.



The machine pictured above, effectively simulates the edge of a grass fire and assists with training fire fighters in correct nozzle patterns for maximum heat absorption, and correct application of water on target.

The training device nicknamed "*the mad rabbit*" is a mobile unit on tow, that uses LP gas and a mixture of petrol and diesel—a fuel fire on wheels. The operator by feeding fuel through the lines can make the flames flare up or lay a trail of fire so that rekindles can also be simulated.

The exercise created actual fire conditions and gave fire fighters a realistic fire to work on. It also proved a good time and motion study of how long it takes fire trucks to leave, refill with water and return to the fire front. Crews also received good driver training, radio practice and saw the importance of not wasting water.

Brigades also took part in an obstacle course to test the crews' knowledge of trucks and handling of equipment, and attended a simulated car accident.

A discussion on tactics then followed each exercise.

The training days concluded with a lecture and discussions conducted by Regional Officer Murray Sherwell.

Subjects covered included: use of ventilation to help fight building fires, methods of gaining access to modern buildings (modern construction often does not allow the traditional fireman's entrance by removing a sheet of iron or tiles from the roof), salvage (firemen were made aware of the need to limit damage to buildings as far as possible), and hazardous chemical spillages.

Continued page 33.

## REGIONAL NEWS

Region 5 cont. . .  
The Mad Rabbit cont. . .

Region 5 cont. . .

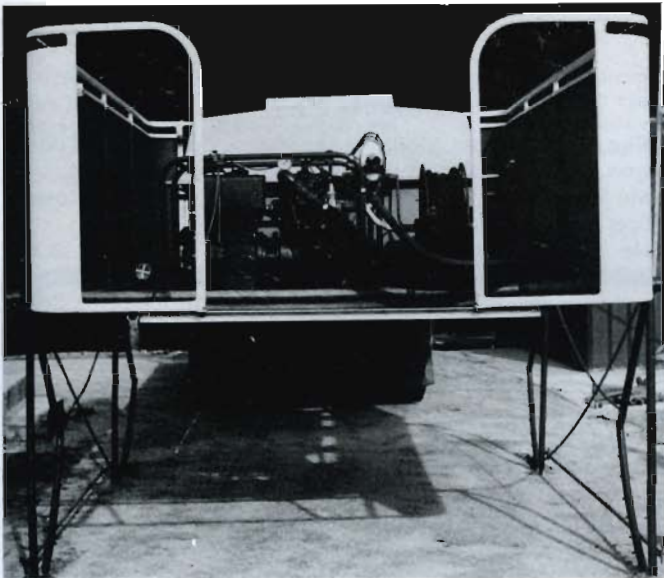


Pictured above the Binnum C.F.S. practices its aim as it chases the fuel fire on wheels.

Photograph reproduced courtesy "The Naracoorte Herald"

### Back Up . . . And away.

A member of the Stewarts Range C.F.S., has designed a quick mounting fire appliance body, for a Toyota Dyna 3 tonne flat top truck.



The unit pictured above, built by Mr. Ted Limbert weighs approximately  $\frac{3}{4}$  tonne and stands on 4 curved bottom legs which load and unload it easily by one man in 2 to 3 minutes.

The 1750 litre fibre glass tank can be filled in  $4\frac{1}{2}$  minutes by a 50 mm overhead filler.

While the tank is being filled the unit is bolted down with four bolts. The 12 volt power is plugged in, a hose is connected to the front sprays, the monitor is mounted on either front corner of the tray and wetting agent is added to the tank.



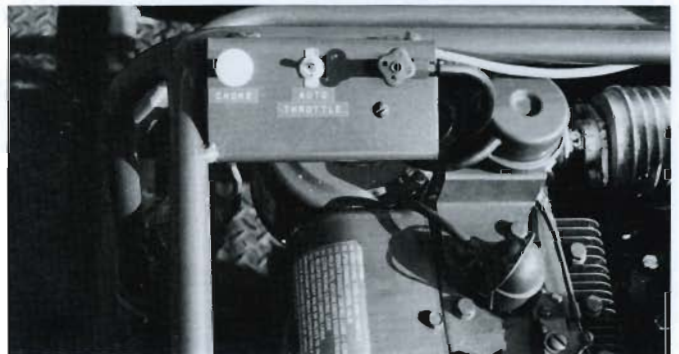
The unit is then ready to go, 8 minutes from call. If the stock crate is on the truck it is unloaded on identical legs to the fire appliance body. The changeover takes just 12 minutes to complete.

Solid sides provides crew protection. Front sprays under the bumper can be operated by the driver or crew on back, from a control valve on the front of the tray. A knapsack sprayer is mounted on the passenger side of front of tray. The pump is an 11 horsepower GAAM MK 100. The exhaust has been modified by replacing the priming shut-off flap of the "Ejectaprime" system with a gate valve and adding an automotive muffler. The gate valve was modified by removing the screw action, and spring mounting the gate so that it is simply closed for priming by pushing down on a knob.

The exhaust is shielded by mesh so that no hot parts can be accidentally touched—or burn hoses if they come in contact.

The pump has been fitted with an automatic throttle, so it can be left idling. As soon as any of the nozzles are turned on, it increases to full speed and pressure, then cuts back to idle again when all nozzles are turned off.

The advantages of the automatic throttle are many: Less wear on engine and pump, less fuel used, less noise (already vastly improved by addition of extra muffler). The pump does not need a bypass when not being used, because at idle it does not overheat without water flowing through. The cut-off pressure in the hoses is very low, so that the chance of connections blowing off is a lot less.



**Automatic throttle:** A "Penn F61KB" flow switch has been mounted between the pump and the outlet manifold by bolting in a flanged 38mm x 25mm tee. (Welded up from a standard tee and two flanges) The flow switch consists of a microswitch controlled by a bronze paddle which sits across the water flow. A flow of about 28 litres/min is required to actuate the switch, and even at idle there is sufficient flow to do this when any of the nozzles are turned on. The bronze paddle bends out of the way and does not restrict the flow of water. The pump does not have an electric start, so electric power is supplied from the truck. The flow switch activates a solenoid valve to turn on vacuum which is tapped from the inlet manifold of the Briggs and Stratton engine.

Cont. page 34.

# REGIONAL NEWS

Region 5 cont. . .

Back Up . . . And away cont. . .

A vacuum actuator is connected to the governor control of the engine by a spring and chain. The manual control cable has been connected by chain as well, so that the manual and automatic controls work independently of each other. If the automatic control is not required, or if anything should go wrong with it, it is simply switched off at a switch mounted on top of the engine frame, and the ordinary manual lever works as usual.

The hose and TB15 nozzle are simply clipped onto the monitor base, and can be immediately unclipped for hand use. The other hose consists of 20 metres of 20 mm hose on a home made reel, fitted with a TB10 nozzle. Also carried is a tap and 10 mm nozzle for use on the 60 metres of canvas hose.

*Carried on fire unit:* Shovel, axe, drag chain, tools, spare petrol, wetting agent, 2 of 30 m x 38 mm canvas hose and canvas hose winder. A light illuminates the pump area.

*Carried in cab:* UHF 2 way radio, VHF radio receiver, 2 hard hats, 2 pairs smoke goggles, grid maps, St. John First Aid Kit and heavy duty jumper leads.

## Region 6

### A roundup of events

R.O. Kevin W. May

This Region is beginning to come alive, particularly in the area of training. Volunteers are keen to attend practical training sessions, lecture nights, association and brigade meetings. I have attended lectures at schools and hospitals, as well as other organisations.

Regional Training Schools were well attended in 1984 and we have planned for two in 1985, one at Ceduna and the other at North Shields. A Breathing Apparatus School will also be fitted into the regional training syllabus. The Training Committee is making headway with a request going out for every council area in the region to be represented on the Committee. The Regional Association has worked extremely hard in the last twelve months, and all members have supported the region well.



At the Cleve Field Days I was pleased to see a number of fire fighters. Some came to chat and have a coffee—most picked up brochures and leaflets for their own or their brigades' use.

Minnipa C.F.S. hosted the Region 6 Competitions, with brigades attending from Regions 1, 2 & 4—distance was apparently no deterrent to them; it proved to be an excellent weekend. At the State Finals we were represented by Buckleboo, Arno Bay, and Edillilie, who all performed well. Streaky Bay C.F.S. took out Best and Most Efficient for Region 6—Well done, Streaky!!

In October I am holding inspection days in three Council areas, all brigades in those areas will be involved—they will be inspected with upgrading the next year's budgeting being uppermost in my mind.

A Communications Committee for Region 6 has been formed, delegates include one from each Association or Council. We have had a 100% response to the formation of this Committee; its first concern being to standardize mapping and co-ordinate communications in this Region.

Region 6 cont. . .

I have been attending as many brigade meetings as possible, assisting brigades in their planning for the future and helping to upgrade the Standards of Fire Cover information provided by them. I have had to disappoint some brigades as I am normally booked up for three weeks ahead. If brigades could give me a month's notice of meetings it would help all of us.

Lincoln District Fire Fighting Association held its training day on October 14th at Coffin Bay. There was an excellent attendance—approx. 60 fire fighters and seven appliances—the general feeling was that it was an excellent day with several exercises involved, knowledge and expertise was gained and all are looking forward to the next exercise.

As the local population are aware in Region 6, the year started poorly for the farmers, but now with all the late heavy rains we have had it is undoubtedly going to be a dangerous Fire Season. It is imperative that all are extremely careful in the country. For all my brigades, I ask that if and when you have a "going" fire, you contact me with all relevant information, as early as possible.

## OBITUARY



### Mr. Sydney William ROGERS

Stirling C.F.S.

The Volunteer pays tribute to the memory of Sydney William Rogers, M.B.E., who passed away on 7th September, 1984.

Mr. Rogers was a life member of Stirling C.F.S. and a fire control officer for 30 years.

He was honored with the M.B.E. in 1965 for service to the community, holding offices of member and chairman of the council, foundation member of Stirling R.S.L., former secretary, president and a life member of the League, secretary of Stirling Hospital and member of the Cemetery Trust and Masonic Lodge.

Mr. Rogers was predeceased by his wife Esther and leaves two daughters Kathleen and Barbara.

A highly respected member of the community Sydney Rogers will be sadly missed by his family and fellow C.F.S. members and friends.

### Mr. C. A. KENNEDY

Suttontown C.F.S.

A stalwart of the Suttontown C.F.S. and community member Mr. Kennedy passed away suddenly.

The Mount Gambier District Council paid tribute to the memory of Mr. Kennedy for the great contribution made to the brigade and town.

Sadly missed by fellow C.F.S. members and friends.

**ALDGATE C.F.S.**—Is running a series of discos for 17 year olds along the lines of the police Blue Light discos, as an activity for young people and as a fund raiser.

**BEACHPORT F.F.A.**—Judged residents on fire protection measures taken to ensure their buildings would be a safe refuge in the event of fire. The winner received a perpetual shield and the nominating brigade \$200.

**BLACKFELLOWS CREEK C.F.S.**—Presented a plaque to Mr. Keith Griggs in recognition of 11 years valued service, and Mrs. Ann Pike, fire phone convenor received an inscribed bowl. The presentation was made at a fancy dress social on Saturday, October 20th 1984.

**BLYTH C.F.S.**—Commissioned their new \$64,000 unit, a Hino cab chassis built up by Carey Gully Engineering. A P.T.O. Darley pump which runs off the main gearbox provides excellent water pressure.

**BUTE C.F.S.**—Combined services shed (C.F.S. & S.E.S.) along with the area's new Ford F100 fire unit was commissioned on Friday, 19th October. Life membership badges and 25 years service certificates were presented to Messrs Jack Gibson, Clarence Rudloff, Colin Woodley, Morris Woodley and Peter Martin. Mr. Malcolm McDonald received his 10 year's service certificate.

**CAREY GULLY C.F.S.**—Acknowledged the services of retired officers Mr. Gordon Badenoch, brigade president for the past 6 years and Mr. Don Driver chief fire officer. Tributes were paid to Mr. Driver's dedication, fire fighting ability and comprehensive knowledge of the district and to Mr. Badenoch's leadership. The brigade received a cheque for \$1,250 from Mr. Bill Daniels for their work during the recent Glendi Festival.

**CHERRY GARDENS C.F.S.**—Had their new fire shed commissioned by the Minister of Emergency Services Mr. Jack Wright. Over 300 people attended the opening.

**EDEN HILLS C.F.S.**—New \$130,000 fire appliance designed by brigade members from plans drawn up by Mr. David Hawkins was commissioned by Mitcham Mayor Keith Pearson.

**FURNER-FOX C.F.S.**—Original fire shed destroyed in Ash Wednesday II has been replaced by a new steel framed galvanised iron shed. Lions International donated \$3,400 and Beachport Council provided \$1,000 from an insurance claim on the old building. Lions District Governor Mr. Ben Gray officiated at the opening ceremony.

**GOOLWA C.F.S.**—Urban fire unit and 1200 gallon water tanker were commissioned before C.F.S. units from Port Elliot, Currency Creek, Hindmarsh Island, Hindmarsh Valley and Tooperang. Following the ceremony certificates for Breathing Apparatus and Second Class Fireman were presented to Messrs Trevor Ferguson and Richard Marchant. Breathing apparatus certificates went to Messrs Jamie Francis and Terry Vivian and Messrs Graham Wood, Roger Kilpatrick, Norbet von Reitzen, H. Gremmert and Peter Ballard received Second Class Fireman certificates.

**HAHNDORF C.F.S.**—Fire station was opened by the town brigade's first life member Mr. George Petersen.

... article next issue.

**IRON BANK C.F.S.**—Has established regular training programmes following the appointment of a Training Officer. Brigade members Messrs Alan Light, George McInnes, Don Emes and Ray Stratfold recently completed the Second Class Firemanship course.

**JERVOIS C.F.S.**—Have received a \$600 hand-held VHF radio through the generosity of the Taillem Bend Lions Club, Lower Murray Rural Youth Club and the community.

**KAPUNDA C.F.S.**—Purchased \$7,000 worth of new equipment in addition to the new unit, with the support of St. John Ambulance Auxiliary, Kapunda Rotary Club, the Railway Hotel, Salvation Army and the Uniting Church.

**KINGSTON C.F.S.**—Received approval from the Lacepede District Council to purchase a new \$75,000 fire unit. The brigade now seeks additional volunteer members to attend regular training sessions and join the service.

**LITTLEHAMPTON C.F.S.**—Ron Childs Memorial Fire Station was officially opened Sunday, 14th October. Dedicated in memory of the late Ron Childs who died from injuries sustained while fighting the Ash Wednesday II bushfires, the structure was financed mainly by Rotary International and built by voluntary labor under the direction of local builder and brigade captain Bruce King. Rotary financed the bulk of the station's building costs around \$26,000 of which \$6,000 came from the Mount Barker Club. The other \$20,000 came from Rotary International. Cost of the structure have been contained to \$32,000 due to the outstanding voluntary efforts of Mr. King and a host of local, professional and tradespeople.

Continued page 36.

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## LITTLEHAMPTON C.F.S.



Pictured above the Ron Childs Memorial Fire Station, Littlehampton C.F.S. valued at around \$90,000 consists of a two bay engine room, crew room, control room, store and kitchen. The grounds are landscaped and include parking areas.

Among the 150 invited guests were Mr. Childs' widow Betty and family, Rotary's past district governor Mr. Jeff Nankivell, Member for Murray Mr. David Wotton and Keith and Helen Nitschke, who generously donated land for the fire station site. Mr. Nitschke was the brigade's first chairman and was instrumental in getting the Littlehampton brigade operational.

At the official ceremony C.F.S. Director Mr. Johns unveiled special plaques and a life-size color portrait of former rotarian, and prominent community member the late Mr. Ron Childs. The Rotary District Governor of District 950 Mr. M. Smith presented another cheque to the Little Hampton C.F.S., to the value of \$1,000.

**LOBETHAL C.F.S.**—Unveiled a new \$13,800 fire shed and a new \$20,000 quick attack Ford F100, 4wd fire unit. The all-metal shed has four bays. Volunteers contributed their time and effort to keep the cost of the building project down to \$14,000. The station was opened by the president of the Hills Fire Fighters Association Mr. W. Murdoch and retired former chairman, fire fighter and public officer Mr. A. W. Paech. Three members were honored with life membership, Messrs Des Stanbury, Trevor Fox and Merv Sickerdick. Each has served in the C.F.S. for 22 years.

**MILLICENT & DISTRICT F.F.A.**—Paid tribute to the dedication of former president The Rev. John Follett. District Supervisor Mr. Mike Kemp said "John has assisted all of us to make the right decisions at the right times, and we will be at a loss without him at the helm."

**MORPHETT VALE, HACKHAM & REYNELLA C.F.S.**—Brigades have been put on the airwaves, thanks to the Morphett Vale Tavern social club, bar patrons and management donation of a \$600 portable two-way radio.

**MUNNO PARA C.F.S.**—Supported by Smithfield and Evanston Gdns C.F.S. and Elizabeth and Salisbury S.A.M.F.S. responded to a call to a staged school fire at which 450 students from the Munno Para Primary School were being evacuated. On arrival the crews from Smithfield C.F.S. under command of senior firemen David Lamplough and Tony Butlin set up a high pressure line and a 38 mm hose line. While the crew of 331 (Elizabeth M.F.S.) under snr fireman Eric Deakin entered the class room with B.A. to rescue two persons "trapped" Elizabeth M.F.S. revived the people while Evanston Gdns 51 (C.F.S.) under snr fireman Ken Oliver set up a 38 mm hose.

Once the evacuation was completed a roll call/head count was done. The Salisbury 323 (M.F.S.) then demonstrated their sky jet, followed by a joint S.A.M.F.S./C.F.S. fire prevention/awareness talk.

**PORT CLINTON C.F.S.**—Junior members Ashley Thompson, Nicole Mullin, Gavin Elsworth and David Bowyer competed at C.F.S. fire fighting drill competitions for the first time against a very high standard of opposition and were runners up in the Region 4 competitions.

*Well done boys . . . Editor.*

**PRICE C.F.S.**—Through a generous donation by the Ardrossan and District Lions Club, have purchased a complete set of breathing apparatus valued at \$2,500.

**ROBE C.F.S.**—Joined with units from Kingston, Lucindale and Penola in a district field exercise, assisted by St. John Ambulance Service officers and C.F.S. instructors from Naracoorte, Penola and Millicent. The exercises covered a cliff rescue, a 3 vehicle multiple accident, lifting and pumping, and an orientation and obstacle course involving 4 wheel drive vehicles. A debriefing and lecture on weather relating to fires followed.

**ROSEWORTHY C.F.S.**—Purchased a 1981 International ACCO cab chassis truck for \$14,250, with assistance from the District Council of Light. A door knock was held to raise money towards the cost of equipping the unit. Once fitted out the truck will replace the existing 1943 Blitz.

# Yakka

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**SADDLEWORTH & AUBURN DISTRICT C.F.S.**—Units from Saddleworth, Marrabel, Auburn, Waterloo, Tothill, Black Springs and Sevenhill underwent a course of 8 assignments at an exercise on the western slopes of the Tothill/Julia Ranges. The assignments set were—L.P.G. Fire, S.E.S. vehicle rescue, hazchem exercise, vehicle efficiency and tank filling test, equipment inspection, a fire front approach and reversing problem, an oil fire, fire in a building and map reading test.

Full radio communications were tested and a controlled net was set up between vehicles, headquarters and bases at Saddleworth and Watervale.

**SALISBURY C.F.S.**—Former mayor and president Harry Bowey, has retired after 30 years service. His civic offices included president of the Local Government Association, chairman of Lyell McEwin Hospital, president of Salisbury E.F.S., chairman of Central District Football Club. Mr. Bowey's community service earned him an Order of the British Empire. He entered the E.F.S. in 1954 and was honored with a life membership in 1982.



Pictured above former Salisbury C.F.S. president Harry Bowey says goodbye.  
Photograph reproduced courtesy Messenger Newspapers.

**SMITHFIELD C.F.S.**—Have dedicated their newly commissioned Ford F350 initial attack fire appliance, to the memory of the late Captain Ken Clark.

*Article to follow next issue.*

**STIRLING, C.F.S.**—Received a \$500 branch donated by the Eagle on the Hill Hotel. The special branch can regulate the flow of water directed at the flames. A feature is its ability to produce a protective "shield" of water to enable fire fighters to get close to the fire source to extinguish it. Burnside C.F.S. were also presented with a branch.

**SUMMERTOWN C.F.S.**—Auxiliary raised over \$1,000 from an art and craft display at Uraidla Show Hall. Money raised will go towards maintenance and the new unit being built.

**WAKEFIELD PLAINS C.F.S.**—District Council purchased a Ford F100 ute as an initial fire attack unit. Fitting out will include a 100 gallon (454 litre) tank, pump, hoses, two radios, extinguishers and knap-sacks.

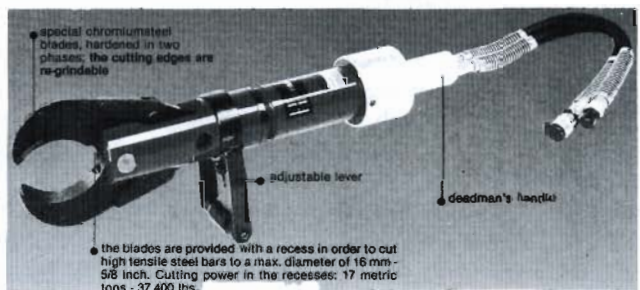
**WILLUNGA D/C**—Latest acquisition is a \$5,500 compressor used to re-charge gas cylinders, for use by all brigades in the area. The compressor will be housed at Aldinga Beach C.F.S. station.

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## FIRE SAFETY AND POLYURETHANE FOAM INSULATION

### Operational considerations

Cost effectiveness and ease of application makes foam insulation very appealing to the Primary Production Industry.

Polyurethane Spray Foam and Polystyrene Rigid Foam Boards are extensively used in many Primary Industries including Pigs, Poultry, Wine, Cold Storage and Horticultural Packing Sheds.

These products are not easily set alight, however when set alight they burn extremely rapidly producing toxic gases.

#### Action to be taken upon outbreak of fire:

- (1) Get out fast—attempting to rescue stock may seriously jeopardise your survival.
- (2) Ventilating from outside may help stock survival—do not endanger your own life through inhalation of toxic gases.

#### Action to be taken by Fire fighters:

- Locate fire fighting vehicles upwind.
- Burning buildings/sheds should not be entered, the exception being to save human life and then only if breathing apparatus is worn.
- High pressure water jets are effective on this type of fire.

#### Additional Hazards:

E.T.S.A. power and L.P.G. are commonly used in intensive stock sheds and may pose a hazard to fire fighters.

### Use of polyurethane foam.

Polyurethane foam is recognised as being an effective insulator and is widely used in the insulation of sheds for intensive poultry, sheep or pig husbandry. Polyurethane foam not only insulates but acts as a filler and eliminates gaps between sheets of iron and wall and roof joints so creating an area within the insulated building that is not adversely effected by heat radiation from the outside. Such buildings can be readily temperature controlled with the aid of heaters or air conditioners. Polyurethane foam is also used with great success as insulation in cold rooms for holding on strong fresh farm vegetables and flowers.

Polyurethane foam insulation is available in either a spray-on product or in a form of flat sheet panels. The spray-on product appears to be most popular due to the ease of applying it to walls and roof panels of existing buildings. Not only does it act as a filler but during the application process will cover any projections such as steel frame work and timber purlons without causing any problems.

### What is polyurethane foam

Polyurethane foam with the trademarks of Daltolac<sup>(R)</sup> and Suprasec<sup>(R)</sup> are the property of ICI Australia Limited. The most commonly used system for the rural industry is Daltolac 83/SR<sup>(R)</sup> which is a formulated blend comprising a mixture of polyether, catalysts, cell control agents and fire retardant activities. Daltolac 83/SR<sup>(R)</sup> is a fast reacting foam system especially formulated for spraying. This material is processed through air spray or airless spraying equipment especially designed for urethane application. The system sets tack free in about 20 seconds allowing for rapid application.

### Is polyurethane foam a fire hazard?

At normal atmospheric temperatures, neither of the chemicals used in the manufacture of polyurethane insulation are flammable but the resulting foam will burn when subject to an open flame. Although Daltolac 83/SR<sup>(R)</sup> contains a fire retardant additive, foam from the Daltolac/Suprasec system will burn when exposed to fire. Where foam is to be used internally in an application which has potential fire hazard, the foam should be adequately protected with a thermal barrier. Alternatively, use a fire rated polyurethane foam which has ratings acceptable to Australian Standards 1530/3. This can be discussed with a responsible foam operator.

It must be clearly understood that polyurethane insulation foam by itself, is not a great fire hazard. However, by adding a heat source and an open flame through welding or oxy cutting, the situation changes dramatically. The result of combining these two elements, is a fire that burns at a temperature in excess of 1000°C, spreads 140 times faster than a wood fuel fire and produces toxic gases including carbon monoxide and hydrogen cyanide.

### Safe use of polyurethane foam in farm buildings

Care is required in keeping all flammable materials away from walls treated with polyurethane insulation and caution should be exercised in the use of electric welders, oxy torches, angle grinders or any open flame in close proximity. Experience suggests that provided suitable precautions are taken with polyurethane foam insulation, it presents no threat to safety.

### Safety precautions

To eliminate a fire risk, cleanliness both inside and outside buildings treated with polyurethane foam is an essential precaution.

**If welding is necessary within the immediate vicinity of polyurethane treated surfaces then this surface should be covered with some fire and heat resistant material such as a sheet of gyprock or similar material.**

Have on hand an adequate supply of pressurised water, to cool off any hot spots that may occur around the welding site.

The most important point to remember is that if polyurethane foam catches fire you have a life risk problem on your hands.

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With Dräger Breathing Apparatus, you don't have to worry. Because we have developed our equipment to perform under the harshest conditions possible. When your life depends on it.

Years of research and technology have gone into the development of our products, such as breathing apparatus.

This is only one of several product ranges marketed by Dräger Australia for your safety.

Gas Detection is made simple by using Dräger tubes which can monitor more than 200 gases accurately and quickly. Giving you the answers when and where you need them.

Resuscitation Training has now become easier with the use of the Laerdal range of Training Manikins. The variations in teaching techniques among various organisations can be accommodated by the versatility of the Laerdal Training Aids.

Dräger Australia also has available the Vetter range of lifting equipment and the Rollgliss ascent and descent apparatus.

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## New Product

### HOSE STRANGLER

There are a number of times during field operations that fire fighters need to be able to shut down a canvas hose line, but it is not always convenient to close the pump delivery valve, or remove fittings under pressure. A few specific examples are described below. A lightweight, portable hose strangler is ideal for these types of applications.

#### *Situation 1:*

Where two 40 mm canvas hose lines are being supplied from one 65 mm canvas line—as in oil or gas fires or structure fires—the hose strangler can be used to shut down one of the 40 mm lines to add a length or replace a damaged length. The other line can remain charged and operating for protection.

#### *Situation 2:*

Where lengths of canvas (65 or 40 mm) hose have been run uphill to a fire scene or mop-up and the supply vehicle is out of water. Note that while the truck is empty, the hose generally can remain almost fully charged unless the pump is shut down and the hose drains back to the tank through the pump. (This will not happen where check valves are fitted in the pump discharge).

In this situation there are basically three alternative actions:

(a) Leave the hose connected to the truck and bring in another truck or tanker to supply the empty truck. This 'ties up' another truck.

(b) Disconnect the hose from the truck while the hose is charged. This can be difficult at high operating pressure, and also results in lost water and wet fire fighters.

(c) The hose strangler can be used to pinch off the hose close to the truck and the hose can then be disconnected. Water loss is minimal, resulting in a charged line when the truck returns with a full tank.

#### *Situation 3:*

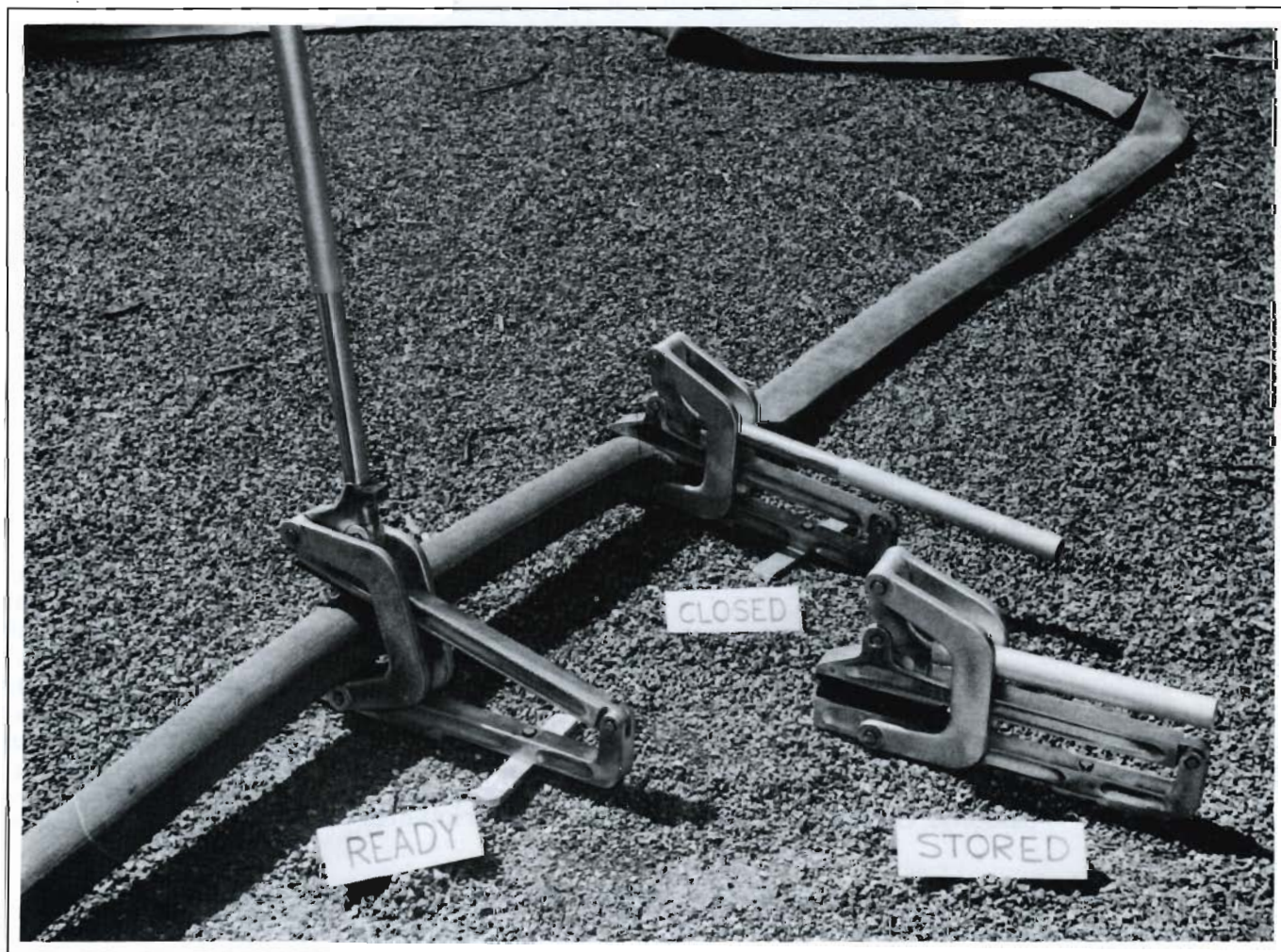
Where lengths of canvas (65 or 40 mm) hose have been run downhill to a fire scene or mop-up and more hose has to be added. In this situation any operator removing the branch to add a length will most certainly get wet and waste water. The hose strangler can again be used to pinch off the hose behind the branch, the branch then may be removed and another length added.

#### *Canvas Hose Strangler*

The canvas hose strangler designed and manufactured by Ian Gliddon, a Captain of Tea Tree Gully C.F.S. is made from heat treated high strength aluminium alloy and is capable of closing 65 mm (2½") hose at pressures up to 700 kPa (100 psi) or 1100 kPa (160 psi) for 40 mm (1½") hose. Its sliding handle gives compact storage size but good leverage in use, and the rotating foot gives stability on the ground. The tool has rubber faced jaws to avoid damaging hoses.

The tool is covered by a two year warranty and sells for \$140 from Ian Gliddon at Gully Engineering Services, 37 Waitara Rd, Banksia Pk, 5091 ph (08) 251 3071, or \$150 will cover packaging and postage. C.F.S. subsidy is available.

The hose strangler is also being marketed through Carey Gully Engineering.



## FIRE WARNING POSTER:

# FIRE WARNING

**\$10,000 PENALTY**  
OR 12 MONTHS IMPRISONMENT

On **FIRE BAN DAYS** (days of Extreme Fire Danger) the penalty for lighting a fire in the open is ~~\$1000~~ **\$10000**

### **BEFORE LIGHTING ANY FIRE IN THE OPEN**

Between 1st November and 30th April.  
You should contact the Local Council,  
Fire Control Officer, Police, or  
Country Fire Services Headquarters.

## PREVENT BUSH FIRES



S.A. Country Fire Services Board

Stocks of the above pictured Fire Warning Penalty Poster have been issued to all Fire Fighting Associations. C.F.S. Regional Officers are to supply District Council requirements.

The posters made from Tyvek and silk screened in Red and Black light fast ink are designed for outdoor use.

Finished size is 290 mm wide x 405 mm deep.

## NEW BOOKLET FOR BUILDING SAFETY IN BUSHFIRE AREAS

*The Technical Services Division of C.F.S. Headquarters and officers of the Department of Environment and Planning have combined to produce a booklet to assist all involved in building houses in areas of the State subject to the danger of bushfires.*

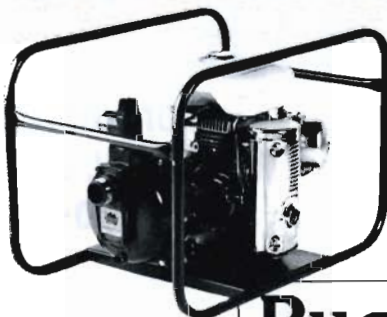
"Building for Bushfire Safety" provides practical guidelines on siting, design, construction and landscaping of houses to achieve the best protection in bushfire prone areas. These guidelines apply equally to all buildings.

The guidelines are based on fire behaviour knowledge and are relevant for all settled areas of South Australia.

The advice relates to buildings on farms and larger rural allotments where there is enough space to landscape for fire protection. It also applies to rural-urban areas where allotments are small and are set in thick vegetation and landscaping for fire protection is limited by the size of the property. More emphasis must be placed on house design, construction and water supply.

The guidelines have been prepared for new development but the principles are applicable to existing buildings and properties for developing protection strategies. The siting, design and construction principles are for prospective home owners, architects, builders and local government.

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## TECHNICAL ARTICLES

Excerpts from "The Volunteer"—Volume 1 (March 79) to Volume 21 (September 84)

An index on "Technical Articles" that have appeared in previous issues of "The Volunteer" has been prepared below for C.F.S. Brigades, Local Councils and interested readers, as an easy means of referral.

Category/ Index	Vol. No	Page	Month	Title
Accident/ Rescue	7	26	Sept 80	New Zealand Accident/ Rescue Kit
Breathing Apparatus	9	10	March 81	Mobile B.A. Chamber
Breathing Apparatus	15	5	Sept 82	Hydrostatic Testing of C.A.B.A. Cylinders
Breathing Apparatus & Equipment	10	9	June 81	Breathing Apparatus . . . Its importance and usage
Breathing Apparatus & Operations	14	11	June 82	B.A. Wearers—Take Note
Building Protection & Fire Protection	19	27	Dec 83	Hints on Surviving a Fire in Buildings
Building Protection & Fire Protection	21	21	Sept 84	See Your Fire Escape Route— Emergency Lighting
Building Protection & Hospitals	6	18	June 80	Country Hospitals Fire Protection Procedures
Clothing & Uniform	13	25	March 82	C.F.S. Brigade Officers Badges of Rank
Clothing & Fire Protection & Uniform	13	23	March 82	'PROBAN'
Clothing & Protection & Uniform	14	4	June 82	Wear Protective Clothing

Category/ Index	Vol. No	Page	Month	Title
Clothing & Fire Protection	19	6-7	Dec 83	Clothing and Heat Protection for Rural Fire fighters
Communica- tions	12	12-13	Dec 81	Communications on the Move
Communica- tions	16	22-24	Dec 82	Consider Communications
Communica- tions	18	14	Sept 83	Communications Generally
Communica- tions	19	9	Dec 83	Communications Check List
Communica- tions	19	13	Dec 83	V.H.F. 20 Channel Transceiver Frequencies
Communica- tions	20	21	Mar-June 84	Communications—1984 . . .
Equipment	1	13	March 79	How much water in that tank
Equipment	3	10	Sept 79	Water Fog Streams
Equipment	7	26	Sept 80	Front Mounted Pumps
Equipment	9	13	March 81	From Fog . . . to Foam Branch
Equipment	10	15	June 81	Maintenance of Knapsack Sprays
Equipment	11	23	Sept 81	Hydroblender—New Zealand
Equipment	13	9	March 82	C.F.S. Standard Threads
Equipment	13	22	March 82	Water Ejector
Equipment	13	24	March 82	Air Bags
Equipment	14	7	June 82	Canvas Hose Rolling Jig
Equipment	14	7	June 82	The Maintenance of Fire Protection Equipment—Part 2 Fire Hose Reels

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# TECHNICAL ARTICLES cont.

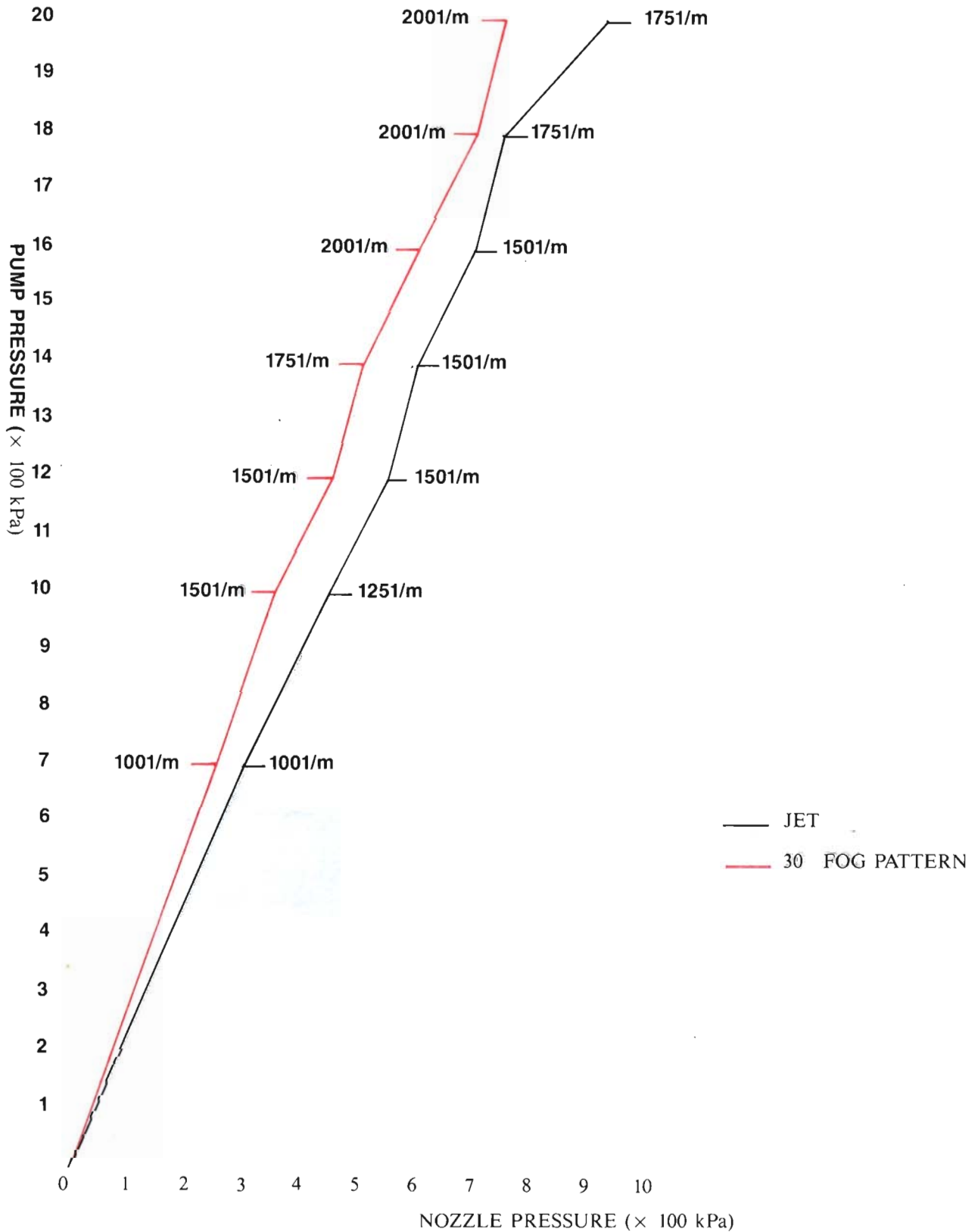
Category/ Index	Vol. No	Page	Month	Title
Equipment	16	17	Dec 82	Nozzles for 25 mm Bore Hose
Equipment	19	9	Dec 83	Bulk Buying for Brigades
Education	19	25	Dec 83	Fire Action Guide
Equipment	19	11	Dec 83	Petrol Vaporisation in Spark Ignition Engines
Equipment	19	30	Dec 83	C.F.S. Board Fire Appliance Specification
Equipment	19	44	Dec 83	Comparison of Cab/Chassis
Equipment	19	48	Dec 83	Extinguishers, Class Rating, Colour
Equipment	20	17	Mar-June 84	Low Water Level Warning Device
Equipment & Fire Protection	4	19-20	Dec 79	How to Use a Fire Extinguisher!
Equipment & Operations	11	5	Sept 81	Friction Loss in Fire Hose
Equipment & Property Protection	11	24	Sept 81	A Guide to Farm Fire Units
Equipment & Vehicle	14	23-24	June 82	Does Your Fire Appliance Comply?
Equipment & Vehicle	21	30-31	Sept 84	Some Facts About Diesel Fuel Vehicle
Extinguishing Liquids & Hazchem	6	19	June 80	World Trends in the Use of Halons (Part I)
Extinguishing Liquids & Hazchem	7	30-31	Sept 80	World Trends in the Use of Halons (Part II)
Extinguishing Liquids & Hazchem	9	29-32	March 81	World Trends in the Use of Halons (Part III)
Fires	5	11-16	March 80	Ash Wednesday I, 20 February 1980
Fires	6	13	June 80	Ash Wednesday I (Part II)
Fires	7	6	Sept 80	Ash Wednesday I—Findings
Fires	17	Issue	Mar-June 83	Ash Wednesday II Bushfires
Fires	20	6-7	Mar-June 84	Coroner's Inquest—Findings—Ash Wednesday II Bushfires
Fires	21	4-6	Sept 84	Coroner's Inquest—Findings—Ash Wednesday II Bushfires
Fire Investigation & Operations	20	29	Mar-June 84	Fire Cause Elimination Process
Fire Prevention	9	9	March 81	The 'Bear' Facts
Fire Prevention & Education	19	4	Dec 83	Fire Awareness Kit
Fire Protection	4	35-36	Dec 79	You and Forest Fires
Fire Protection	8	30-31	Dec 80	Fire Uses . . . and Opinions
Fire Protection	8	32-34	Dec 80	Before the Fires Start
Fire Protection	8	35-36	Dec 80	Advice to Women
Fire Protection	9	21	March 81	Property Protection . . . All the Way!
Fire Protection	12	26	Dec 81	Four O'Clock Fires
Fire Protection	14	15	June 82	Don't Panic . . . And Live

Category/ Index	Vol. No	Page	Month	Title
Fire Protection	19	7	Dec 83	The 10 Second "Key to Survival"
Fire Protection	19	26-27	Dec 83	Bushfire Survival
Fire Protection	20	11	Mar-June 84	Welding Fuel Containers
Fire Protection	21	7-8	Sept 84	Bushfires: What Have We Learned?
First Aid	3	15	Sept 79	First-Aid Hints for Fire Emergencies
Fire Protection & Vehicle	4	21	Dec 79	Fire Safety in Your Caravan
Fire Protection & Fire Bans & Weather Forecasting	19	25	Dec 83	Red Alert Day
Fire Protection & Breathing Apparatus	20	16	Mar-June 84	Smoke is a Silent Killer
Fire Research & Fire Suppression & Fire Protection	21	25-26	Sept 84	NCRFR (National Centre for Rural Fire Research)
Fire Season	8	14	Dec 80	Fire Danger Season
Fire Season	8	14	Dec 80	Prescribed Day
Fire Season	8	14	Dec 80	Fire Bans—What They Mean!—Bans
Fire Protection & Property Protection	8	12	Dec 80	Why Clean up?
Fire Suppression & Fire Research	13	26	March 82	Project Aquarius
Fire Suppression	20	20	Mar-June 84	Wetting Agents
Floods	18	10-12	Sept 83	The Floods of March 2nd-3rd
Hazchem	7	18	Sept 80	The Evacuation of Mississauga (Part I)
Hazchem	8	26-28	Dec 80	The Evacuation of Mississauga (Part II)
Hazchem	9	12	March 81	Hazchem in Australia
Hazchem	11	4	Sept 81	Dangerous Substances Hazard
Hazchem	15	23	Sept 82	Hazteam in Chemical Incident Exercise—Part I
Hazchem	16	19&28	Dec 82	Hazteam in Chemical Incident Exercise—Part II (cont. from Vol. 15)
Hazchem	20	12	Mar-June 84	Hazchem
Hazchem	20	13	Mar-June 84	Responding to a Hazardous Materials Incident
Hazchem	21	11	Sept 84	Chemical Fires/Spillages . . . Heed Protection Advice
Health	2	15	June 79	Physical Fitness for Fire fighters/Can you measure up?
Health	3	15	Sept 79	Physical Fitness for Fire fighters/Can you measure up?
Health	9	26-28	March 81	The Effect of Heat and Smoke on the Human Body

Continued Page 46

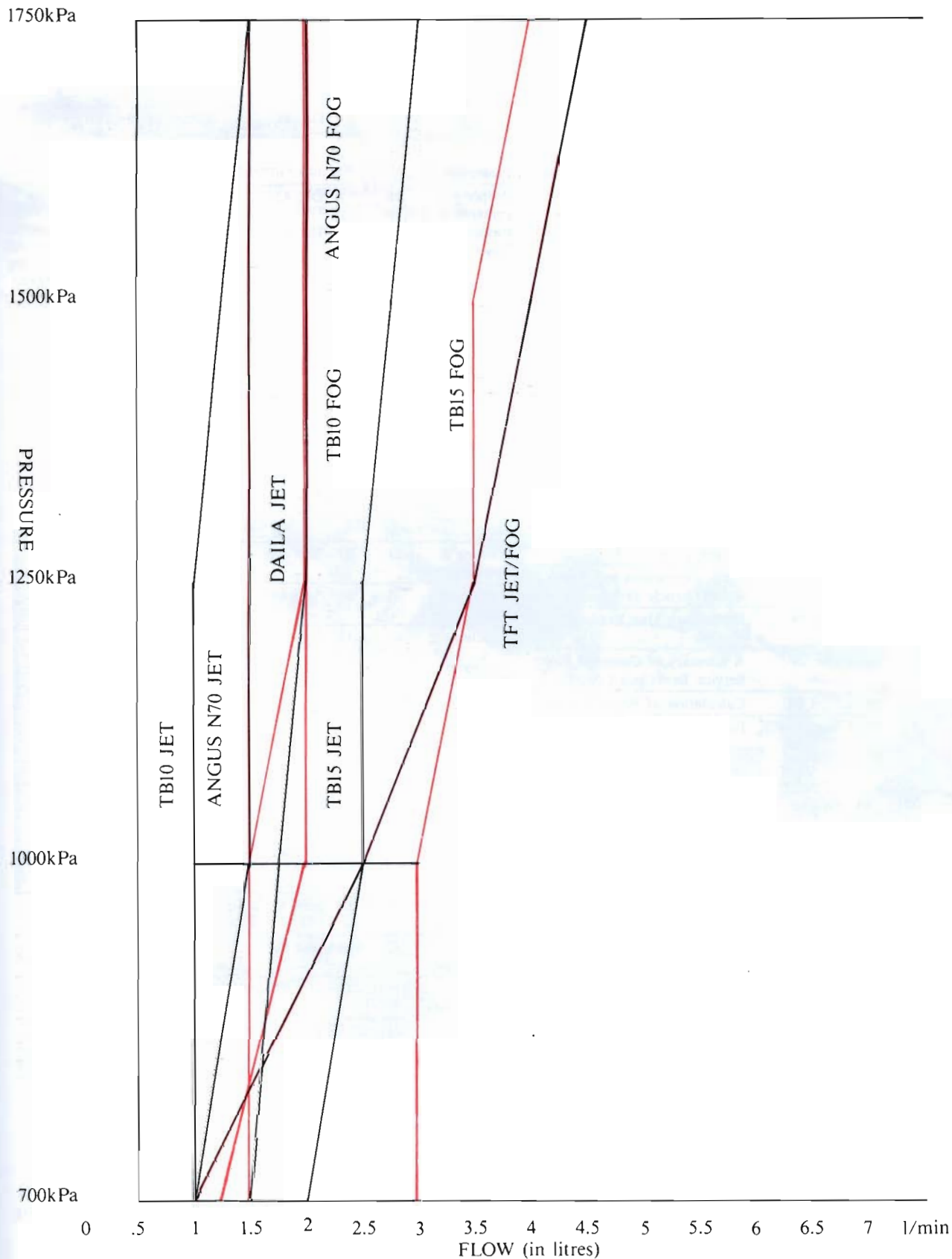
## RELATIONSHIP BETWEEN PUMP AND NOZZLE PRESSURE

GRAPH 1 shows the pressure required at a pump to obtain a working pressure through a 50 m × 25 mm hose reel and a TB15 nozzle. Over 50% of pressure can be lost due to friction.



# RELATIONSHIP BETWEEN PRESSURE AND FLOW

GRAPH 2 shows the flow in litres through a range of nozzles.  
(Note—no frictional loss has been taken into account.)



# TECHNICAL ARTICLES cont.

Category/ Index	Vol. No	Page	Month	Title
Health	11	15-16	Sept 81	Heat Stress—What is it?
Health	20	10-11	Mar-June 84	Heat Stress on Fire Fighters
Health	21	10-11	Sept 84	Compensation
Health	21	24-25	Sept 84	Effects of Heat Stress Being Determined
Health & Fires	20	8-9	Mar-June 84	Ash Wednesday & C.F.S. Fire fighters
House Protection	8	45	Dec 80	In the Home—Fire Safety (Danger not Realised)
House Protection	10	24	June 81	Danger in Trend to Wood Stoves
House Protection	11	22	Sept 81	Danger in Trend to Wood Stoves (cont. from Vol. 10)
House Protection	12	10	Dec 81	Home Fire Safety Check List
House Protection	21	28&29	Sept 84	House Survival in Bushfires
LPG & Hazchem	6	11	June 80	LPG is safe, but . . .
Operations	1	3	March 79	E&WS Hydrants for fire-water
Operations	1	5	March 79	Fire Service Terminology
Operations	1	12	March 79	Smoke Columns and Fire Behaviour
Operations	1	16	March 79	C.F.S. Operations and Radio Room (Article 1)
Operations & Fire	2	4	June 79	Some Aspects of Rate of Spread of Fire
Operations	2	13	June 79	Safe burning—a planned one boss operation
Operations	2	16	June 79	C.F.S. Operations and Radio Room (Article 2)
Operations	3	10	Sept 79	Mopping up
Operations	3	16	Sept 79	C.F.S. Operations and Radio Room (Article 3)
Operations & Mapping	4	25	Dec 79	Elementary Map Reading
Operations	4	41-42	Dec 79	A Glossary of Common Fire Service Terms and Commands
Operations	7	28-29	Sept 80	Calculation of Water Supplies
Operations & Fire Protection & Burning Off	11	20-21	Sept 81	Fuel Reduction Burning
Operations	12	14	Dec 81	Quickly Assess all Factors
Operations & Fire Investigation	13	7	March 82	Fire Investigation
Operations	13	15	March 82	Brigade Turn-Out Information?
Operations	15	3	Sept 82	The C.F.S. Fire Reporting System
Operations & Breathing Apparatus & Health	18	15	Sept 83	Combating Smoke . . . Gaseous Poisons
Operations & Education & Burning Off	19	14	Dec 83	Fire Management and National Parks
Operations & Communications	19	32-33	Dec 83	1983 Into The Future
Operations	20	9	Mar-June 84	Mutual Aid Plan
Operations & Training	20	14	Mar-June 84	Are You Adequately Trained?
Operations & Training	20	15	Mar-June 84	Correct Procedures—on arrival at an incident

Category/ Index	Vol. No	Page	Month	Title
Operations	21	6	Sept 84	Incident Reporting System
Operations & Country Fires Act & Burning Off	21	32	Sept 84	Planning a Burn Off?
Property Protection	12	18	Dec 81	The C.F.S. and the Farmer
Property Protection & Fire Protection	12	24-25	Dec 81	A Philosophy of Fire Protection
Property Protection & Fire Protection	12	31-32	Dec 81	Planning for Property Fire Protection
Property Protection	16	7-8	Dec 82	Fire Threat Lessened on Eyre Peninsula Farm
Property Protection	16	15	Dec 82	Landscaping Cuts Fire Risks
Property Protection	19	18-20	Dec 83	Farmer with Simple Prevention Policies
Property Protection	19	22-23	Dec 83	Planning for Property Fire Protection
Spark Arresters	11	23	Sept 81	Spark Arresters and the Law
Spark Arresters & Property Protection	12	8	Dec 81	Dangers from Exhausts and Overhead Wires
Suppression Operations & Fire Suppression	8	54	Dec 80	Improved Aerial Ignition System (U.S.A.)
Training & Fire Research	21	20	Sept 84	C.F.S. Training, Research Applications
Training & Equipment	21	27	Sept 84	Testing of Ladders
Vehicle	3	13	Sept 79	Driving Advice to C.F.S. Officers
Vehicle & Equipment	3	13	Sept 79	Equipment and Vehicle Maintenance
Vehicle	4	33	Dec 79	CFS Fire Appliances: Standard C.F.S. Colours and Identification
Vehicle	9	24	March 81	Petrol Vaporisation in Spark Ignition Engines
Vehicle	21	8	Sept 84	Maintenance of Vehicle Electrical Systems
Weather Forecasting	7	22	Sept 80	Fire Weather Forecasting
Weather Forecasting	11	10	Sept 81	Fire Weather Forecasts
Weather Forecasting	12	38-39	Dec 81	Fire Weather Season South Australia 1980/81
Weather Forecasting	19	12	Dec 83	Fire Weather Forecast
Weather Forecasting	21	22-23	Sept 84	Fire Weather Season—South Australia 1983/84

## Who's Who at Headquarters

## MERRY XMAS . . . AND THANKS



I, along with everyone here at Seven News, wish all the Country Fire Service a Very Merry Xmas and a Happy New Year.

As you well know, it's much nicer working in harmony at the scene of an emergency. I am personally grateful for the willingness of your fire fighters to take the time to pass on important information at the scene of fires.

Thanks again to everyone and I hope next year goes well for everyone and their families.

Yours faithfully,

ROD WHITE  
Channel 7 Adelaide  
Emergency Services Reporter

The Country Fire Services welcomes our new Headquarters staff members, pictured above from left: Dennis Mutton, Manager Support Services; Denny Williamson, Director's Secretary; Wayne Byrne, Subsidies Clerk; Julie Morrison, Shorthand Typist and Frank Muldoon, Project Officer. Lesley Peacock, Receptionist/Typist and Phil Seymour, Correspondence Clerk, are not pictured.



## Merry Christmas

Smokey The Koala and SAS Channel 10's Fat Cat and "Friends" join with the Country Fire Services Board, headquarters management and staff in extending seasons greetings to the C.F.S. volunteer members, and readers. We wish you all a Merry Christmas and a Happy, Prosperous New Year.

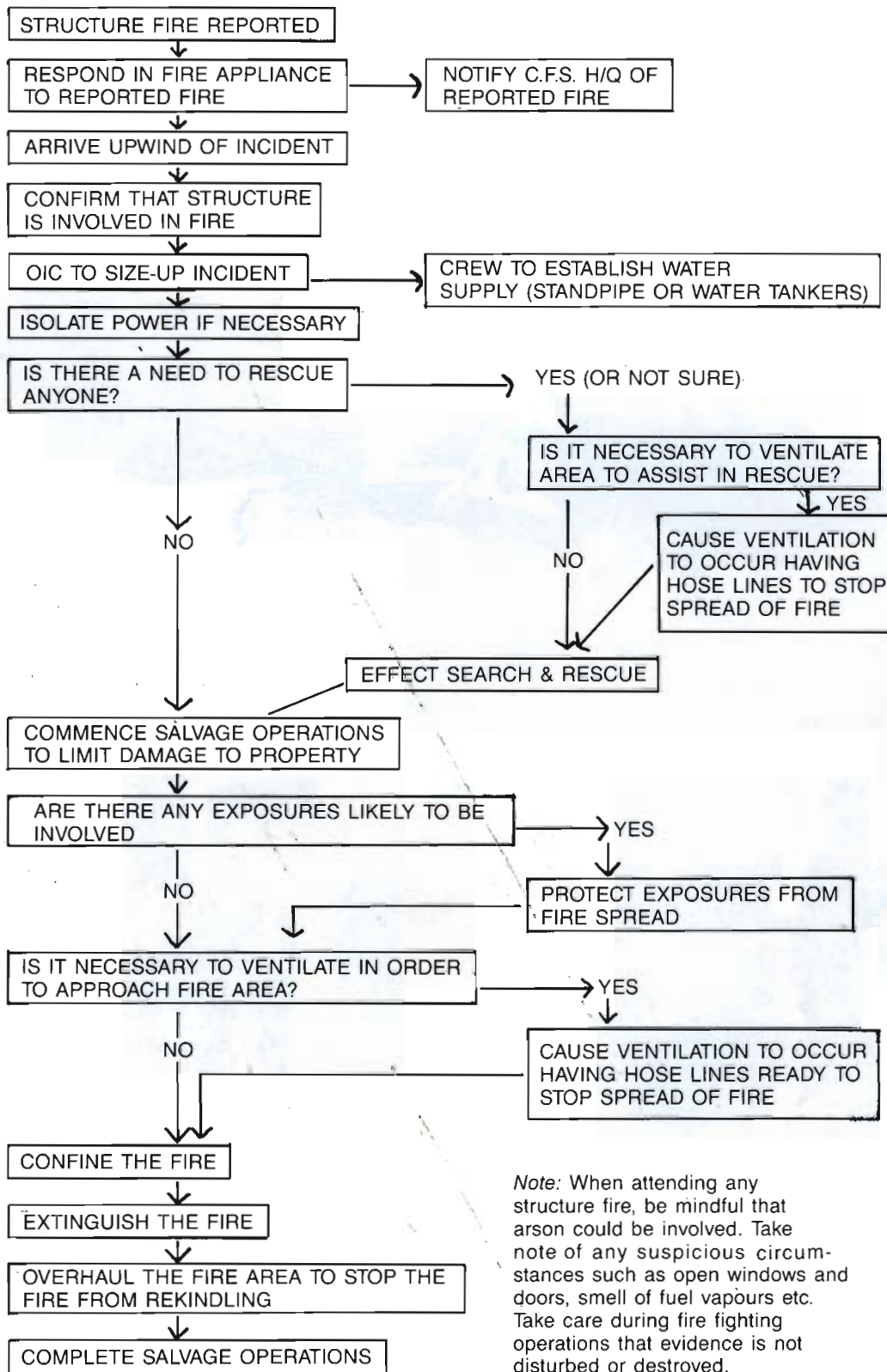
## RESPONDING TO A STRUCTURE FIRE

With the possibility of a life being at risk in a structure involved in fire, do you know the most effective sequence of actions which should be carried out in order to minimise the risk to that life, and reduce the likelihood of damage to the structure?

Shown below is a flow chart giving a step-by-step procedure which should be followed in the event of a structure fire.

The flow chart does not go into detail in any particular area, but gives an overall picture of the procedure which should be followed. If you wish to know more about a particular area, contact your Regional Officer or R.O. Bruce Hogan at C.F.S. Headquarters.

### STRUCTURE FIRE FIGHTING



*Note:* When attending any structure fire, be mindful that arson could be involved. Take note of any suspicious circumstances such as open windows and doors, smell of fuel vapours etc. Take care during fire fighting operations that evidence is not disturbed or destroyed.