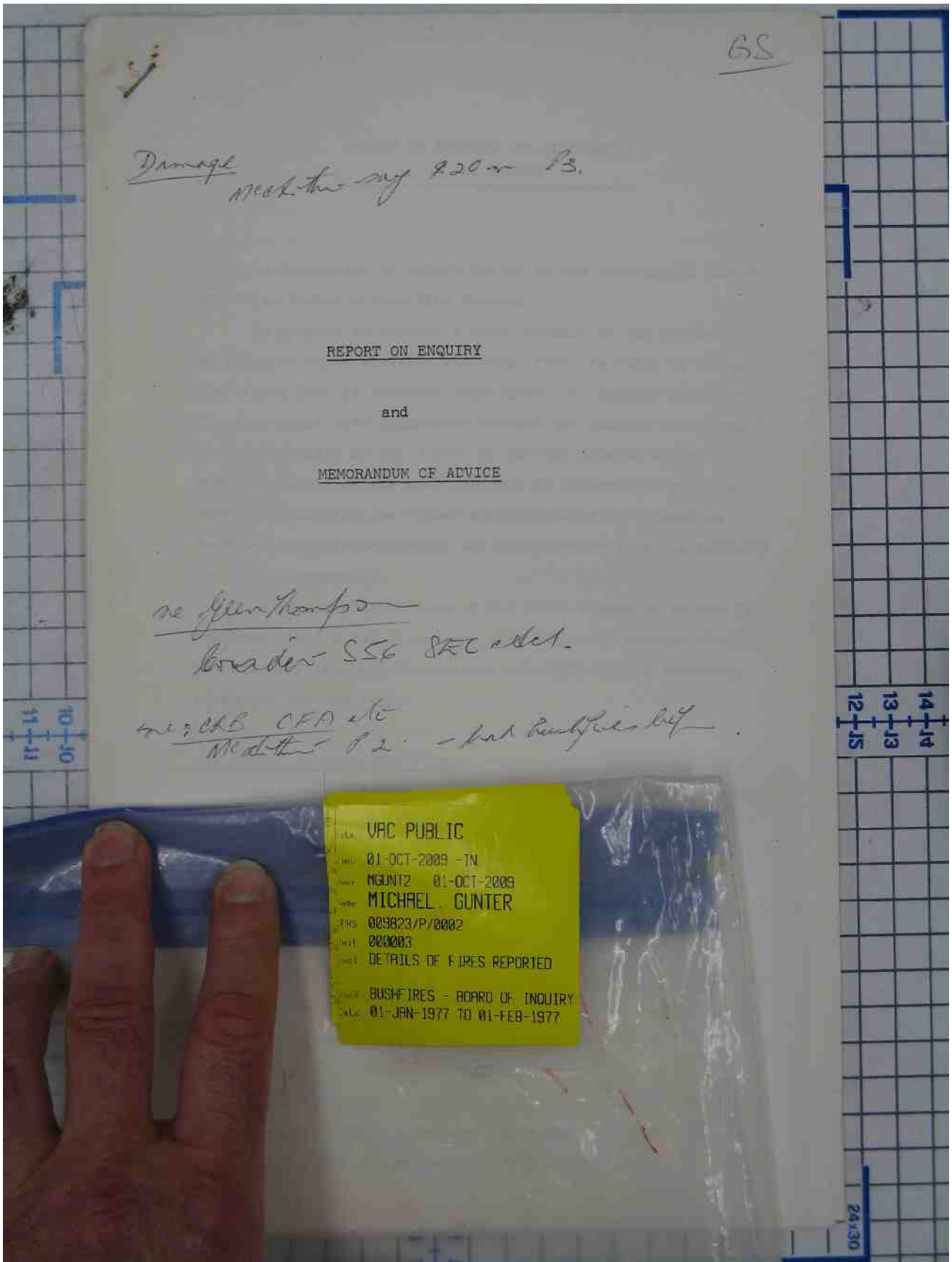


Excerpt re Beac, and much frank advice



Nothing was done between the time (whenever it occurred) of the aforesaid conversation and the commencement of the fire.

From the evidence given by various S.E.C. employees it was apparent that there was no regular or systematic inspection of S.E.C. lines in the area to ensure that they were clear of trees or hazards and further, tree cutting and clearing operations were far below that which was necessary to maintain and protect S.E.C. assets and remove potential fire hazards.

On the evidence we are of the opinion that it will be found that the S.E.C. was liable for the cause of this fire. Indeed, it has already settled the small claims arising out of it. It appears that at the time when the high tension line was installed it was not routed so as to be well clear of the elm tree and that further the southern conductor of the three conductors was either initially installed or permitted to come into such a state that under high wind conditions it could swing laterally some five feet so as to come into contact with the tree. Further in addition to the aforesaid matters on the day before the fire the very risk danger or hazard was drawn to the attention of the S.E.C. but it was not attended to before the fire commenced.

BEEAC FIRE:

This fire occurred at approximately 3.00 p.m. on the 12th February 1977 and it started either on the south side or the property on the south side of Pearce's Road, approximately 2 kilometres east of the Colac/Ballarat Road. Pearce's Road runs east and west with a gravel carriageway approximately 20 feet wide and grass verges approximately 24 feet on the north and 21 feet on the south side. On the southern side of the road there are S.E.C. conductors comprising two 22 KV conductors on top and three low voltage conductors below. At the point approximately opposite where the fire commenced the span was some 144.7 metres in length. Before the happening of the fire no spreaders or

spacers were fitted between the low voltage conductors.

As a result of the fire damage was done to approximately sixteen properties, two houses were destroyed, a number of outbuildings and motor vehicles were also destroyed together with 50 miles of fencing, sixteen cattle and in excess of two hundred sheep.

On inspections made subsequent to the fire it appeared that the northern perimeter of the fire was approximately 2'6" south of the gravel surface of Pearce's Road. However, on evidence called it would appear that the fire actually commenced further to the south than this point and that the fire probably burnt back.

One Ian Lee stated that very shortly after the fire must have started he saw it and it appeared to him that at its northern point it was some 30 - 40 yards south of the southern fence line of Pearce's Road. It does appear however from some of his evidence that his view may to some extent have been obstructed. Another witness one Daryll Hirth stated that on a first observation made by him the fire was approximately 10 feet south of the southern fence line and spread out to the south. There is some doubt as to whether it was Lee or Hirth who made the first observation as to the fire and consequently whether the fire had its starting point about 10' south of the aforesaid fence line or very much further to the south as stated by Lee.

On observations made of the low voltage conductors subsequent to the fire evidence was found that the centre and road side low voltage conductors had clashed.

At the time of writing this opinion we have had the opportunity of reading a statement prepared by an expert witness one Dr. Penman who has concluded that as a result of the low voltage conductors clashing particles of molten metal could be thrown and carried to the south by the high wind to such a distance as were likely to cause the fire to start.

Tests have been carried out by the S.E.C. as to this matter and although such tests are not complete they tend to show that hot metal particles in conditions like those on the day of the 12th February, 1977 could be thrown from clashing conductors and carried by the wind approximately 100 feet and cause a fire.

Very significant and important evidence was given by one Raymond Hutchinson. He stated that on the 8th January, 1969 he occupied a house on the north side of Pearce's Road. On that day a fire started on the south side of the roadway and to the north of the boundary fence of the property situated on the south of the road. Subsequent to the fire on the 12th February 1977 he went to Pearce's Road and observed that the fire had started in or about the same place as the fire on the 8th January, 1969. He stated further that shortly after the 8th January, 1969 he attended the office of the State Electricity Commission in Murray Street, Colac and asked whether something could be done about the slack power lines in Pearce's Road as he considered that the power lines constituted a danger. He stated that he considered that a possible cause of the fire on the 8th January, 1969 was the slack power lines clashing together in the strong north westerly winds. It appears further from his evidence that on inspecting the fire scene on 13th February 1977 he observed that the power lines were in the same condition as they were on the 8th January 1969, that is, nothing had been done either to tighten the span so as to prevent them clashing or to put spreaders between the low voltage conductors.

Subsequent to the 12th February 1977 spreaders have been installed between the low voltage conductors.

It is our opinion that having regard to the evidence of Penman and evidence of S.E.C. experts (yet to be given) it will be found that the cause of this fire was that the low voltage conductors clashed in the very strong wind and as a consequence hot molten particles were thrown to the south falling into

very dry grass causing the fire. Although it appears on initial observation that such particles must have travelled a considerable distance south from the conductors - at least 70' or thereabouts if not further - it would appear from the evidence to be given to the Commission that this can happen. It also appears that this is the only probable explanation as to why this fire started in the paddock on the south side of the road. If such is the finding, as we think likely, we consider it will be found that the fire was caused by the negligence of the S.E.C. It appears that the low voltage conductors were permitted to continue to be in a clashable state after notice. It is particularly important in the circumstances of this case that notwithstanding the report and complaint made by Hutchinson subsequent to the 1969 fire nothing was done and the same conditions continued until after the 1977 fire.

BALLIANG EAST

This fire occurred at approximately 15.50 hours on a property of Michael Cock facing Sharkey Road. The road runs generally east and west. It is a gravel road with three low voltage conductors running along the south side.

The fire burnt a distance of approximately 12 kilometres. It covered an area of 2,100 hectares and it was ultimately brought under control on the north west outskirts of the township of Little River. As a result of the fire 48 kilometres of fencing was destroyed as was 2,100 hectares of grassland, one thousand six hundred sheep and some one thousand five hundred bales of hay.

The most northern part of the fire was approximately 8.9 metres south of the centre line of the three low voltage conductors. Subsequent to the fire examination of the LV conductors revealed evidence of having clashed.

and may theoretically cause him to contribute towards any loss or damage suffered by other property owners as a result of this fire although no doubt his contribution may be more theoretical than a practical advantage in the circumstances of this case.

POSSIBLE LIABILITY OF OTHER PARTIES :

We have a direct interest in putting on other - i.e. costs in the future.

We have had some discussion with our instructing solicitor and Mr. G. Masel, Solicitor for the insurers of the S.E.C., about the chance of successfully claiming contribution towards payment of damages from other bodies such as the Country Fire Authority, Country Roads Board or the relevant local Shire Council.

This suggestion has arisen because in the spread of fires which occurred at Wallinduc, Waubra and Mingay there was at or about the point of ignition high grass on the road reserves which enabled the fires to remain alight and spread before the north wind.

In our opinion, the law does provide for a claim in negligence to be made against a person, body or corporation responsible for negligent spreading of the fire as distinct from commencement.

Section 20. of the Country Fire Authority Act provides :-

"The duty of taking superintending and enforcing all necessary steps for the prevention and suppression of fires and for the protection of life and property in case of fire and the general control of all stations and of all brigades and of all groups of brigades shall, subject to the provisions of this Act, so far as relates to the country area of Victoria be vested in the Authority."

It has been suggested that as a result of this provision the Country Fire Authority should contribute to damages because it should have ensured that road reserves had been burnt off or

mowed or ploughed so that any fire starting on or near a road reserve could not spread. Similarly it is argued that a case might be made out in the alternative against the Country Roads Board (where the road reserve is vested in it) or the local Shire Council (where it has responsibility for the particular road reserve).

We think that there is no substance in this suggestion in the circumstances of these cases and that its implementation would result in an unnecessary escalation of legal costs delays and public scorn.

The duty imposed on any body such as the Country Fire Authority, local Council or Country Roads Board can be no more in law than to observe its statutory duty and in so doing to act reasonably. The evidence called before the enquiry does not indicate that any of the bodies contemplated as co-Defendants could have been expected to know in advance that there would be fires on February 12 and where they would start so that they should have ensured that the particular road reserves involved should have been cleared.

It can never be suggested that reasonable fire prevention steps involve the removal of all grass at the sides of all roads or carriageways of any description right throughout the State.

As we understand it, the purpose of burning off on road reserves is mainly to provide fire breaks. It appears to be an essential part of fire fighting theory that road breaks are not primarily either to prevent the start of fires or to stop their spread. Their main purpose is to provide access points to facilitate the fighting of fires. Accordingly, fire breaks which include burning off at the side of roads are planned for strategic purposes

The proposition that the Country Fire Authority Act was not intended to impose on the Country Fire Authority a duty to ensure that all road reserves were cleared of grass is supported by the provisions of S.41, S.42, S.53 and S.55 which provide

*Why have I be
reasonably foreseeable
What is the strategic
plan?*

for the selection of areas for clearing on the basis of strategy. This clearly suggests that the duty is not one involving a blanket absolute duty but a duty involving judicious selection.

The evidence at the inquiry is clear and definite that once the fires took hold the weather conditions were such that no fire break or other preventive method could have prevented their spread. Mr. charge?

In the context of discussing possible liability of other authorities we refer again to the Wallinduc - Cressy fire because it resulted in very extensive damage.

It will be recalled that the fire started at an S.E.C. pole probably as a result of an EDO fuse operation. The paddock in which the pole was located was very lightly grassed having been eaten down by cattle. The fire spread south and was fuelled by grass at the side of the Mt. Clear - Lismore Road.

According to the transcript at p. 1099 there exists a witness, Mr. Harry Urch, who did not give evidence at the inquiry but to whose statement reference was made. According to this witness the fire break which was associated with this road had been burnt just south of the property line within the fence line of the adjoining property. The break was put inside the property rather than on the roadside at the request of the owners who did not want their fence damaged by burning off. The statement also claimed that there was burning off around the pole on the property where the fire started each year including 1976. There was, therefore, in fact a fire break close to the point of origin of the fire and it was a fairly wide one as appears in the coloured photos taken by the S.E.C. On p. 1099 there is a reference to the date of burning off being 20th February 1977. We think this is an error because the evidence at p. 1098-9 indicates that the fire break consisted of two plough runs burnt prior to the fire on February 12th.

At p. 1099 the following question and answer appears in

the evidence of Ian Ronald Symons the acting Regional Officer for Region 7 :-

"Looking at the position there, with the grazed paddock on the left of the photograph and the break on the right hand side of the roadway, you have a situation which is fairly adverse to the starting of a fire do you not?

.... That is right. On most summer days that would have been most effective."

*add
and a
it might
have been.*

For the above reasons we are strongly of the view that claims for contribution against other parties are not available. We emphasise that no argument at all arises with respect to any other of the fires than the abovementioned, (ie. Waubra, Wallinduc Cressy and Mingay). This means that the proposition discussed in this section cannot even be raised in respect of the very large fires that resulted from the Tatyoon and Pura Pura outbreaks.

REASONS FOR EARLY DECISION ON THE QUESTION OF LIABILITY OR PREPAREDNESS TO SETTLE CLAIMS

We believe that it is in the interests of the S.E.C. to settle in full reasonably made claims for damages as a consequence of the fires under discussion. Whether liability is admitted or whether claims be settled with a denial of liability is a matter purely for decision by the Commission. If it is possible to achieve settlement of the claim with a denial of liability we would support this course. However, we believe that it would not be in the interests of the S.E.C. to consider this aspect of great moment. Whether or not liability is admitted or claims are paid in full with a denial of liability makes little difference in practice. We recognise, however, that the S.E.C. may have firm views on this aspect.

We think it important to emphasise the value to the S.E.C. of immediate attention to the claims and to achieve settlement

as soon as possible. We summarise our reasons :-

1. There is, in our view, no legal defence to the claims;
2. Early settlement will greatly reduce legal costs which with the institution of proceedings and consequent interlocutory work will substantially increase;
3. Early settlement will greatly reduce, if not avoid, an obligation to pay interest on claims, (8% is presently allowed).
4. It is common experience that with the passage of time and long delays claims tend to be increased and inflated. The cost of investigating and paring down inflated claims is expensive and time consuming;
5. We believe that there is a greater chance of favourable settlements being obtained in an atmosphere where feelings have been tempered by a willingness on the part of the S.E.C. to treat at an early stage;
6. The hearing of claims in local rural areas would inevitably result in considerable adverse publicity for the S.E.C. We say this from our knowledge of evidence already given at the enquiry some of which is discussed in the above early section of this memorandum.
7. Early settlement of claims will reduce hardship and therefore improve the public relations between consumers and the S.E.C. in country areas.
8. Delay may stimulate political pressure for -
 - (a) amendment of the law so as to impose on the S.E.C. strict liability to pay damages in respect of any fire resulting from S.E.C. assets whether due to negligence or not;
 - (b) a possible inquiry into the S.E.C. - a suggestion which has already been made by one of the political parties.
 - (c) settlement of the claims in any event.

*Invest
Money*

Radhokan Singh

9. A decision to settle claims at an early time may assist the S.E.C. at the present enquiry to get some support for some of the basic submissions it is proposing to make with regard to division of responsibility and increased responsibility of the Country Fire Authority to ensure that fire prevention methods are undertaken.

GENERAL MATTERS TO BE DRAWN TO THE ATTENTION OF THE S.E.C.:

The Board of Enquiry was required to enquire into the causes and origins of major bush and grass fires which occurred in Victoria during January and February 1977.

The terms of reference, however, included other questions involving :-

- the adequacy and effectiveness of present measures taken by Government, private agencies, and by individuals, to guard against the outbreak of bush and grass fires in the rural areas of Victoria
- whether developments which have occurred in the rural areas of Victoria during recent years indicate a need for Government and private agencies and individuals :-
 - (a) to take different or additional steps to assist in the prevention of bush and/or grass fires; and
 - (b) to adopt different or additional practices in the fighting of bush and grass fires.

The Board also has to examine the adequacy and effectiveness of present fire fighting practices etc.

However, the two matters set out above have permitted the introduction into the enquiry of evidence which amounts to general complaints against the S.E.C. and in particular complaints regarding hazards observed to arise from S.E.C. assets. In addition, we have been ordered to disclose our records and the summaries extracted therefrom in relation to

past experience with fires allegedly caused by S.E.C. assets. All this has exposed the S.E.C. to examination of its structure and efficacy in relation to fire prevention and maintenance of its assets relative to fire prevention.

It also means that the Board will be urged to make recommendations affecting the way in which the S.E.C. conducts its business. This may affect its future management and deployment of economic resources.

It follows that there is a danger that some of the submissions may be acted upon and recommendations made which are not in the interests of the S.E.C. or which the S.E.C. might find much difficulty or, at least, expense in implementing.

We are of the view that the S.E.C. must consider what recommendations it would be prepared to support. We believe that early recognition of valid claims and early consideration of management policies and necessary new expenditures on fire prevention will assist an atmosphere for the reception of S.E.C. submissions as to sharing of responsibility with land occupiers and other authorities.

We believe fundamental matters affecting S.E.C. management arise out of the present enquiry and need to be discussed by us with the Commission so that it is fully aware of possible outcomes.

We consider it necessary to report criticisms of the S.E.C. which it will be necessary to meet.

We endeavour to summarise those criticisms as follows :-

- (a) Some S.E.C. equipment is not fireproof. For example :-
- (i) clamp-on fuses
 - (ii) EDO fuses - without or with a fire choke
 - (iii) lightning arrestors
 - (iv) lines strung with a long span permitting clashing and ignition of dry grass by molten particles of

metal emitted;

- (b) That research has either been not sufficient to cope with the problems in (a) despite knowledge of their existence over a considerable period of time;
- (c) The steps taken to prevent outbreak of fires from causes which were unmasked in 1969 (January 8th) have been in some areas non-existent and/or inadequate in others/ We are unaware of any steps taken in regions other than those in which the fires actually occurred. Instructions tend to suggest that some steps were taken in the immediate period following the fires but since then there has been considerable falling off;

The main steps taken were in relation to the cutting of tree branches. There has been no closer co-operation with the C.F.A. a two-way criticism;

- (d) There has been a failure to provide sufficient top level supervision of safety guidelines - either in respect of the protection of S.E.C. assets or the protection of other property and persons;
- (e) There has been a failure to provide sufficient trained S.E.C. personnel to attend systematically to maintenance as the needs have increased with expansion of distribution assets;
- (f) There has been a failure to lay down and enforce any sufficient system of proper inspection of lines including identification of trees which by their nature might prove dangerous;
- (g) There has been a failure to lay down and enforce any proper system of recording complaints or follow ups (we refer to the evidence adduced in respect of the fires at Merino, Purahat, Tatyoon, Wallinduc-Cressy, Strathmore-Glenthompson etc.);
- (h) There has been a failure to lay down and supervise any reliable system for recording inspection of poles,

lines and equipment (including pole tops and insulators).

It is also said, apparently with some basis, that the inspections referred to are haphazard and do not conform to the guidelines which have been adopted by the S.E.C.;

- (1) Responsibility for safety, which includes proper inspection of assets, tree cutting, tree lopping etc., have been left almost entirely to regional and district managers. An examination of the S.E.C. organisation tends to indicate the desirability of a person or body of persons at a top level being specifically charged with the duty of ensuring that proper guidelines are laid down in respect of safety matters and that they are enforced. We appreciate that these duties have been allotted to specific persons at a top level but such persons are primarily, as we understand it, charged with other more substantial duties. It would appear that the S.E.C. is open to the criticism that safety has been regarded as a peripheral matter or a duty which is an adjunct to primary duties of an entirely different character

POSSIBLE BOARD RECOMMENDATIONS:

It is now feared that this whole matter will be the subject of recommendations to be made by the Board with possible implementation by the legislature. The need for top level decisions as to the priority now to be given to safety questions is, we think, very urgent. If the matter is to be given the priority which we think now will be demanded the implications are far reaching.

- (i) Provision for safety of persons and property and safeguards against outbreak of fires is now very likely to need top level administrative attention.
- (ii) Possible changes as contemplated below will involve substantial expenditure and detailed budgeting consideration

(iii) Apart from political and any other pressure it seems to us inevitable that the S.E.C. will have to face up to possible future liability in respect of the outbreak of fires which originate from S.E.C. assets. This is because insurance may not be available in the future as it has been in the past and that claims will have to be met from S.E.C. resources. In this regard liability may well be open ended if no change takes place. This is because the evidence available to us shows an extreme degree of vulnerability of the S.E.C. to the danger of fires arising from its assets and consequently, liability for the damage that results. Damage from future fires may well be much worse than it has been at any time in the past. It is unlikely that fires of the magnitude recently experienced will never arise again.

(iv) If we are correct in predicting that some changes in S.E.C. policy and administration are inevitable then we see such changes as involving at least the following :-

(a) assumption of top level executive responsibility for ensuring that safety guidelines and directions are obeyed. Some personnel at least will have to be deputed to full or near full time concern with this aspect of administration;

(b) guidelines will have to be determined and put into effect for :-

(i) use of spreaders in S.E.C. LV conductors;

(ii) use of spreaders or insulated active wires or construction of underground cables in rural areas, at the expense of the consumer, to be used in aerial consumer mains systems;

(iii) replacement of clamp-on fuses with EDO fuses with chokes;

- (iv) co-ordination of fuses where aerial consumer mains contain two actives adjacent to one another;
- (v) research into improvement in safety of EDO fuses with catchers. (The records show a number of fires have started in connection with the operation of fuses with catchers or chokes attached);
- (vi) tree cutting or tree lopping near lines;
- (vii) relocation of lines - particularly S.W.E.R. - which presently are through or alongside trees and tree plantations;
- (viii) placing underground - possibly at expenses to be shared by the S.E.C. with government, the Environment Protection Authority, the Forests Commission, Local Councils or the like of HV cables in areas where tree cutting and tree lopping is impractical for example the Dandenongs, Black Forest, Macedon etc.
- (ix) more regular and effective pole inspection. The evidence shows that there are a number of instances where condemned poles have fallen and started fires some months after they had been condemned. There is also evidence to suggest that in some areas the pole inspection and training of pole inspectors is less than what is required in the interests of safety.
- (x) the keeping of records of complaints (we refer to a previous memo a copy of which is attached
- (xi) assisting consumers to take their own responsibility for aerial consumer mains for example permitting by appropriate amendment of regulations a registered electrical contractor

to remove S.E.C. low voltage fuses to enable independent contractors to lop or remove trees near LV lines;

- (xii) keeping records of pole and line inspections and reporting on same to head office;
- (xiii) regular and adequate exchange of information with the Country Fire Authority including guarantees for proper and effective fire prevention work;
- (xiv) defining areas of responsibility between various statutory and other bodies and of the role of the S.E.C. in the discharge of same. For example, should we achieve a pinning of responsibility for the clearing of road reserve and the clearing of trees and foliage from close proximity to lines on road reserves on the Country Roads Board and the pinning of responsibility of a similar nature on the Forest Commission with respect to S.E.C. lines in forest areas and the pinning of responsibility in urban areas on local Councils then the S.E.C. would have to ensure that personnel at all reasonable times were available to de-energise the lines to enable duties to be carried out;
- (xv) ensuring proper reporting of hazards by member of the public, local authorities, the C.F.A. etc. of hazards observed. We refer to such hazards as trees on or near lines, loose pole tops, loose insulators, insulator shorting, lines down etc. etc.

This also involves organisation to enable prompt action on such reports. Evidence

reveals that in some areas at the present time it is part of local policy not to act on a non-report until the lapse of some period of month. This occurs not as a matter of policy but because of the availability of personnel.

(xvi) removal of lightning arrestors of a type which are known to be prone to explode and replacement with the latest and safer type of lightning arrestor;

(xvii) research programmes particularly with regard to equipment which is presently known to be a source of fire outbreak - eg. EDO fuses, clamp on fuses, lightning arrestors, loose pole tops pole failures etc.

(xviii) amendment of the S.E.C. Works Protection Regulations, particularly Reg.16.


Ken H. Marks



A. McDonald

Owen Dixon Chambers

May 18, 1977

ANNEXURE

MEMORANDUM FROM COUNSEL TO INSTRUCTING SOLICITORS FOR THE
STATE ELECTRICITY COMMISSION 27th April, 1977

As a result of the conference on Friday afternoon last, April 22, we understand that the Commission proposes to consult with the Forests Commission for the purpose of drafting standards to be laid down and met by S.E.C. personnel and contractors for the lopping or felling of trees in contact with or in the vicinity of power lines including low voltage lines.

In our opinion a definite policy in this regard should be embraced by the State Electricity Commission and embodied in regulations. It is clearly empowered to make such regulations under S.110(e) of the State Electricity Commission Act.

As it may take some time to implement this policy it seems to us that an interim policy may be carried out to safeguard the risk of repetition of the fires from electrical sources in the coming season 1977-78.

We would suggest in the light of the evidence given to date the following be given consideration by our client :-

1. That suitably drawn advertisements be published at regional level over local radios and in newspapers asking inhabitants to report to the nearest S.E.C. offices (which should be listed) the presence of :-
 - (a) trees or any part of trees that are within a specified distance (say 10 feet) of power lines observed on any street, highway, roadway, lane, thoroughfare, public place or private property.
 - (b) trees or foliage within a specified distance (say 6 feet) of aerial consumers mains.
2. Instruct regional and district managers to compose a list (after due enquiries) of contractors available to work in each region on tree lopping and tree felling. The information should detail in respect of each contractor -

- (i) whether the contractor is capable of doing tree felling and tree lopping or either and which;
- (ii) what equipment that contractor has;
- (iii) what number of regular employees that contractor normally has;
- (iv) what number of employees that contractor is capable of controlling;
- (v) whether such contractor is willing to tender for contracts in respect of tree lopping and tree felling or either for the S.E.C.

3. The S.E.C. at managerial level should write formally to the Country Fire Authority asking whether it is prepared to co-operate with the S.E.C. in any one or more of the following matters :-

- (i) spreading by word of mouth or otherwise information to local inhabitants in its various regions the necessity of reporting to specified S.E.C. offices the existence of any and what trees or foliage within a specified distance of S.E.C. assets.
- (ii) whether the C.F.A. would join with the S.E.C. in any and which of the above type of advertisements.
- (iii) in taking part in any and what campaign to inform farmers and occupiers of domestic premises industrial and factory premises of the danger of trees and foliage in contact with or in the vicinity of private low voltage conductors and the need to employ private contractors to remove the hazard.
- (iv) to join with the S.E.C. in publishing material to be agreed upon detailing fire hazards in relation to S.E.C. assets and the steps necessary to reduce them.

4. It is envisaged that the reportable hazards referred to in the preceding paragraph might include :-

- (a) trees near HV and LV lines;

- (b) observations as to sparking from insulators;
- (c) observations as to LV conductors which have been seen to swing unduly in high winds in the past or contacted;
- (d) observations as to any apparent undue movement in poles or cross-arms;
- (e) long grass at sides of roads in the vicinity of S.E.C. assets;
- (f) conductors which appear to have undue sag or to be unduly loose;
- (g) frayed insulation covers.

It is also envisaged that in the literature which is proposed consumers be advised as to the wisdom of :-

- (i) putting aerial consumers mains under-ground or
- (ii) ensuring that one active conductor is insulated with some information as to the cost estimates involved.

5. In addition to the course decided to be implemented on Friday last we believe that there should be immediate steps taken to formulate a course of action in respect to the following :-

- (i) avoidance of moisture build up in lightning arresters;
- (ii) consideration of design improvement of the fire choke associated with explosion drop out fuses so that all sparks on operation can be maintained. Alternatively the development of a spark less fuse;
- (iii) up to date instructions in the light of recent past experience being given to S.E.C. personnel as to the risks of fire from S.E.C. assets, for example, the necessity to ensure that a cap is installed on the EDO fuse on

installation, the necessity of inspecting lines as well as poles on the patrol, looking out for any loose pole caps etc.

- (iv) regular and systematic reporting on conditions of lines and poles in districts and regions;
- (v) review of the current pole inspection and pole testing procedures and investigation of the extent to which the efficacy of present procedures can be improved including the speed with which condemned poles are replaced. We make particular reference to inspection and replacement of stringy bark poles which appear to be less durable than others. However, present procedures do not appear to implement the avowed necessity of looking at these poles once every twelve months. In other words, there appears to be a need for more inspectors and more effective and up to date methods of inspecting which take into account possible rot on the top half of the pole and any instability in pole caps.

6. We advise again in the light of the evidence at the enquiry that there ought to be a procedure laid down for each region and district for systematic response to complaints not only about loss of supply but about any matter connected with S.E.C. assets. We also advise that there should be a similar system in relation to inspection and checking of lines and assets for possible fire hazards. In accordance with such new procedures as may be laid down we believe that sets of records should be kept in respect of each of complaints and asset patrols. In our opinion the present asset sampling system is insufficient to protect the

BUSHFIRE HAZARDS : CHANGES REQUIRED IN COMMISSION POLICY, PERSONNEL ATTITUDES AND RESOURCE ALLOCATIONS

Arising from our investigations into the probable causes of bush and grass fires in the 1976/77 summer period it is evident that a number of changes in policy, attitudes and resource allocation are necessary within the SEC and that many of these changes require immediate implementation.

Although we have submitted a statement on policy to the Board of Inquiry recommending the setting up of separate statutory authority - "The Fire Protection Authority" - it would be most inappropriate for us not to initiate all of those actions which are possible to lessen the risk of fires occurring in the future.

Tree Cutting

The major problem, which tends to have an interactive association with many others, is that of tree clearing. In recent years there is no doubt that we have compromised our standards in order to appease conservationist and environmentalist groups. The tendency has therefore been to adopt a tree trimming policy. In many respects we are also still responding, unnecessarily, to the policy approach of the 1950s and 1960s to electrify the State. This latter concept tends to presuppose the right of any customer to be provided with electricity supply and again we have compromised our requirements for tree clearing in order to provide such supply. Preoccupied as we have been with these attitudes, and pressured by SEC objectives to reduce staffing to maintain a viable, economic, and competitive organisation, we have failed to request or allocate appropriate resources to some of the more important aspects of our task.

also need a fire protection authority

It is necessary that our tree trimming policy be changed to a policy of tree cutting. Action in this regard is needed immediately if we are to take advantage of the relatively short memories of the community and other organisations to achieve an attitude commensurate with the hazard entailed if trees are not cut.

Two areas - grassland & forests may need different treatment

A program of inspection and tree cutting in conjunction with local authorities and individuals must be commenced immediately by all Regions for all high voltage lines and in rural areas and with particular emphasis on s.w.e.r. lines in and adjacent to the homestead tree plantations. The accent should be on clearing trees to prevent overhanging of h.v. lines and to ensure that branches, limbs or whole trees (particularly in the case of sugar gum trees) are not left in a position where they can come into contact with our trees by falling, bending or breaking.

We may well become known as the Sugargum Elimination Commission (SEC) but clearing such trees will not only reduce the potential bush and grass fire hazard it will also have the effect of improving the reliability of supply on the system and both of these features are necessary and desirable objectives.

Inspection of P.S.L. clearing should only accept the responsibility of paid for work

In conjunction with the necessary clearing of trees from high voltage lines and no less important is the necessity to ensure trees are kept clear of low voltage lines and private service lines - not because of the possibility of fire arising from direct contact but more particularly because of the possible consequent low voltage conductor clashing.

It is therefore necessary to take a much tougher line with private service lines which may be considered hazardous for any reason and particularly if the presence of trees may give rise to conductor clashing. In such cases it is proposed that if after a week's notice effective action has not been taken (may be less in a high fire danger period) we should disconnect supply.

If you do show that you will be successful in your proposals for community education that would be a good idea

Resources Availability for Tree Cutting Program

It is proposed that in every possible case, advantage be taken of the relatively high unemployment in rural areas to hire contract personnel for tree cutting to minimise the use of skilled linesmen for this activity. In many instances, the landowner or shire may be the appropriate contractor to carry out tree cutting on their own property.

Consideration must be given to the SEC purchasing articulated arm chain saws or providing assurances of continuing work to contractors to promote their purchase of same to promote the rapid removal of dangerous trees.

Wherever possible removal of the debris should be negotiated with the landowner. It would be preferable and improve our own rate of tree clearing if individual landowners and/or authorities agreed to remove the debris themselves even if they were paid on a schedule of rates basis to do so.

Rural Low Voltage Lines

The major problem in this areas is conductor clashing although spurious fuse operations can also create an unnecessary hazard.

Many of the rural low voltage conductors throughout the State are slackly strung, long spans with minimum spacing and are therefore a problem in regard to security of supply and also as a possible source of bush fires.

Each Region must immediately implement a program of general inspection of rural low voltage lines with a view to restraining conductors, adding spreaders where spans exceed about 150 feet, adding poles where this may be more appropriate than the use of spreaders. Where the overall work involved is considerable or the state of the assets poor, consideration should be given to the alternative use of neutral screened cable or the installation of additional distribution substations. The whole of this program should be arrived at eliminating possible conductor clashing. At the same time DED must undertake the design development of a simplified spreader installation.

Fuses

The current series of tests on EDO fuses will continue particularly those tests associated with evaluation of particle size, temperature and ability to cause fires but also those tests relating to the comparison between the sparkless fuse length and our ~~current~~ switch link. In addition immediate action is necessary to inform every linesmen/operator throughout the State of the importance of ensuring that the screw cap on the top of the EDO fuse is replaced during the operation of replacing the fuse link.

Although the presence of this cap does not appear to effect the electrical operation of the fuses at small ~~fault~~ ~~cuts~~ no tests have been carried out at higher ~~volt~~ levels and the absence of the cap certainly does promote the possibility of particles and/or the hot ~~bottom~~ and top of the fuse link falling to the ground and possibly causing fires. Linesman must be advised that they are to report all fuses which do not have a screw cap at this stage and DED must arrange to procure caps from the fuse manufacturers so that all types and sizes of fuse caps are readily available on trucks for linesman to replace those that are missing. These facets require urgent attention.

Arising from the fuse tests currently being carried out, consideration may have to be given to an accelerated program of replacement of clamp-on fuses on the s.w.e.r. distribution substations.

Poles

There are several areas of major concern with regard to poles. Firstly, we have been endeavouring for some little time now to improve a rate of replacement of condemned poles. This effort must continue and further more must be extended. Again this is a matter of appropriate priority allocation of resources.

X-rays also regular
In addition there have been some implied criticisms of our application of resources to pole inspection. All Regions will be requested to advise re resources required to ensure that all poles in their area are inspected at least once every year and also the possibility of applying incapacitated linesmen to this task. The alternative of inspection once every two years will also be encompassed.

It is further proposed that pole testers be issued with field glasses to ensure that pole caps are inspected at least from the ground during each pole inspection. This applies particularly to s.w.e.r. lines and is intended to avoid the pole cap dropping to the ground under windy conditions and bringing conductor and insulator with it. An evaluation should be commenced by DED of the present form of pole cap design and this should be linked with an investigation of whether any of the incidents of pole caps coming free from the top of the pole does involve the present design of pole caps.

Involvement With Other Authorities And Individuals

Just
Our immediate requirements in this regard should encompass the education of other authorities and individuals in regard to their responsibilities to assist us in advising of trees close to or touching lines, the dangers of these and assisting us where possible with cutting of trees associated with conductors where such cutting does not involve risk to the authority or individual concerned. Such an education program should also ensure that the hazards associated with trees, conductors and fuel left on the ground in the vicinity of these conductors, provides an ideal ~~just of~~ position of factors which could well lead to catastrophic fires.

The more specific interactive association of the SEC with the CFA will be dealt with in a later section of this report.

Responsibility For Tree Cutting On Private Service Lines

Although there has been contradictory evidence submitted indicating that customers are not aware of their responsibility for keeping private service lines free of trees, it is quite clear to the SEC, and we believe to those customers, that the private service lines are their fundamental responsibility. Pending the outcome of the Inquiry which may be some months yet and the possible setting up of a Fire Protection Authority, a campaign should be initiated to ensure that all customers with private service lines are well aware of their responsibilities in regard to those lines. Reference should be made in this to the wiring regulations and the application of those to their installation as a whole. Also, as previously indicated, a much stronger line of approach must be taken in regard to disconnecting installations which are hazardous.

Representation and Functioning Of Commission Officers On Local CFA Advisory Committees

The primary function of the local CFA Advisory Committees appears to be one of methods of fire fighting. It is apparent from some evidence given that, for reasons best known to themselves, many volunteer CFA members are not aware of the dangers of trees in proximity to overhead lines. Criticism of the CFAs fire prevention activities as distinct from their fire fighting activities, was implied in the opening address by John Nixon, Counsel Assisting the Inquiry.

The current Inquiry activities provide an ideal basis for the SEC to take a leading role in fire prevention activities within the local CFA Advisory Committees. Commission representatives on such committees should request that they have full rights and not just be invited to attend such meetings. This can be a preliminary to the establishment of a co-ordinating body on fire protection.

Specific education is required of all CFA members, volunteer and permanent, of the dangers and hazards of trees adjacent to high voltage lines in particular, but also the dangers and hazards associated with private service lines. Such activity would provide an ideal opportunity to ensure that we were encompassing all of the customers associated with these types of services or lines or activities. All SEC representatives should take the line that fire protection starts with fire prevention i.e. the removal of the hazards, trees associated with lines, the removal of the fuel in fire hazardous areas. The immediate second line of approach on such committees should be the necessary liaison with the SEC when fires have started. Early contact with the SEC can help ensure that the hazard or possible danger of live conductors in the fire fighting area is readily eliminated. Further discussions should be initiated on these Advisory Committees regarding the operation or liaison necessary on extreme fire danger days related to the suggestion of disconnection of supply in critical fire hazard areas.

All Regions and Districts should be immediately advised of these principles and proposals so that appropriate action can be immediately taken by local SEC representatives on CFA Advisory Committees. Managerial level discussions should also be immediately initiated with the CFA to obtain the appropriate level of standing and interaction of Commission's representatives on such committees.

Disconnection of Supply

The desirability of disconnecting supply in fire hazard areas has been raised both before and during the Inquiry. Obviously the postulates regarding tree clearing, pole testing, condemned pole replacement and spacing and attention to low voltage conductor stringing are not going to be achieved over night because of the necessary allocation of resources to such activities. It is therefore proposed that we should look quite seriously at the prospect and possibility of disconnection of supply on either total fire ban days or more particularly on days of extreme fire danger. There are many aspects to this problem and all Regions are to be immediately requested to prepare a plan for the disconnection of hazardous lines based on the following background:

Advice could be received from a responsible officer in the Victorian Forestry Commission or the CFA that, say, at 8 o'clock on a Saturday or Sunday morning, the day was one of extreme fire danger, the requirement would then be to disconnect all apparently hazardous lines that had been previously discussed with local CFA members, within one hour of such advice. In order to achieve this end it may well be necessary with our present system facilities to initially disconnect main 22 kV feeders subsequently disconnect the spurs and reconnect the 22 feeder to retain supplies to the essential services, hospitals, food storage, water pumping and communications. There are many logistic problems associated with such action which may give rise to the need for high voltage local service agents to assist in this action or alternatively for a concerted program to be undertaken for the installation of radio controlled oil circuitry closes on hazardous spurs and/or in hazardous locations.

The obvious corollary of this is the subsequent restoration of supply, and it would be necessary to ensure precise operational liaison with the CFA under these conditions to ensure that all fires are reported to the SEC and that no supply was restored in areas where fires have occurred until patrolling was carried out.

yes | An additional facet of this situation is the possibility or desirability of manning district offices on a day of extreme fire danger during the hours of say 8 am to 5 pm. This proposal would arise basically perhaps as an interim measure prior to improvement of our communications systems and would need to be researched at an early stage with the Staff Associations and Unions.

Again specific operational liaison with the CFA would be necessary.

rjw/aeg

2256

8 June 1977

ASSISTANT GENERAL MANAGER (M & D)

Memo. to: All Departmental and Regional Heads

BUSHFIRE HAZARDS : ACTION REQUIRED

As discussed at the meeting of Regional Managers and Departmental Heads on 20 May 1977, evidence presented at the current Bushfire Inquiry has indicated the need for the State Electricity Commission to further reduce the possibility of our assets being a factor in the initiation of bushfires.

It will be evident from the instructions below that rectifying action on some matters can and must be initiated now to ensure a reduction of the possibility of our assets being associated with the initiation of bushfires before the next summer season. Other actions are foreshadowed for the immediate future which will require some further investigation and procurement of material and still others which will require more detailed investigation and will be longer term in arriving at appropriate solutions.

A report is required from each Regional Manager by mid-July indicating capacity to implement the instructions below and the impact on other work such as the resultant delay in connection of new customers. A further report on progress will be required by mid-November 1977.

There is also a clear need to ensure that customers with aerial consumers' mains are aware of their responsibilities for the upkeep and safety of aerial lines forming part of their installation and requirements in this regard are also included below.

1 INSTRUCTING PERSONNEL ON FIRE HAZARDS

In this regard it is imperative that all personnel are aware of the possible mechanisms of fire initiation which may be associated with SEC assets and of the significance and magnitude of the problem. As an aid to this urgent communications exercise and to dispel any doubts which may have arisen from tests carried out in the 1960's, Distribution Engineering Department is arranging for the duplication of films of tests carried out as part of the investigation of the 1977 fires. A copy of these films will be forwarded to each Region and as you are aware they will show possible fire initiation from the following sources:

- a Trees or limbs in contact with high voltage conductors (in this case 12.7 kV line) with the emission of hot debris from the tree limb and the subsequent failure of the conductor due to local overheating.
- b Spark emission from EDO fuses with screw cap removed and the trajectory of the top of the fuse link.
- c Spark emission from clamp-on fuses and the reduced emission associated with the use of the so called "sparkless" link.
- d Spark emission from clashing low voltage conductors under test conditions.

Discussion of the implications of these films together with some photographs of inappropriate tree clearing should highlight the areas needing attention and the actions required to upgrade our present practices in the operation and maintenance of our distribution system to all of our personnel. It is also important that all personnel are reacquainted with existing standards, guidelines, procedures and instructions and that they are clearly instructed regarding the urgent actions required before the next summer season as outlined below.

2 TREE CUTTING

While an increase in the manhours spent on tree cutting has been achieved over the past several years, it would appear that community opposition to the cutting of trees has handicapped the achievement of good clearance between trees and conductors. Further, our laid down standards for tree clearances and the interpretation of these standards may not have been entirely satisfactory - in some situations where fires commenced many of our experienced personnel would have considered the clearances between the trees and our lines to be adequate. However, particularly with regard to the species primarily concerned, mainly sugar gums which can whip extensively in windy conditions and are very brittle, our standards must be revised.

We propose to ensure that all of our line and supervising personnel are better informed on botanical species, their growing habits and cutting requirements. To this end, we have initiated arrangements with the Forest Commission to assist in the preparation and implementation of an appropriate course which should also provide the basis for the establishment of more appropriate tree cutting standards for the future.

In the meantime the attached Tree Cutting Policy includes an interim revision of the clearance standards and a number of policy matters.

Information has been sought from each region regarding their need for tree cutting contractors and contracts for substantially increased tree cutting resources are being or will be let for each region. The note from the Field Practices Engineer to the Departmental Supplies Officer of 18 May 1977, a copy of which you received at our meeting, indicates the proposals in this regard.

Will you please undertake forthwith an inspection of tree cutting requirements and an assessment of resources and preparation of a program to carry out essential clearing before next bushfire season and forward to me a copy of your intended program and resource allocation with your report in mid-July.

3 FUSES

3.1 As indicated, recent tests have confirmed the greater potential fire hazard of an expulsion type fuse without a screwed cap on the top end of the fuse tube. Orders have been placed for the provision of spare screw caps so that all operating parties can be equipped with all types of caps in use. The caps will be available by the end of June 1977 immediately following which each Region is to institute a program of inspection of all expulsion fuses and replacement of missing fuse caps which is to be completed prior to the end of December 1977. During the above inspection alignment of the fire choke on EDO fuses should be checked and modified if necessary. Monthly statements on the numbers of caps replaced and any outstanding requirements should be forwarded to Distribution Engineering Department so that any necessary extension of orders can be initiated promptly.

3.2 Also, as an urgent matter, a further assessment is being made of the recently modified 2 amp "sparkless" fuse element, as to its electrical and mechanical characteristics, and its resultant suitability for use in our system particularly in clamp-on fuses. The tests on these fuse links will be completed in about 3 weeks and if they prove satisfactory stocks will be obtained in a further period of about 3-4 weeks to enable the replacement of existing links in clamp-on fuses prior to the end of December 1977.

3.3 Consequent upon the results of the tests under 2.2 further tests will be done to ascertain the potential suitability of "sparkless" fuse links of other ratings for use in EDO's throughout the system. The possible application of these links to EDO's would be a longer term development of which you would be advised in due course.

3.4 Investigations have also commenced in conjunction with the manufacturer on possible improvements or modifications to the fire choke design and you will be kept informed of any subsequent developments in this regard.

4 AERIAL CONSUMERS' MAINS

In evidence presented at the Inquiry, rural property owners indicated a lack of knowledge of the point in their installations at which their responsibilities commenced and a lack of awareness of these responsibilities.

While it is unlikely that property owners are in fact as unaware as they make out, there is a clear need for the Commission to issue advice to them of their responsibilities.

It is proposed to deliver or post to all customers with aerial consumers' mains, a document setting out the customer's area of responsibility (as indicated in the attached draft). This document will include a questionnaire regarding the physical condition of the aerial consumers' mains which the customer will be required to inspect and return the completed questionnaire to the local District Manager. Copies of this document and questionnaire will be completed and forwarded to you shortly.

It is proposed to evaluate the response to this questionnaire by sample inspections before considering whether a more formal inspection procedure, which would be a cost to the customer, is necessary.

Whatever system is adopted there is a need to compile a list of customers with aerial consumers' mains, (while the document for the customers will also refer to metered aerial mains, we do not propose to take any further action with such aerial lines at this time), with the aim of initiating future periodic inspections. In this regard negotiations have been commenced to use the computer customer master file to record the necessary information.

To this end, would you please initiate a survey of aerial consumers' mains and compile a list with the following information:

- a Customer's name
- b Customer's account number
- c Form of Aerial Consumers' Mains -
 - . open wire - vertical or horizontal construction
 - . active conductors - insulated or bare
 - . neutral screen or multi-core cable

In regard to the first span of services direct from a pole type substation on the customer's property to his house or farm building, the conditions applicable to the erection and ownership have varied over the years.

To clarify this matter, the point of supply for new and existing supplies will be the substation low voltage terminals and existing services from the substation pole will be regarded as Aerial Consumers' Mains and will therefore be the customers responsibility. Arrangements are in hand to amend the Extension Procedure Manual accordingly.

It is appreciated this will reintroduce the old problem of the customers' registered electrical contractor providing cable for us to terminate on the substation pole but it does not increase our work load other than the need to raise chargeable work notices for any maintenance of the first span of the aerial consumers' mains.

In compiling the list of aerial consumers' mains it will generally be necessary to undertake some form of inspection. While this is not intended to be a detailed inspection, any obviously hazardous condition in an aerial consumers' mains should be conveyed to the customer by means of the Installation Defect Notice in accordance with normal practice.

It was suggested that meter readers may be able to deliver the questionnaire document to the customers and compile the list. It will take approximately 2 months to produce the questionnaire and with a 3-monthly meter reading cycle it could take up to 5 months from now to reach all customers. This would run too close to the next bushfire season and earlier completion of the task is necessary. This matter could well be combined with other action to be taken and should therefore be arranged on a local basis using whatever resources are available and is to be completed so that the proposed circular can reach all affected customers by the end of September 1977.

5 SURGE DIVERTERS

While surge diverters do not represent the same degree of fire hazard as other items mentioned in this memorandum they do represent some degree of risk.

All regions currently have on issue Radio Interference Detectors and commencing in about 2 weeks new Conductance Testers will progressively be made available so that the integrity of surge diverters can be adequately evaluated.

The overall topics of insulation co-ordination, surge diverter testing, identification of faulty units and their replacement will be followed up further with you by Distribution Engineering Department in the immediate future.

To assist in this exercise and in conjunction with the inspection of fuses it is requested that you prepare a listing of the following data:

- i the number and location of surge diverters installed;
- ii their relative electrical location (i.e. on the supply side or load side of substation fuses;
- iii the numbers installed but disconnected and their location; and
- iv the number and location of non-urban substation installations which do not have surge diverters fitted.

6 LOW VOLTAGE MAINS

To reduce the possibility of conductor clashing the attached document lays down some interim standards which are applicable to existing lines and to the construction of new lines in fire risk areas.

Action is to be taken to install spreaders in accordance with these standards on existing lines before the next bushfire season.

7 POLE CAPS

Pole caps coming adrift can also be a source of trouble. Greater vigilance in respect of loose pole caps is needed and all personnel should be instructed to keep a look out and report them to the appropriate supervisor.

In particular, Pole Inspectors should be required to inspect and report on pole caps and any obviously deteriorated crossarms. Field glasses should be issued to all Pole Inspectors for this purpose.

Although there is an extended pole cap strap already available, a new strap is being designed which will facilitate installation of the strap without removal of the pin from the cap or the insulator from the pin.

8 RECORDING OF COMPLAINTS

As you have already been advised a committee has been set up to review and report on the recording of complaints and the reconciliation of subsequent actions.

9 GENERAL

In order to improve communications with customers, CFA and other authorities, will you please arrange to have district office communications manned on weekends and public holidays from 8.00 am to 5.00 pm on days of extreme fire danger (as distinct from days of total fire ban). Such a day is to be treated in the same way as a normal emergency storm situation where local district control has been assumed on a handback basis from the report centre.

Distribution Engineering Department will make initial contact with the CFA to establish the procedure for CFA Regional Officers advising report centres of extreme fire danger days.

Sufficient copies of this memorandum and attachments will be forwarded under separate cover to allow for circulation to all District Managers.

R. G. G.

ASSISTANT GENERAL MANAGER (M & D)

att usc

TREE CUTTING POLICY

For a guide to the standard and policy, reference should be made to the Distribution Manual Procedure 1A. Although originally produced some 20 years ago, it is still generally applicable today and has not been superseded.

In line with the policy of producing a separate manual for each Section, Procedure 1A will be updated and metricated into a form suitable for inclusion in a Construction Manual. Meanwhile, to expedite the tree cutting program, copies of the complete procedures with Folio 17 amended, to provide for increased clearance between trees and conductors, are attached for your implementation.

Details for training field and supervisory personnel in recognising and cutting of different species of trees will be finalised soon following consultation with the Forest Commission. You will be advised of the details as soon as possible to enable training to proceed. The Distribution Engineering Department will assist regions in formulating suitable training programs, which will make use of the training films and session outlines already available (refer correspondence of 29 July 1976 re tree cutting). In addition, it is intended to reopen negotiations with the CRB with regard to their policies concerning cutting of trees on roads for which they have responsibility.

1 Basically the policy is:

1.1 All trees shall be cut to provide a minimum clearance to the nearest conductor equal to the maximum sag of the conductor plus 0.5 metres with an overall minimum clearance to still conductors of 1.5 metres for voltages up to 22 kV; or maximum sag plus 1 metre or an overall minimum of 2.25 metres for 66 kV. Further investigations will be made of the whip of trees up wind and down wind of lines to assess the adequacy of these clearances.

1.2 No limb or tree shall overhang any conductor in fire prone areas.

1.3 Every limb or tree which by virtue of its condition is considered dangerous and if it broke or fell could contact the conductor, shall be removed.

Note: Particular attention should be given to acute angle forking which occurs in some eucalypts particularly sugar gums. Refer Folios 18 and 19.

1.4 Special consideration shall be paid to botanically important or historically significant trees or stands of trees and may form the basis for some exception to 1.1, 1.2 and 1.3 above. (This should be the subject of negotiations with the owner of the tree/s).

1.5 With the undergrounding of Telecom assets it may be possible in some cases to relocate our assets to the opposite side of the road. This could avoid long stands of trees and should be evaluated on a basis of cost to relocate against the capitalised cost of cutting.

1.6 Provision of advice and assistance to the owners of trees on replacing some trees or stands of trees with smaller growing species will be further considered, i.e. a replanting policy.

2 Resources

Regarding resources necessary to carry out the tree cutting program some or all of the following methods may be of assistance:

2.1 Engaging temporary linesmen's assistants to work with existing forces.

If suitable, some of these employees may undergo training courses at Chadstone and with Forest Commission.

2.2 Additional use of contractors.

2.3 In rural situations having shutdowns of sections of lines and using local farmers to assist SEC forces particularly for cleaning up cut timber.

2.4 A further approach should be made to local councils seeking their co-operation in the disposal of tree cuttings.

2.5 Where relocation is considered a satisfactory solution it should be carried out as expeditiously as possible. However, if trees are considered to be a danger they shall be cut as quickly as possible.

Do not delay tree cutting in dangerous situations pending relocation of assets.

3 General

Every effort shall be made to enlist the co-operation of landowners in particular to ensure that the maximum amount of clearing consistent with the tree cutting policy is achieved.

att

PROCEDURE:	Procedure Number	Folio
TREE CUTTING GUIDE	1A	17A
SUBJECT:	Manual	Date
POLICY	Distribution	25/5/77

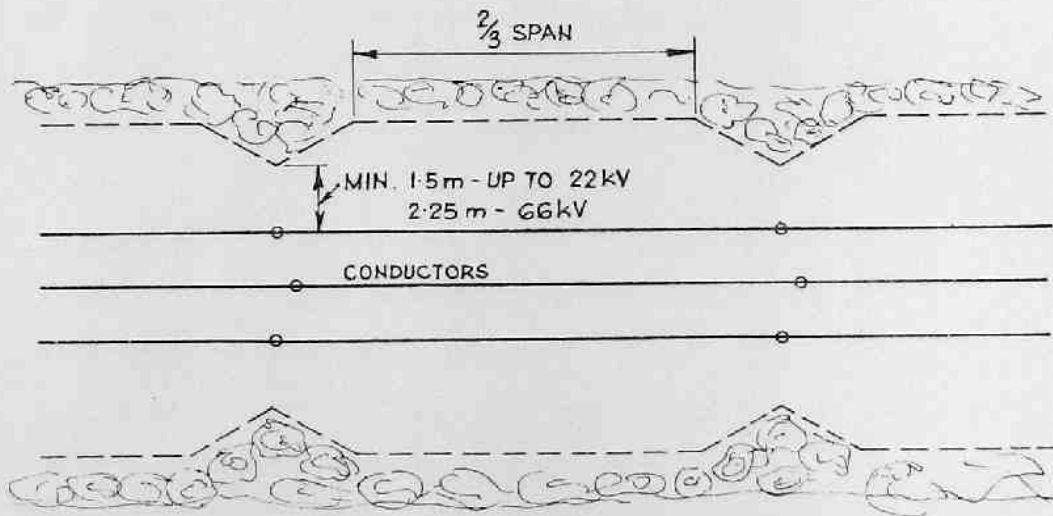
6 CLEARANCE TO H.V. LINES (CONTD)

The schedule distances are MINIMUM standards.

Greater clearances should be obtained where possible and discretion used in applying same, e.g. DO NOT split a tree to obtain just 1.5 meters clearance. It may be more practical to remove it.

VOLTAGE	CLEARANCE AT POLE	CLEARANCE TO STILL CONDUCTOR ALONG 2/3 OF SPAN
Up to 22 kV	1.5 metres (min) to nearest conductor	MAXIMUM sag of conductor at 40°C PLUS 0.5 metre OR 1.5 metres (whichever is the greater)
66 kV	2.25 metres (min) to nearest conductor	MAXIMUM sag of conductor at 40°C PLUS 1.0 metre OR 2.25 metres (whichever is the greater)

ABOVE FIGURES TO ALLOW FOR WHIP IN TREES IN HIGH WINDS (50 km/hr)



of cost to relocate against the capitalised cost of cutting.

PROCEDURE:	Procedure Number	Folio
TREE CUTTING GUIDE	1A	17/1
SUBJECT:	Manual	Date
POLICY	Distribution	25/5/77

6 CLEARANCE TO H.V. LINES (CONTD)

NO limb shall overhang any conductor in fire prone areas.

EVERY limb or tree that is considered DANGEROUS, (that is, it is liable to break off and/or fall, and if it did break or fall could contact a conductor shall be removed.

Particular attention should be given to acute angle forking which occurs in some eucalypts, particularly sugar gums. (Refer to Folios 18 and 19 of this procedure.)

Special consideration shall be paid to botanically important or historically significant trees or stands of trees and may form the basis for some exception to above.

These exceptions shall be the subject of negotiation between the owner of the trees and the Regional Office.

These areas should avoid long stands of trees and should be evaluated on a basis of cost to relocate against the capitalised cost of cutting.

LOW VOLTAGE MAINS : CONDUCTOR CLASHING

To reduce the possibility of clashing of low voltage conductors the following measures are to be taken in fire hazard areas in both rural and fringe urban situations:

1 Existing Low Voltage Mains

As an interim guideline a spreader shall be fitted about mid-span in spans of bare conductor low voltage mains which -

- . have conductor separations less than 1'6"; or
- . have conductor separations less than 2' in tightly strung spans more than 150' in length; or
- . have conductor separations less than 2' in slack spans; or
- . have span lengths greater than 250' (in these cases spreaders should be installed at maximum distances of about 150'); or
- . cannot achieve adequate clearance to growing or falling trees; or
- . are considered for any other reason to constitute a fire hazard.

In all cases depending on the nature of the particular problem, consideration needs to be given to the necessity to fit more than one spreader in particular spans.

2 New Low Voltage Mains

For new extensions or augmentation of existing low voltage mains the following shall apply:

- . A minimum conductor spacing of 2'0" be adopted for bare conductor construction.
- . Switch wires be deleted in favour of photo-electric cells wherever possible.
- . Where switch wires are necessary to satisfy half night lighting or major lighting schemes, an insulated switch wire shall be used and effective separation is then the spacing between adjacent bare conductors.
- . Spreaders to be used as set out in 1 above.

NOTES OF MEETING HELD AT MONASH HOUSE, FRIDAY, 27 MAY 1977
AT 2.00 PM

PRESENT: Dave Killey
Des Trevaskes
Jack Hill
Ray Longmuir
Bryan Dureau

REASON FOR MEETING:

Emanating out of the Bushfire Inquiry it would seem that within the Commission there has been -

- 1 A lack of internal recording of information and complaints rendered by our customers
- 2 A lack of internal documentation of reporting action or restorative action following lodgements of information and complaints by our customers
- 3 A lack of retention of any or some of the documents raised to record customer complaints and reports
- 4 Little or no attention given to those situations which have been deemed to be related to repetitive faults
- 5 No distinction between matters of either a Commercial or a Technical basis.

BROAD OUTLINE:

The Assistant General Manager (M&D) had requested Mr Killey to convene a working group to examine this situation.

Mr Hill was to act as Chairman of this working group and Messrs Longmuir and Dureau were co-opted to investigate the various situations in force, and to recommend a system to improve the present practices.

PARAMETERS OF WORKING GROUP:

The working group will examine -

- 1 The inflow of information and complaints from customers at district level.
Attention is to be given to the manner of recording and proper documentation
- 2 The manner in which action is taken by districts and the documentation of such action
- 3 The manner in which districts store such records
- 4 The duration which districts store such records
- 5 The manner in which reports etc. are referred by districts to Region Offices.

GENERAL DISCUSSION:

During discussion it was generally agreed that -

- 1 Districts use SIF's (Supply Interruption Forms) and Access Permits
- 2 Districts have not been advised of any system for processing of such information, or advised of any retention periods
- 3 No one seemed to know, or have documented, what records are currently maintained or for how long
- 4 Districts may be maintaining and retaining the wrong records.

REPORTS TO CUSTOMERS:

In the main, no response appears to be issued to customers, following lodgement of a complaint, where action taken is not obvious to customers.

PRELIMINARY INVESTIGATION AND FAMILIARISATION:

- Monday, 30 May 1977 - Mr Dureau to analyse situation in Colac district and the relationship with and at the Barwon Report Centre
- Tuesday, 31 May 1977 - Mr Dureau to analyse situation at Warrnambool district.

During these two days Mr Longmuir to undertake preliminary planning and collation in Metropolitan area.

- Wednesday, 1 June 1977 - Messrs Longmuir and Dureau to visit Metropolitan Region Customer Services Area, Report Centre and Prahran Area Centre
- Thursday, 2 June 1977 - Messrs Longmuir and Dureau to visit Eastern Metropolitan Region including at least one district
- Friday, 2 June 1977 - The working group to reconvene to study information gathered and to determine subsequent action.

ALBERTA 10-3

DEPARTMENTAL

fpc/cm1 ITEM No. _____

STATE ELECTRICITY COMMISSION OF VICTORIA

Telephone: _____

I agree with the view expressed in the penultimate paragraph.

Extension No. 3922

SECRETARY _____

23 MAY 1977

34/5/77

Date 23 May 1977

ASSISTANT GENERAL MANAGER (Adm) _____

Agua

NOTED - MEETING 26/5/77

BUSHFIRES

The attached memorandum by Messrs K Marks QC and A McDonald, Counsel representing the Commission at the Bushfire Enquiry, sets out very clearly the likely legal liability of the Commission in a number of the major fires which occurred on 12 February 1977 and recommends steps which the Commission might take in advance of the Enquiry announcing its findings.

In the main, Counsel's recommendations, if adopted, would be of immense public relations value to the Commission in an area where the Commission's image is suffering very considerably by the understandably highly emotional reactions of those who have suffered disastrous losses.

On the other hand, it must be realised that a substantial sum of money is involved and the Commission must ask itself whether it is justified in conceding claims if there is any possibility of negating its insurance cover in the interests of sectional public goodwill.

A firm estimate of the losses which the Commission could possibly have to meet is not available but the total loss has been stated to be in the vicinity of \$30 million to \$40 million. Counsel has advised that claims would be minimised if settlements were made immediately - delayed settlements not only invite interest but also higher capital values of assets and legal costs.

On the other hand, the experience of the 1969 fires, when the Commission, without itself delaying legal processes, took no action to expedite them, is that settlements are likely to be very much lower than was originally estimated. There are many reasons which could be advanced why this is so, for example -

- 1 claimants' solicitors appear to have been very dilatory in their processing of claims, with the result that some claimants have lost patience and are no longer pressing their cases;
- 2 losses generally were not highly disastrous to landowners involved, with a tendency not to press strongly for settlement as time has elapsed and they have recovered their financial positions;
- 3 other State and Commonwealth agencies did not make claims - for reasons best known to themselves;
- 4 possible involvement of Commission assets was not so widely publicised and claimants did not have the advantage of a public enquiry charged with investigating the causes;
- 5 Commission officers acted in some cases at least in the belief that the unusual circumstances of the day would give a reasonable safeguard against claims of negligence. (The Commission's position in this respect following the 1977 fires would be weakened considerably if the Enquiry were to find that insufficient steps were taken to profit from the 1969 experience.)

Because landowners are more highly organised and more conscious of their right of claim, the Commission would not hope to achieve such a favourable result following the 1977 fires and Counsel's advice favouring early settlement probably is sound.

The other important factor is whether acceptance of Counsel's opinion would prejudice the Commission's insurance cover. It will be recalled that the Commission is insured for \$14.3 million after the first \$700 000 over the 1976/77 financial year. Some minor claims have been met in respect to some earlier fires but none of the \$14.3 million insured cover has been called upon.

Solicitors (Messrs Phillips, Fox and Masel) for the insurers (a large number of companies are involved in the complete cover) have been kept closely in touch with proceedings at the Enquiry and are satisfied that, to date, no action taken by Commission personnel will prejudice our rights under the policy.

Mr Geoff Masel has advised that he will be proceeding to London this week to inform insurers that claims will certainly exceed \$15 million and that it would be in their best interests to agree to early settlement and so avoid legal costs for which they would be liable in excess of the policy cover up to the date they agree to settle. He has been given a letter from the Commission seeking consent to settle immediately claims arising from the fires which occurred in the Strathmore (Glenthompson), Tatyoon, Pura Pura and Cressy-Werneth-Wallinduc areas, or any claim or claims arising out of same on the advice of Senior Counsel.

Mr Masel has advised, however, that he would expect that insurers will want to be first satisfied that they need to pay any claims at all under the terms of the policy. The most worrying aspect of this statement is that the policies include a clause requiring that the Commission (as a corporate body, as distinct from the actions of its individual servants) will not cause losses by negligence in the conduct of its affairs. The Clause states -

"The insured shall exercise reasonable care and shall take all reasonable precautions to prevent bodily injury or damage to property"

The main issue will be whether the Commission at its highest responsible level has in fact acted reasonably and whether it profited sufficiently from the experiences of the 1969 fires. While the interpretation of this clause is open to doubt, there is some precedent at common law which would suggest that any liability of the insured would arise only if he takes some positive steps which prejudice the insurers as distinct from unwitting negligence.

Counsel's memorandum does not give a great deal of comfort in this respect and may point to the possibility of litigation to determine whether insurers have to meet claims.

The Solicitor advises that action taken now to prevent a recurrence of the events of 12 February 1977 should not prejudice the rights of the Commission under its insurance policies. However, action taken now to prevent further "incidents" may be used as evidence of what could have been done and therefore assist a claimant in establishing a case of negligence against the Commission, but cannot of itself be used as an admission of liability. The Solicitor is of the opinion that the Commission at law has a responsibility to take remedial action, notwithstanding the possible consequences of such action.

In summary, if the Commission decides to accept in principle the advice of Counsel as set out in the attached memorandum, it must realise that there is some risk to its recovering the \$14.3 million of insurance cover. This cover may be at risk in any event.

It seems desirable that no action should be taken on Counsel's recommendations until we know the outcome of Mr Masel's visit to London, at least the response to our recent letter seeking concurrence to the early settlement of claims arising from some of the major fires.

The Assistant General Manager (M & D) in his memorandum of 10 March 1977 (submitted to the last meeting of the Commission) has dealt with a number of the remedial actions referred to in Counsel's memorandum from page 29 onwards and is further examining the administrative procedures suggested.



SECRETARY

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