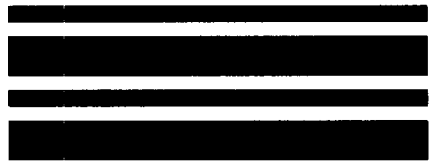

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TRANSCRIPT OF PROCEEDINGS

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ROYAL COMMISSION INTO BRITISH

NUCLEAR TESTS IN AUSTRALIA

MR JUSTICE J.R. McCLELLAND, President
MRS J. FITCH, Commissioner
DR W.J. JONAS, Commissioner

TRANSCRIPT OF PROCEEDINGS

AT SYDNEY ON MONDAY, 23 SEPTEMBER 1985, AT 10.00 AM

Continued from 18.9.85

Secretary to the Royal Commission

Mr John Atkinson
GPO Box 4044
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MR McCLELLAN: Firstly, I have not so far asked Mr McIntyre to indicate the position for us with respect to the Australian Government documents, and in the same way that I asked Mr Koladziej in London to confirm the position with respect to British documents, I would ask that he indicate the position with respect to Australian Government documents.

MR McINTYRE: Very briefly, to touch on the activities of the Department of Resources and Energy and the commission since the commission commenced sittings last year, as the commission is aware the commission staff last year assumed the responsibility initially of contacting Commonwealth Government departments and identifying the files to be forwarded where appropriate to the commission's offices in Sydney. This pattern continued after I sought and was granted leave to appear last year. However, on occasions when I became aware of documents which were of relevance, I caused them to be produced to the commission and, on some occasions produced them myself.

Whilst the commission staff were engaged in that process over the many months of the commission of identifying from individual departments documents which they wished to see, the Department of Resources and Energy having the responsibility for the management of certain common law actions arising out of the tests was itself engaged in a systematic review of Commonwealth files and documents to permit complete discovery to be done in the normal course of those Commonwealth proceedings. That process is, of course, continuing as the need for discovery continues in relation to those common law actions. As that department in the course of that review for that purpose found the files of relevance to the terms of reference and the commission sittings, that file or those documents together with the file summary if time permitted was as a matter of routine forwarded to the commission.

In response to the letter from the president in June of this year to the Minister for Resources and Energy, and subsequent to the reply from the minister to the commission on 17 July, a comprehensive file list was produced by the Department of Resources and Energy, that being in response to the request from the president in the letter in June for a list of files to be compiled relating to file holdings from all government departments. That list, it will be recalled, was a rather massive document, but after reconciliation to eliminate duplications and other obvious errors in the document, was constantly as a continuous process updated as the review of files by the Department of Resources and Energy continued. That list of files as it has been amended by information passed from the Department of Resources and Energy now represents a comprehensive list of all files and

documents that are known to all Commonwealth departments and agencies insofar as they relate to the nuclear tests.

Whilst that is a list of all documents and files which are known to Commonwealth departments, I have been instructed to advise the commission that the Department of Defence has not itself done a complete audit of all archived material, and in the absence of that complete audit that department cannot give an assurance that there were no documents in defence archives which might have relevance to tests. However, the Royal Commission staff last year, as will be recalled, conducted their own audit of archival material in Canberra and Villawood, and since the Royal Commission staff themselves inspected documents in those archived areas, there has been a review of archives in Western Australia, South Australia, Victoria and New South Wales, and in respect of some of the archived material in Canberra, checks by officers of the Department of Resources and Energy, and the results of those checks of archived files, have been advised to the commission. So in a sense in essense whilst the Department of Defence cannot give a categoric assurance about archive files, they have been made available to the commission staff in the course of its endeavours to contact departments direct, and with the exception of archived files in Darwin and to some extent in Townsville, the archives of defence have been, in fact, checked by officers of the Department of Resources and Energy.

It follows, I think, what I have said that even with the best endeavours by departmental officers to search archived records and documents throughout the continent, I certainly cannot exclude the possibility there might be a file in a corner of a filing cabinet in some part of the continent which might relate to the nuclear tests, but to the extent that manpower or personpower has been available over the last year, and to the extent that the archives have been able to be checked, the list produced to the commission is, in fact, a final statement of files that Commonwealth departmental employees are aware of, having made those inquiries.

That, I think, is a summary of the current situation. I cannot give an assurance that there is nothing else in any part of Australia, but to the extent that those inquiries have been conducted, the list with the commission as modified is the current statement of file holdings known to Australian Government departments.

MR McCLELLAN: Just one or two things. Firstly, a list of files held by the commission have now been prepared and I think everyone now has a copy. I propose to to tender that, and it can be marked RC - something in due course.

I would also indicate it has been pointed out to me this morning on page 14.2 of my submission there is reference there to an answer given by Mr Beale in the House in 1951. Can I indicate that I think an error has occurred there and the position would be, I think, that Mr Beale when giving the answer which he gave and which is recorded in Hansard would not have been aware of the prospect of testing in Australia although the Prime Minister of the day may have been so aware. That is established by the documents. I think the correct position is probably Mr Beale did not become aware of the situation until early 1952.

Could I also indicate that a number of persons have raised with me the statement made by Sir Ernest Titterton which was reported in some Australian newspapers, in particular the Melbourne Age, and I think the statement was made on the National last Wednesday night, in which he indicated that the United Nations had investigated the testing programme in Australia and had apparently given it a satisfactory clearance. The concern having been expressed to me I took steps and arranged for Mr Winch to telephone Sir Ernest Titterton, which he did last Friday, and he asked him about the suggestion that the United Nations had reported in relation to the testing programme in Australia. The response he gave to Mr Winch was that there was no actual report but Sir Ernest said he had heard back through the scientific community. He was asked which body of the United Nations he was referring to and he was referring apparently to UNSCEAR and he indicated to Mr Winch that UNSCEAR had been collecting fall-out data from all over the world and that the Atomic Reference Test Safety Committee had sent the data collected in Australia to UNSCEAR. That much of what Sir Ernest told Mr Winch I think we are all aware of.

Mr Winch also asked him whether there was a report which related specifically to the tests in Australia and Sir Ernest replied there was not and that the only information which he had in relation to the United Nations was that the UNSCEAR committee had been responsible for collecting world-wide fall-out data.

In the light of Sir Ernest's remarks in that telephone call I do not propose, Mr President, to pursue any further investigations. It would seem there was not a specific, as it were, United Nations investigation for testing programme. I think the file list can be marked RC876, and I think Mr McIntyre is going to go first in the submissioins.

MR McINTYRE: I take no objection in going first although I was not present last week at the meeting in which

the order of addresses was dealt with. I believe I have all the points listed here I wish to address on but I would like at some appropriate stage later in this week's proceedings to ask for leave to respond to any matter which might be raised by any of my learned friends in the course of their submissions which might be a new matter. I hope that will not be necessary but I foreshadow that as a possibility.

If I can deal firstly with the submission from the Australian Ionising Radiation Advisory Council by saying I do not wish to make any comment in relation to any of the matters contained in it.

The second submission I have listed here is the submission from the veterans organizations that Mr James appears for and I have two matters specifically to refer to in relation to that submission. It makes reference to AG7 on several occasions in the submission and refers to - this is one reference I have not got at my fingertips - to a commitment to pay compensation in certain circumstances. The submission by the Department of Resources and Energy which was tendered last year contains a brief description of the need for the Department of Resources and Energy to conduct investigations in relation to compensation claims and makes passing reference to the onus of proof being upon the Commonwealth of Australia in certain circumstances to show that there may be or there was no relationship between that exposure and a medical condition which otherwise compensation would be payable.

The reference in that submission is in reality a summary of the effect of the regulations made under the Compensation Commonwealth Government Employees Regulations, regulation 12 of which refers to the schedule to the regulations and to a deeming provision which deems a disease to be related to certain kinds of employment. In the first schedule to those regulations a disease described as a pathological condition caused by radium or another radioactive substance is deemed to be related to employment involving exposure to or contact with radium or other radioactive substances and with the consequent reversal of onus of proof. I make reference to those regulations in that act to demonstrate that that part of the submission by the Department of Resources and Energy which refers to the reverse onus of proof is simply a brief summary of the effect of the first schedule to the compensation regulations, creating that reversal of onus of proof if the condition from which the applicant suffers is a pathological

(Continued on page 10,113a)

condition caused by a radioactive substance, and in that respect the position of the Commonwealth is set out in the effect in law which that act and those regulations have.

The submission from the Nuclear Veterans Association, South Australia, and the Maralinga and Monte Bello Islands Ex-servicemens Association makes reference to the role of the International Commission on Radiological Protection and questions, as does other submissions, the independence of that body, of its impartiality and its consequent ability to formulate advice to different nations to protect persons from exposure to radiation.

I would merely remind the commission that in London when Professor Radford was being asked questions in this area he did indicate, as is recorded in transcript on page 4791, that in his view until the 1970s despite whatever criticisms he felt could be levelled against the ICRP that until that time it did try to maintain its objectivity and his evidence, in my submission, did clearly contrast the perceived standing of the commission prior to 1970 with its standing later. I, of course, am not passing any judgment or suggesting any finding in relation to this question of whether or not the ICRP was able to be objective and to formulate safe standards, I would simply mention in passing if criticism is to be made by any of my learned friends organizations of the objectivity of the commission that according to Professor Radford, at least, until the 1970s there was objectivity present even if Professor Radford himself believed it might have been less than that present after the 1970s.

Finally in relation to Mr James submission, as I indicated to him earlier this morning, at page 90 of his submission towards the bottom of the page reference is made to the lack of film badge and blood count records. He says at the last paragraph that:

> There is also a lack of records . . . . .
> . . . . . and Hurricane.

(Continued on page 10,114)

In fact the results of the blood tests conducted as a result of the recommendation from Air Vice Marshall Daley are in fact with the commission. The commission file numbers are 024.001 and R161.002. I have not seen those records this morning. I have no specific recollection of seeing them in the course of the commission hearings, but I cannot guarantee I have not cast my eye over them at some stage in the last year.

The submissions from the various veterans organizations, if I can refer to them in that collective sense, make a number of complaints or criticism in relation to some specific aspects of the health physics arrangements at each of the trials. Whilst as I indicated in my written submission, it is not my function to suggest any particular finding in relation to the question of whether measures were safe or not for the protection of servicemen or persons involved in the tests, I would like to make a couple of observations arising from the summarised criticisms of the veterans submissions and only in very general terms.

The first submission which I think really relates to almost all evidence of all individuals called, be they scientists or non-scientists involved in the tests, goes to the question of recollection. In my submission I drew attention at page 29, although it is not a matter which I would need to go to, to imperfect recollection of Dr Stephenson and Captain Butler. It will be recalled from the document that Captain Butler was shown to have gone from Emu to Woomerah after Totem One was detonated to set up a health control and de-contamination facility to decontaminate the Lincolns that came back from the Totem One sampling flights. Despite entries in Australian Air Force documents confirming activities and despite the AWRE report of the decontamination group at Totem, Captain Butler could not recall going to Woomerah His evidence was that he went from Emu to Amberley. It was put to him, as I have set out in my submission at page 29, that the documents clearly showed that he went there and indeed worked there for several days.

THE PRESIDENT: Went to Woomerah?

MR Mc INTYRE Went to Woomerah. One would have thought that Captain Butler in London would have been able to recall that fairly significant event involving several days work at Woomerah to set up from scratch virtually a decontamination facility for the Lincolns. He could not; even when the documents were put before him, he could not. If one concludes from the variety of documentary references to Butler's presence that in fact he did go to Woomerah, and that, in my submission, would be a rather tempting conclusion to reach, then it follows there is an extraordinary lack of recollection by Butler of an important area.

This of course is not setting criticism of Butler or indeed any other person who has memory difficulties. It merely illustrates the problems one has in trying - if it is attempted to take evidence of veterans, or evidence of scientists or any other person called simply at face value without looking at other documents. Dr Stephenson also exhibited a similar lack or recollection on which one might take the view it is somewhat surprising when documents record specific details of oactivities. He said he had no recollection, after being made aware of the contaminated Lincolns, of inspecting the aircraft.

However, the Australian Air Force documents, and several of them, have a clear reference to him doing just that. Again if one accepts the documents - and I am not by any means suggesting that is a formula by which issue should be resolved - but if in a particular case the commission is satisfied from many documentary references and evidence of other people, for example Dr Stephenson inspected the Lincolns, then the consequence is that his recollection is shown to be quite faulty. Then it is against that difficulty of recollection that I would invite the commission, without looking at areas of conflict between evidence of persons present and documents which might suggest the contrary, to bear in mind those demonstrated areas where particular witnesses have been shown to have, through no fault of their own, an obviously faulty recollection.

As I mentioned before, I am not suggesting that ought to be the formula to resolve differences. In my submission that demonstrated difficulty of recollection ought not to be put to one side when assessing or trying to resolve an issue which may have emerged either between witnesses recollection or between witnesses recollection and documents.

There are some specific areas in the veterans associations submissions which I would like to briefly refer to. I do not propose to deal with individual recollections insofar as they relate to those areas because that I think would be quite beyond the proper scope of this response to a submission. However, numbers of personnel referred to what might be described as uncontrolled entry into contaminated areas. Now it would seem, in my submission, clear from the documents we have that relate to health control and security for the tests, particularly the Buffalo series, but others are importantly involved, that contaminated areas were not static , they changed, and they might have been contaminated a day after one explosion might have been found to be uncontaminated, or at least with a level of contamination which had declined to the extent that different levels of control were required.

When one looks at the recollection of a person who says that he went into a contaminated area without being controlled, there is a difficulty at this stage in establishing with certainty whether or not the area that he went to was an area which was contaminated and which required control or which required control of a certain level. An example which comes to mind is the evidence of visits to the One Tree target response area.

Many servicemen apoparently at various times in the Buffalo series after One Tree saw the layout of target response items. The commission of course has been to the range and we have seen maps, diagrams and photographs of that area. One could be forgiven, I suppose, if one had been taken into an area such as that and seen the effects of explosion and heat and blast by concluding that it was an area of contamination; but it would seem, with respect, if one looks at the evidence of some of the persons in control of health physics or security at the time or indeed the post-trial reports, that significant areas of the target response sector were not areas of which there was contamination. It is very difficult, in my submission it would be a very difficult task for the commission, to try and determine now with any certainty what areas were contaminated, what were not, what required health control, and what did not require health control.

A similar comment could be made in relation to the question of the suggested non-issue of protective clothing on occasions of where they might otherwise be thought to be required. Again the question of what protective clothing might have been issued to a person going to a forward area depends upon the level of hazard assessed by the health control people of being present. It would be very difficult, in my submission, if the commission were to attempt to determine what protective clothing ought to have been issued to a particular person for a particular visit. Regrettably the documents that have been produced do not with any great precision show for the relevant days after the Buffalo firings or indeed other tests the day-by-day movement of the yellow boundaries and the red boundaries, etcetera. It would, in my submission, be necessary to know those boundaries and areas if one were to make any detailed assessment of whether a particular serviceman ought to have been issued with these kinds of clothing: respirator, overshoes, etcetera.

One frequently finds recollections of personnel present of surprise at geiger counter readings going off scale and concern on the part of the person that he might be at that time exposed to dangerous levels of radiation. It was of interest in this

respect, having heard the evidence of Mr Stubbs at Kanatha, who it will be recalled had two monitors both of which went off scale, but, when these were analysed by the Australian Radiation Laboratory, it was found the sensitivity of the instruments was such that they could read off scale at levels consistent with the safety committee monitored levels of radiation or radio-active fallout.

The evidence of course describes these instruments as being highly sensitive. Whilst one can understand I suppose a person's concern if a geiger counter went off scale, one can see from looking at the RAL report of Mr Stubbs' monitors that that reading can occur at low levels of radiation, that being a result of the very sensitive nature of the instruments.

Various people have been critical of security at roadside in the Buffalo and Antler series. In my submission the evidence shows that there was in fact a police post there and there is evidence that it was manned at the time of the Buffalo trials. The evidence clearly shows that it could have been evaded if a person chose to. Of course, the only access, rather than going across country to the forward areas was past roadside. Whilst a person intent on avoiding security could have evaded the police post, the evidence would seem to suggest that the presence of the roadside control would have been effective to road access by people, for whatever reason they found themselves passing through the roadside area.

Evidence has been heard of some personnel going past roadside as part of a group. Now whilst an individual member may not have been aware of arrangements made to permit the group in, that individual's failure to be aware of what arrangements could have been made by the group to pass the security, does not necessarily mean there was in fact no security there.

Those are the general comments I would make in relation to servicemen's recollections of radiation risk and security, and health business. As I indicated in my submission, it is not evidence to suggest that any conflicts which the commission might feel appear between plans for health control and implementation could be resolved in any particular matter.

There are some specific portions, however, of the submission of ANVA, Western Australia and Queensland - at page 32 of the submission - ANVA, Queensland, and ANVA, Western Australia. In the third last line the submission reads:

> Mr Turner however had an attitude of disrespect towards radiation.

Reference is made to the evidence of Mr Brindley. It would be my submission that the commission, having heard Mr Turner and having heard the many other people who had worked with him, above him, and working at his direction, that the commission would not find that Mr Turner had an attitude of disrespect towards radiation, and to the extent that any individual might in evidence have suggested that Mr Turner had an attitude of disrespect towards radiation, then I would merely submit that that evidence of those people should not be accepted uncritically. There is an

abundance of evidence, of course, as to Mr Turner's training and experience and the measures which he was responsible for to ensure health on the range.

There is a reference in my notes to the same submission which is obviously an incorrect reference, because there are not 505 pages in it. Reference is made to HMAS Junee's activities at the time of the Mosaic series at the Monte Bello Islands, and the evidence I think of Mr O'Brien that stated the ship's company was marshalled on the deck of the ship, and just like the Diana, the ship sailed through the fallout and there was a pre-wetting which had occurred on the ship prior to that activity having been undertaken.

The report of the proceedings of HMAS Junee is contained in the Monte Bello collation which I tendered before the evidence concluded. At pages 666 and 677 there is no reference in those reports of proceedings to any such activity. My submission is simply this, it would appear if in fact that ship had engaged in the activity described by Mr O'Brien, it would be very surprising if there was not an entry in the report of the proceedings to that effect. That evidence is not supported by the recollections of any other person on the ship, as I can recall.

In my submission the absence in the report of the proceedings of the Junee series, and the reference to any such activity ought to be taken as indicating that the ship did not purposely sail through the G1 or G2 cloud with the crew on deck, the ship being exposed to fallout.

At page 58 of the ANVA, Queensland and Western Australia submission, paragraph (c) the submission states:

> Several veterans have given evidence of the isolation of the Lincoln aircraft at Amberley after their return to Operation Hurricane.

Reference has been made to those four witnesses there.

Now, my submission in this area is this, the Royal Australian Air Force documentation that the commission has read, of course many times, makes no reference to any contamination being experienced after Hurricane. I am not for a moment suggesting that the aircraft might not have been contaminated. Obviously, if there was activity in the filters

under the wings, there would be activity deposited on the oily surface of the aircraft.

My submission is if one looks at and accepts the air force documentation, there was no knowledge of contamination by the air force authorities until after totem. One merely has to look at the letter from Air Vice Marshall Daley after the Totem one flight of the contamination found - that is RC83 - and recall the surprise that Air Vice Marshall Daley expressed at the presence of contamination, and his statement that it would now appear that it was a hazard after Hurricane, as it was a hazard after Totem. Of course, Hurricane and Totem were only a year apart and the aircraft returned from the Monte Bellos to Amberley as they would return from Woomerah to Amberley, after exercise Operation Totem. Without going through the evidence of all the air force personnel who were called who went on Operation Hurricane, my submission is that if a witness gave evidence of contamination being found on aircraft segregated or steam cleaned, put off in roped areas, then in reality those events of segregation, separation of aircraft, even if contamination occurred as a consequence of the Totem and Hurricane trials, then indeed this very matter was put by me to a number of witnesses called to give evidence of the contamination having been found present, they initially thought it was after Hurricane, but when asked specific questions about it quite often agreed that their recollections were not correct or indeed agreed in fact contamination was observed after Operation Totem. If the air force documents are correct, the conclusion which would seem to flow from that was that contamination was only found or noticed after Totem. As I mentioned before, I am not suggesting it was not there in fact after Hurricane, but it would seem from the documents that the weight of the evidence of the air crew and RAAF personnel involved, that the contamination was noticed by the air force after Totem and not after Hurricane.

If I could pass from the submissions from the veterans organization to the submission from the Aboriginal groups and evidence. I might at the outset invite the commission to turn to page 493, indeed paged 492 to 293, under the heading Compensation for Loss of the Lands. The submission reproduces two sections of the terms of reference concerning measures taken to protect persons from exposure to radiation, and the second "requiring the commission to have particular regard to Aboriginals in the general regions of the test sites."

The last paragraph of page 493 concludes with the request that the commission recommend that the Australian Government pay compensation to those persons and to sections of those persons who have traditional interest in sites at the former Maralinga prohibited area for loss of use of enjoyment of their land.

My submission is that any such recommendation which is sought by the boriginal groups that this commission makes, would not strictly follow from the terms of reference of this pattern. Now, whilst there has been a large amount of, if I can refer to it, anthropological evidence called before the commission, which of course is quite relevant to the question of distribution of Aboriginal peoples, their lifestyles and living habits, whilst of course that is directly relevant to the specific question of the letters patent, that evidence, if it is said to be related to compensation claims, would then be used in my submission in an area which would be outside the parameters of the letters patent.

On page 199 if I can now go through the submission in a more logical or more orderly fashion, the submission is referring to the safety levels of contamination for the Mosaic series, and makes reference to the criteria requiring that less than half level B, or that levels in excess of half level B ought not to be carried to the mainland. I would merely draw the commission's attention to a part of the Commonwealth submission on page 62 which sets out the evidence of Mr Matthewman and refers to an AWRE report which, if correct, records that the safety committee applied not half level B as the level above which contamination could not fall on the mainland for G1 but, in fact, applied level A to limit the fall-out levels which could be permitted on the mainland after G2. Mr Matthewman said, and I have this quote at page 62 of my submission:

> Between G1 and G2 in the light of the experience of G1 and also in the light of the increased yield we were dealing with, the safety committee changed their practice. For G1 they had been satisfied with a contour of so-called half level B safety level; when it came to G2, or well before G2, they said they wished to have indications of a lower level, level A contour.

And as I also set out in my submission that that is consistent with the contour figures appearing in report T24.57, and one can see if one looks at 9 that there is a plotted contour level for level A in the predicted fall-out patterns for G2. There is an indication, in my submission, from that that, in fact, whilst half level B might have been contemplated and used by the safety committee for G1, it seems that there were somewhat more limiting criteria for G2.

At page 207of the submission dealing with the fall-out at Mosaic, it is stated in line 3 of the first paragraph - "However for G2 Port Hedland exceeded level A for traditional Aborigines". It may be that my calculations are in error, but the level A for Aboriginal peoples which was applicable, or was the current calculation in 56 was, of course, that contained in the appendix to the report 041 of 55, and that gave a level A for Aboriginal people for exposure commencing at 24 hours of 6.7 times 10 to the third microcuries per square metre. I say for exposure commencing at 24 hours because if one looks at the Matthewman report, 24 of 57, if the winds recorded there after G1 and G2 are correctly recorded, the mainland exposure would not have occurred until about 24 hours from detonation, but the level A for Aboriginal people in the 56 calculations for 24 hours was 6.7 times 10 to the third microcuries per square metre.

The report, 24 of 57, has two figures which set out the safety committee continental sampling figures. Figure 12 in that report sets out figures of deposited activity taken from the sticky-paper samples analysed by the Commonwealth X-ray laboratory. Those figures on that page have been adjusted to H plus 1 values and they show in relation to Port Hedland a figure of 3960 microcuries per square metre as being the level of activity at H plus 1 of the fall-out which landed at Port Hedland about 24 hours after detonation. That could be otherwise expressed if my rusty mathematics are correct as 3.96 times 10 to the third microcuries per square metre. If one then looks at the table for level A for Aboriginal people for 24-hour fission products, the limiting level, or the level of tolerance at H plus 1 is 6.7 times 10 to the third, and it would seem from my calculations that in relation to the 1956 calculations the level A for Aboriginal people on those figures would not have been exceeded at Port Hedland for G2 because, as I do say in my submission, a different consequence flows if one takes the calculations which were made in 1959 in the report 26026 of 1959. I have said in my report that the later calculated levels for Aboriginal level A exposure would have been exceeded in the instances that I have referred to in my submission, but if my analysis is correct of the Port Hedland fall-out, it would seem that if one recognizes that the values in figure 12 are converted to H plus 1 hours for 24-hour fission products, the level of activity deposited at Port Hedland would not seem to have been excessive, bearing in mind the standards that were being applied at that time. I am sure if I have made a mistake Mr A. Eames will correct me.

At page 321 there is a quotation from a report of Mr Beaver from AWRE in relation to the sticky-paper method of sampling. The quote refers to the fact that by the time the samples had been received at the Commonwealth X-ray laboratory the count rates were very low indeed, and I think there is reference elsewhere in the submission to that statement. If it is to be suggested that the low count rate at the time of measurement at the Commonwealth X-ray laboratory results in the accuracy of the survey being jeopardized, I would make this submission, that it is clear from the many experts that have been called that there is a technique of using the decaying laws to calculate back along the time of exposure from a level monitored at a later time the levels of activity at certain times after detonation. If it is to be suggested that the delay in measuring papers by the X-ray laboratory were such as to cast doubt upon the accuracy of the measurements, that is not a matter that was put to any of the witnesses who were called and gave evidence in relation to in part the sampling methods.

Mr Stevens was questioned about sticky-paper samples both in Melbourne last year and in Sydney this year when recalled; Mr Moroney was called, who was in a position to give evidence of that, I would have thought, and Mr Dale in London. It is an area, in my submission, which clearly requires expert evidence if there is to be any suggestion that the late measurement of the samples in some fashion invalidated the results.

As that question has not been canvassed with the witnesses who were called who could have, one might think, dealt with the matter, either rejecting it or supporting it, in my submission the commission ought not itself to inject that argument into its findings to in any way cast any dobut for that reason alone as to the accuracy of the calculations of the X-ray laboratory. I recognize, of course, there are other criticisms made of the sticky-paper sampling method which I have referred to in my submission, and the commission will no doubt make its assessment against those criticisms of the effectiveness and value of the continental sampling programme, but I would simply point out that the particular criticism relating to delayed measurement is not one which was ventilated with the scientists.

Finally, in relation to the submission from the Aboriginal groups, there is reference made to the evidence of Mr Connolly and the records that the commission is aware of of statement made by Mr Burke before his death. At page 351 of the submission of the Aboriginal groups after a brief resume of the evidence, the submission states as follows: "We do not submit that a positive finding should be made by the commission on this issue". That, of course, refers to the lack of any details or information of persons who might have been missing at that time, and lack of knowledge, unfortunately, was the result. My submission is this. The evidence of Connolly was direct and raised a matter of seriousness and a matter of concern, as did the evidence the commission took of Mr Burke's statements prior to his death.

General Henderson was called and dealt with in his statement almost entirely matters relating to the presence of aboriginals. He categorically denied the suggestion or the allegation made by Connolly of the four bodies in the area forward of roadside. It was not suggested by any party or by the commission of General Henderson that his evidence in that respect is not accurate and certainly he would have left the witness box, in my submission, with the impression that nobody wanted to suggest to him that what he had said was not accurate, reliable and accepted.

In addition to the evidence of General Henderson the British Government, as I recall, obtained statements from some other persons who had been mentioned by Mr Connolly - Norris and Maguire I am told they are - which repudiated what Mr Connolly said and were consistent with General Henderson's evidence.

My submission in this area is this, that if the commission believes the evidence of General Henderson, particularly in the light of the statements that the British Government have provided, then the commission ought to make a positive finding. It is of course a matter for the commission whether it believes General Henderson or not but it is an area of importance and in my submission if the commission is satisfied as to what General Henderson told it that there should be a finding in that area.

If I can pass now to the submission from the United Kingdom. Paragraph - chapter 8 - I will refer to the numbering as it appears at 8.98. In dealing with Buffalo the submission records in the second sentence: the highest acceptable dose for inhabited areas was fixed at level A as defined by Dale in 041.55; and the next paragraph I think makes reference to the question of half level B. It does not appear clear from the AWRE reports whether the level A talked about in report 41 of 55 is the level in the main body of the report or the level in the appendix which was prepared subsequent to the publication of the report for the safety committee following the safety committee's request.

Throughout the Buffalo document from the AWRE we come across the concept again of half level B and again it is not clear from the document from Buffalo whether the level B being referred to is level B in the appendix to report 41 of 55 or whether it is level B in the actual document itself. The concept of half level B, it will be recalled, was introduced by, I think, Mr Adams to the safety committee prior to Mosaic and appears at that stage certainly to have been half level B in the main body of report 41 of 55

and not the level B in the appendix, and it would seem possible that the levels A and B referred to in the AWRE documents for Buffalo might be the levels not in the appendix but in the main AWRE report.

The fallout monitored at Buffalo is recorded in the relevant reports which are expressed in levels of activity at 24 hours after detonation and it is not readily apparent from those levels whether when they refer to fallout levels being a fraction of level A or B whether we are talking about the levels A and B in the appendix to report 41 of 55 which are of course expressed in activity at H plus one hours. The documents themselves would seem to suggest that as far as the British were concerned the levels were those referred to in the body of report 41 of 55.

That of course is a different question to the safety committee's responsibility to ensure that the Cabinet determination with regard to levels of contamination for aboriginal persons was applied, and in my submssion I have drawn the commission's attention to the report from the safety committee after Operation Buffalo to the Prime Minister when the safety committee states that the levels of contamination that were predicted and measured were within the specific levels set by the Cabinet as being appropriate for aboriginal persons living in their tribal state.

That of course is an area where Mr McClellan has covered in his submission the calculations of fallout levels, particularly for One Tree and the other Buffalo detonations, and his conclusions in relation to whether or not the activity necessary to produce the dose rates measured would have indicated either compliance or failure to comply with the criteria laid down by the Australian Cabinet for exposure to aboriginal persons in their tribal state, but the British documents would seem to refer to the levels A and B in the body of the report and not to the levels which the safety committee said they applied as a consequence of the Cabinet decision.

At page paragraph 8 273 the submission deals with the range security during the inter-trial periods. The second paragraph on page 456, second last sentence reads:

> The UK relied heavily on the advice . . . . . did so without fuss

The reference for that quotation is the evidence of Brigadier Durantz. I am not submitting the United Kingdom did anything with fuss or without fuss or that

they did or did not do what they were supposed to do but that reference is taken from the evidence of Brigadier Durantz who was of course range commander in 1956 and 1957, and perhaps one ought not to judge the response of the United Kingdom to security or health risk requirements for the entirety of their involvement at Maralinga simply by an assessment of Brigadier Durantz during the Buffalo and Antler series.

The Commonwealth government's submission in dealing with questions of recommendations for future use of the Maralinga range set out the extent to which the Australian government was aware of the state of the Maralinga range prior to the more recent ARL survey and to the extent of knowledge by the Australian government of problems with contamination of the range at the time when the then round of arrangements was terminated.

The submission from the aboriginal groups does deal with this in some detail at page 402 when the question of the knowledge on the part of the safety committee of the nature and extent of the plutonium fragments was dealt with and if I can in response to that portion of the British submission which deals with the awareness of the safety committee of the state of the range at the time of the termination of the arrangements refer to the quote that is made at page 402 of the submission of the aboriginal groups, that being a quote from the evidence of Mr Moroney. It was being suggested to him that some signals or cables from the AWRE ought to have carried a clear implication to the safety committee as to the existence of plutonium contaminated fragments and the quotation and submission from the aboriginal groups of Mr Moroney's evidence puts quite clearly, in my submission, the inference that the committee itself through Mr Moroney would have drawn from the information flowing from Aldermaston. In fact at page 403 I might read the question and answer. The question put to Mr Moroney was:

> You see, I am sorry to stay with it, Dr Moroney. . . . . major problem here which we have to re-examine

I think that portion of Mr Eames' submission highlights the position of the safety committee at that time and, as I indicated in the final chapter of the Commonwealth submission, the extent of documentary information available to the Australian government prior to the ARL survey is set out on page 128.

If I could pass now to the submission of council assisting the commission, I might first inquire whether we are likely to be favoured with pages that I apprehend appear after page 817. It seems Buffalo has gone into limbo.

MR McCLELLAN: Not at the moment; I am sorry.

MR McINTYRE: I read Mr Allen's conclusion with interest in relation to Buffalo, but I would have been a bit more interested if I could have read the reasons for it. Before dealing in detail with the points that I think require some comment, Mr McClellan in his submission at times classifies conduct or lack of conduct as negligent and at times makes specific reference to whether or not certain individuals might or might not have suffered adverse health effects.

I would invite the commission to refer to the letters patent in which there are two requests in relation to comparable Commonwealth proceedings. The letters patent state:

> And we request you:
> (k) in respect of any particular matter that is or becomes an issue . . . . might directly affect rights of a party to those proceedings.

Of course, we have had evidence from a number of people who are involved in claims before courts or tribunals, and there was no application made by me or any other party for that evidence to be heard in camera. But I pass to the second portion of that request, which is (l):

> Where any part of your report under these our letters patent . . . . . recommend whether or not it should be published.

The commission will recall that prior to the London sittings I produced in response to a summons on the Australian Government Solicitor relevant papers concerning common law and compensation claims being handled by various officers of the Australian Government Solicitor throughout Australia. The commission has those papers with the pleadings and the relevant documents.

That request in those letters patent would, for example, be relevant to the evidence of Mr Yami Lester. There has been a writ issued from the Supreme Court of South Australia in relation to that matter. Indeed, there are other witnesses who were called whose evidence to the commission touched on certain aspects relevant to their common law or compensation claims. I merely invite the commission to consider that request in the letters patent when formulating its conclusions and recommendations.

At paragraph 7.29 of Mr McClellan's submission, when dealing with Operation Mosaic, the paragraph appears at the middle of the page commencing with the words "the deception". The paragraph reads:

> The deception which characterized the British approach to Mosaic . . . . in the witness box by Martell and Titterton.

Whatever comment could be made of the evidence of those two witnesses, in my submission, the documents contained in the Australian collation would indicate that the Australian government must have been aware of the existence of a link between the Mosaic series and the thermonuclear weapons development programme which the British government was then involved with.

The Australian collation contains the message from Sir Anthony Eden to Mr Menzies. As others have I think identified in their submissions, it contains the following words:

> Experiments would consist of atomic explosions with the inclusion of light elements as a boost.

Evidence has not been taken from any particular witness as to what those words would have meant to a scientist in the mid-1950s. However, it would seem reasonable to infer from the document that the Australian government through its scientific advisers would certainly have been aware of some connection between the programme in the Mosaic series and the thermonuclear weapons development programme by reference to the words "inclusion of light elements as a boost".

One of course does not know what might have been said to the Australian authorities by the British High Commissioner or his staff or to the safety committee from the British scientists, but that document, in my submission, does suggest certainly disclosures to that extent by the British government to the Australian government of the nature of the trials. Further, the paragraph in Mr McClellan's submission suggests that Martell and Titterton continued a patently false assertion that there was no contamination on the mainland.

Now, whilst the safety committee's reports and its published position at that time could be construed as maintaining that there was no contamination on the mainland, it would seem from contemporary British documents, which of course were made available to the Australian authorities, that the prospect of fall out on the mainland in the Mosaic series was always acknowledged. That is dealt with in the

first section of chapter 3 in my submission on Operation Mosaic under the heading Criteria for sake of firing.

At page 58 I refer to a number of AWRE documents and discussions between the British authorities and the safety committee with regard to the permitted level of fall-out. It would seem to me clear that the safety committee and the scientific staff on the Mosaic series were aware that there was to be a possibility of contamination on the mainland, and, if I am in error, no doubt Mr McClellan will correct me, but I do not myself recall any evidence of any assertions by the United Kingdom publicly that there would be no contamination on the mainland as a result of the explosion.

As I recall it, the assurance given was there would be no risk of injury to persons or property on the mainland. I do not recall any assertion going to the extent of stating that there would be no contamination on the mainland. Certainly the scientific concern clearly envisaged that as a possibility.

Paragraph 8.17 of Mr McClennan's submission, when dealing with air searches for Operation Buffalo, second last line, reads:

> No report of a security search is to be found for round 2.

In the Aboriginal collation there is a document to which I make reference in my submission, that is, to an air timetable for ground 2. Now that document is numbered 850 in the Aboriginal collation.

It is a proposal or an air timetable for round 2 air searches. It contains a proposal for a flight on the day before detonation, being a Varsity flight at half-past-six in the evening and a dawn search by a Varsity aircraft towards Coffin Hill, that being at 6.00 am. There are no documents that confirm that flight having taken place other than the general recollections of persons who were called who said, "Look, there were more than one or two flights; they were programmed." That is one document which we have managed to resurrect which contains some verification of a flight or flights prior to round 2.

Page 8.24, last paragraph, contains the following statement:

> A perusal of the evidence leads to the inescapable conclusion that the authorities were unaware of the location of Aborigines during the Buffalo test series and that the plans for their safety were thrown together at the last minute.

Certainly the evidence could not lead to a conclusion that the authority knew the precise location of each Aboriginal person in each area of relevance.

In my submission the evidence does not lead to an inescapable conclusion that the plans for their safety were thrown together at the last minute. Whatever criticism can be justly and properly levelled at measures taken or not taken to monitor and record the presence of Aboriginals, the documents, or what documents have survived for us to read, do show plans and concern for Aboriginal welfare being expressed in early September. They are the first records of specific patrols monitored by relevant personnel that we have other than the general concerns for Aboriginal welfare and safety expressed by departments and governments.

We were not able to take evidence from Mr Jay, who was the range overseer, but the documents that I have referred to in my submission in the Aboriginal collation clearly show him to be an important person. He,it appears, however had a significant responsibility for the co-ordination and direction of patrol officers and security staff.

The documentary records of Mr McDougall's travels would appear incomplete in the sense that they do not recall every activity he ever did. Mr McDougall, of course, was not able to be called. Those documents which we now have, in my submission, would not result in a person looking at them assessing whether adequate measures were taken for the safety and security of Aboriginals, would not lead to an inescapable conclusion, in my submission, that whatever plans there were were thrown together at the last minute. Whilst there is error as to what plans there were, in my submission the documents do not lead to that inescapable conclusion.

THE PRESIDENT: We will take a short adjournment.

MR McINTYRE: At page 1072 of Mr McClellan's submission in expressing his conclusions, in relation in particular to the presence of cobalt 60 as a result of operation Antler, Mr McClellan's recommended conclusion is in these terms:

> The AWTSC, or more particularly its chairman . . . . . at the site.

This is at page 1072. Of course, Professor Titterton, I understand, has received a communication from the commission in relation to possible findings of the commission of his position. The recommendation or conclusion expressed by Mr McClellan is not limited to Professor Titterton. There are members of the, or at leat one member of the safety committee who was involved in the Antler series who would fall within the critical finding or conclusion recommended at page 72.

THE PRESIDENT: Who was that?

MR McINTYRE: Mr Moroney.

THE PRESIDENT: He was the secretary of the committee?

MR McINTYRE: Yes, your Honour is correct, but be he a member or secretary, his evidence was that Sir Ernest Titterton had not advised the safety committee as Sir Ernest maintained he had of the presence of cobalt in the bomb after detonation.

THE PRESIDENT: Could you give us a reference to Mr Moroney's evidence on that?

MR McINTYRE: I will supply it later in the day. I have not got it at my fingertips now. The evidence, as I recall it, was he knew about the cobalt in the bomb, he did not tell anybody until the instant the weapon was fired, and he then said he had informed the safety committee. The evidence of Mr Moroney was he did not recall any such advice being given to him, or notification to the safety committee either. I will get the reference for those passages later in the day and supply them to Mr McClellan. I do recall a denial by Mr Moroney of that claim by Sir Ernest, and if that were the case in the finding of the commission to adopt that acceptance of that evidence of what Mr Moroney said, and any conclusion that you might express as to . . . . . ought to be properly confined to Sir Ernest, because of the consequence that would follow if the commission was of the view the whole safety committee was advised of the presence of cobalt.

Almost finally at page 19.2 Mr McClellan's submission in paragraph 11, of his conclusions and recommendations, he again refers to the safety committee and says:

> The AWTSC failed to carry out many of its tasks . . . . . it played an active political role in the testing programme.

It would be my submission that if there is to be any finding of deceit in relation to the duties discharged by the safety committee, that some particularity would be desirable, if only to permit an examination to be made of the membership of the committee to see whether any notice ought to be given to any survivors of the committee in similar fashion as notice has been given to some organizations and persons in the course of this inquiry.

THE PRESIDENT: Who are the survivors?

MR McINTYRE: Mr Stevens was one, he was a member of the committee, I think for Buffalo.

THE PRESIDENT: He is the only one, apart from Professor Titterton?

MR McINTYRE: Yes, from recollection. Mr Butement, he is still alive. If there is to be any finding of deceit by the safety committee, my submission is that there ought to be an analysis of the particulars of the deceit and notice given to any people who

might have been members of the committee at the time to permit the right to be extended to them to make any representations or submissions that they wish in accordance with the rules laid down by the Privy Council in Mahon's case.

The safety committee over the years was constituted by different people and it would, in my submission, not amount to a conclusion supported by any great detail if one were to categorise the activities of the safety committee to be deceitful. Its membership, its function to discharge all its responsibilities, obviously differed over the years of its existence, and if a conclusion is to be reached in those strong terms, in my submission some particularity ought to be evolved and notice given to any persons who would be affected, their reputation or profession or privately by such a finding.

Two final matters, firstly, at page 7.33 of Mr McClellan's submission, it might be a typographical error, but in terms of fall-out criteria and levels of fall-out from G2, there is a repetition in fact on that page of a previous page, but immediately above the heading of conclusions on page 7.33 the submission reads:

> In conclusion . . . . . .
> three times level A defined in 1959.

I think that should read three times level A primary, and again in paragraph 3, the last line refers to three times the A level for 1959. I think that should read A prime as well.

THE PRESIDENT: Do you agree with that, Mr McClellan?

MR McCLELLAN: Yes, your Honour. In fact I think the analysis would show that level A was exceeded anyway, but not by the level margin of 3.

MR McINTYRE: Finally, a matter on page 159 of Mr McClellan's submission, under the heading of minor trials, the last sentence reads in the second-last paragraph:

> Clearly the extent to which the radioactive substance . . . . . did not concern the committee.

I think possibly that ought to read "did concern the committee". I am not certain which stance he is taking, but I would have thought from the context that should read "did concern the committee", but I think the committee's views recorded in documents might suggest the committee to be of a different view.

THE PRESIDENT: Do you agree with that, Mr McClellan?

MR McCLELLAN: I will reserve my position.

MR McINTYRE: Subject to getting the reference later today or tomorrow of Mr Moroney's recollection of what Sir Ernest Titterton told him after the Tadje event, those are my submissions.

MR McCARTHY: Mr Chairman, before making the submissions on behalf of AIRAC, there is a request that AIRAC makes to the royal commission and it is this. No doubt in the royal commission's report there will be a reference to the representation that there is at the bar table, or has been provided by the groups in the course of this royal commission, AIRAC requests that when reference is made to their representation that the date of that representation, that is the date from which they were represented, be noted in the royal commission's report. The exact date in respect of representation for public hearings is July 23, 1985. It may be of interest to the royal commission to note that my brief was delivered on 12 July 1985 and that my first contact with counsel assisting the commission was on 15 July.

On 16 September AIRAC, pursuant to the royal commission's powers, submitted its final written report. Subsequent to that date there has been discovered, and apparently we are not alone in this, a series of typographic and spelling mistakes in the final submission. A sheet of errata has been prepared and I would seek leave from the president to have a copy of that sheet incorporated within our submission.

THE PRESIDENT: There is no objection to that, I take it? That will be done.

MR McCARTHY: I hand those up.

THE PRESIDENT: That will be incorporated in the submission.

MR McCARTHY: There are two corrections which AIRAC would also seek to make to the final submissions. In the submission at page 2.7 there is reference to primary criteria for safe firing.

This has been the subject of discussion in various submissions, and Dr Watson was cross-examined concerning that. The matter has been reviewed by AIRAC and what would be sought is this, that the reference in AIRAC 9 is conclusion 1.16 which was in these terms:

> The criteria for safe firing were met in all tests.

That had been preceded by conclusion 1.15 in these terms:

> The primary criteria for a safe firing where the persons living relatively closely to the ranges should not -

that was one of the words I think is met on the errata -

> should not be exposed to more radiation than was considered acceptable by the ICRP and that fall out at greater distances where such levels could not occur should be minimized.

What AIRAC would seek in terms of an amendment is as follows, the 1.16 to now read:

> The primary criteria for safe firing as defined in 1.15 were met in all tests.

If leave is granted for that amendment.

THE PRESIDENT: Yes, that will be amended.

MR McCARTHY: It is submitted that, to put it in simple terms, the criticisms and argument that has emerged about that finding in AIRAC 9 can be, if not overcome, at least put in better terms if that amendment is made. It certainly makes the purpose, it is submitted, of the report clearer and makes clearer also the matters that were considered by AIRAC in coming to that conclusion.

The second matter where an amendment is sought is in the final submission, page 2.9, and this is in relation to conclusion 1.19 which has been raised concerning the late Dr Marston. There is a paragraph for which leave is sought to substitute on 2.9 at the top of that page. There is also sought to be tendered with that for the assistance of the Royal Commission

a brief discussion of those matters which it is submitted would assist to put the matter of Dr Marston and his research and his reports in some perspective. I would seek to read on to the record and then tender what it is proposed as the substitute for 2.9, if that is an appropriate course.

THE PRESIDENT: All of 2.9?

MR McCARTHY: Just for the paragraph.

THE PRESIDENT: That paragraph comes out and what you are about to read replaces it?

MR McCARTHY: Yes, it does. Would you wish that to be read on to the record?

THE PRESIDENT: I think it would be sufficient if you hand over copies.

MR McCARTHY: There is a document which I am seeking leave to tender with that for incorporation in the commission's document, and that is attached to that paragraph.

THE PRESIDENT: Let us have a copy. The second page - where do you want that incorporated?

MR McCARTHY: That to be incorporated just in the commission's documents. It is in a sense an aid. Perhaps I will withdraw that, Mr President. It would seem more appropriate since that sheet of errata is to be put to the front of this and has been accepted, perhaps both sheets of paper as is could be put by yourself and your fellow commissioners as a substitute for the paragraph at 2.9.

THE PRESIDENT: Both pages?

MR McCARTHY: Yes.

THE PRESIDENT: Any comment?

MR McCLELLAN: It would be appropriate if it comes in.

THE PRESIDENT: Is there any objection to the course suggested by Mr McCarthy?

MR JAMES: I have no objection, but I do indicate at the bottom of paragraph 3 there is reference by the author to a failure to produce the details of early fall out analysis by the United Kingdom. The author says,

> I know not why, though it may simply be that they cannot find them.

The author's identity might be of some assistance.

THE PRESIDENT: Dr Watson.

MR McCLELLAN: It might be noted that was a note prepared by Dr Watson.

THE PRESIDENT: Very well, that will be incorporated.

MR McCARTHY: AIRAC would now seek to comment and make submissions briefly on references in other submissions that have referred to AIRAC or to reports or members of AIRAC. The first submission that we wish to make a brief submission in relation to, is ANVA New South Wales. AIRAC is referred to at page 17 of that report.

MR JAMES: I should indicate to your Honour that is not a submission of the persons on behalf of whom I appear but the submission of persons on behalf of whom Mr Nass appears.

THE PRESIDENT: Which document is it?

MR McCARTHY: It is a submission of the Australian Nuclear Veterans Association, New South Wales, 2B Hale Road, Mosman. Page 17 and continuing to page 19 - it is not proposed to take the commission through all of that material but simply to refer the Royal Commission to what is said on those pages and to make this submission, that that submission completely misunderstands the relationship between AIRAC and the government of the Commonwealth of Australia that in whatever way AIRACs report can be described it is difficult to use the words whereby one organ of government advises another unless in the same sense, and I use this as a pertinent example, the very same criticism is going to be made of this Royal Commission and its reports, and I think it is totally inappropriate in these circumstances and totally inappropriate in respect of AIRAC. This is reinforced by a paragraph on page 18 at point 7, on that page where this appears:

> Government documents are overwhelmingly prepared . . . . . or either regulations were not obeyed.

It is a notable fact of AIRAC 9 that has been before this commission that the original draft of that document was prepared by someone who was not at that stage a public servant.

THE PRESIDENT: But in any event it was prepared for a different government.

MR McCARTHY: That criticism completely misstates the facts and we submit is completely inappropriate. The last matter, and I only deal with this very briefly, there was a

submission that was referred to to be distributed apparently later from the same source which is called a reply to the written submissions. I am not sure if that document is before the commission.

MR NASS: It is my client's reply to the submissions. I put it in writing. I can distribute it now.

THE PRESIDENT: Are we going to get this later - Mr McCarthy is going to reply to your reply before we get your reply.

MR McCARTHY: I understood it had been handed in. I did not want to come back to it, the only general point to be made is this. There is a call for the abolition of AIRAC. I am under specific instructions -

THE PRESIDENT: That is not included in our terms of reference, you need not worry too much about that.

MR McCARTHY: There is a proposal that a body or an office be established with judicial independence to consider these matters. The only submission that we make there is that this would seem to be totally inappropriate, not to say unconstitutional use of the judicial power of the Commonwealth, to have a body of that nature.

I pass now to the submission of the other veterans association for whom Mr James does appear. In that report there are references to AIRAC and criticism of AIRAC for its methodology that would seem to have been a criticism first and foremost of AIRAC 9. And there are other - it is not so much fact as opinion - statements that are made in this submission but from AIRACs point of view the key one is at page number 36 of volume 1, and page 37. At page 37 the criticism is made of Dr Watson for a self-acknowledged pro-nuclear position - I will come back to that - which is alleged to have led to buyers in the findings, but there is the finding at about .5.

> The conclusions in AIRAC 9
> . . . . . effects
> of exposure to radiation.

That characterization of AIRAC, Mr President, is rejected and the commission's attention is drawn to 6.4 of the final submission in the last sentence thereof wherein it is said:

> AIRAC does not regard itself as
> anyone's adversary . . . . . .
> matters within its terms of reference.

I would like to refer briefly now to the final submission on behalf of aboriginal groups and individuals. There is a reference to AIRAC at page 524 in a section headed 15.4 The Australian Ionising Radiation Advisory Council and Dr Watson. The first paragaraph of that section states that:

> The AIRAC report has been so
> . . . . . to its
> terms are unnecessary.

AIRAC rejects that statement, there is no evidence for a finding of scientific integrity. There may be other criticisms that can be made but certainly that submission overstates the case in no uncertain terms. The rest of that submission, Mr President, is in a sense an elaboration of that statement and to the extent that there are references there just to opinion and not to fact and those opinions concern scientific integrity, they are rejected.

The only matter that AIRAC would draw the commission's attention to specifically is at 526

where in a final rounded parting shot the submission is bolstered by pointing to what is described as AIRACs seige mentality - last line on page 526 - demonstrated it is alleged by their reaction to the Kerr report.

AIRAC would draw the commission's attention to the following: that if the submission on this point of the counsel assisting is accepted then the language of the Kerr report can be regarded as - I think the word was unfortunate in his report - but we submit it would go further than that and say it was unscientific and it was an attack on persons individually and on their probity and their scientific integrity. One would only expect that if such language is used it will be replied to in vigorous fashion. Anyone can expect in science, or indeed in public life, that criticisms are going to be made of your activities.

When criticisms are unnecessarily made of one's probity it can only lead to vigorous response. Such vigorous response is no indication of a siege mentality and that section of that submission, we submit, should not be accepted by the commission.

I pass on now to the submission of the counsel assisting. In chapter 16 of his submissions there is the heading A Consideration of AIRAC 9, the Kerr report and the Donovan report. The main matters concerning AIRAC are at 16.1 to 16.10. The conclusions are those set out at 16.8 and I might request, Mr President, that you go to 16.8.

The first matter that is submitted is this, that it is conceded that AIRAC did not specify in AIRAC 9 the methodology or approach to its terms of reference that had been given to it by the government of the day and that much of the criticism that has been drawn on to the head of AIRAC has come about, it is submitted, because its approach had not been understood for the reason it was not set out.

THE PRESIDENT: What are you saying, that page 3 of AIRAC 9 is not the full story of the terms of reference?

MR McCARTHY: It certainly set out the terms of reference but in terms, Mr President, what is being put is that AIRAC had taken a particular view as to how to proceed, of the documentation that was available, of what indeed was expected of it.

I do not propose, Mr President, to make the submission other than in those terms but to refer the royal commission to what is set out in the final report or the final submission which on this issue as on a number of issues raised by Mr McClellan of course have in a sense passed as ships in the night. The reply has been set out in some detail to what is in his final submission because those matters were certainly matters on which AIRAC was on notice for some particular time.

THE PRESIDENT: I am not quite following what you are putting about the terms of reference. As I understood what you said a few moments ago it was that much of the criticism of AIRAC 9 had been based on the fact that the full terms of reference were not as set out in AIRAC.

MR McCARTHY: No, I will rephrase that. AIRAC 9, the terms of reference are fully set out in a paragraph page in that. What AIRAC did not set out in AIRAC 9 was a full view as to how it interpreted those terms of reference in relation to the type of inquiry that was to be undertaken, the way it was to approach for instance individual complaints about having suffered radiation exposure, how it was to consider evidence or material as to the exposure of aborigines who were in the vicinity of the tests.

It did not set out how it would deal with or did deal with individuals who had been at that stage making complaints to the government about these matters. As a consequence AIRAC has left itself exposed to be criticised for not having apparently properly considered those matters. Mr President, there is an attempt to deal with that in some detail in section 3.1 of the final submission. In 3.1 there is set out the evolution of those terms through what is in effect chapter 3, The Genesis and Scope of AIRAC 9. At 3.6 there is a paragraph beginning:

> It is clear from the evolution of the terms of reference . . . . . AIRAC considers that it is not a suitable body -

and the same point is made again in slightly different terms. That is also referred to in 2.1 in the first paragraph where there is an introduction to amendments that have been made to AIRAC 9 in the evidence that has been given to date.

The other matters that have been criticised in the submission that the attention of the Royal Commission would be drawn to are conclusion 1.9, which is criticised in paragraphs (c) and (d):

> It is submitted that the members of the AWTSU did not claim to have a biological expertise . . . . . to its specific task.

In respect of 1.16 of AIRAC 9, which is criticised in (c) and (d), we submit those matters are covered, and the conclusions that have been put by counsel assisting should be seen in the light of the amendments that have been sought to be made today and the material that is set out there.

I do not really think in the final analysis the matter is going to be resolved as to primary criteria other than to try and give an understanding of how AIRAC were proceeding on that matter. In relation to findings of 1.17 and 1.18, which have also been criticised by counsel assisting - they are the matters that concern the black mist - that has been set out again in some detail in the final submission. We submit that the criticisms that have been made should be reviewed in the light of what has been put forward by AIRAC in those sections of its finding as it were.

THE PRESIDENT: Do you advert to the question of what was the basis of the dogmatic assertion in 1.18? What did AIRAC have before it or what did it seek

which entitled it to draw that conclusion? It found no evidence perhaps because it sought no evidence.

MR McCARTHY: Mr President, AIRAC has set out its views on that matter in 7.1 of the final submission. There is a fairly detailed discussion of the matter. Mr President, it goes down to 7.11. I only put it on the basis of commending what is there to the Royal Comission. That is the way in which AIRAC responds to the question put forward: that it would not seem to be a simple answer as such, but a consideration of a number of factors that are involved.

A further matter that AIRAC would wish to submit concerns paragraph (e) of the summary of submissions by counsel assisting. That paragraph is on 16.9 and continues over the page at 16.10. At 16.10 there are two sentences which deserve some comment. In the last sentence, which seems to be the conclusion:

> No doubt the scientific contribution is important to such an investigation, but there may be significant problems if the investigation of scientists is left to scientists alone.

That would appear to be Mr McClellan's paraphrasing of Clemenceau's famous expression in the first war:

> War is too important a matter to be left to the generals.

THE PRESIDENT: It was not a bad comment, was it?

MR McCARTHY: If it is meant in that sense, then obviously, as there are other factors that are involved, there may certainly be validity in that. But further up in that paragraph the conclusion is stated:

> That AIRAC failed to appreciate need for objectivity of the question of pre-existing views held by those responsible for the tests.

Not that certain members of AIRAC, not that certain individuals associated with AIRAC, may have held those views, but AIRAC did.

Mr President, a number of members of AIRAC gave evidence to this Royal Commission over the period from when the terms of reference which became AIRAC 9 were drawn up, and AIRAC personnel has changed. There has been in relation to the majority of AIRAC no seeking out of their views, no interviews.

It is a complete overstatement of the position concerning AIRAC to have that expression there or for the commission to find that there is no evidence on which that can be based as the great majority of AIRAC were not interviewed.

There may be views that can be expressed about the evidence of some member of AIRAC who came before the Royal Commission, but certainly it is not something that can be said to characterise a group of scientists as a whole without having had the evidence before the Royal Commission for that to be found.

THE PRESIDENT: Mr McCarthy, the opening page of the AIRAC 9 document makes it clear that all of the then members of AIRAC accepted responsibility for this report. Now, Mr McClellan's formulation in the sentence you object to does not make any reference to people who were not then members of AIRAC but who subsequently became members of AIRAC. Is it necessary to interview a bundle of people who put their names to a report to find out whether they individually agree with it or not? They committed themselves to the report and they had every opportunity through you to put their comments. In what way have they been unfairly dealt with in that submission?

MR McCARTHY: It would be put in two ways. If first of all, Mr President, you look at the bottom of 16.9, there is a characterisation there that can be read as a characterisation of AIRAC as a whole having some conscious preconceptions. Certainly there can be various strong opinions about what is in the AIRAC report but, to take the criticism further in relation to a series of individuals, Mr President, it is submitted that, without that being put to the individuals, it is unfair and certainly not something that would be open to the commission on what is before it. It is not that the report cannot be attacked. That is not submitted. It is only that the nature of the submission that is put forward is far wider than anything to do with the report itself and there is in relation to AIRAC, since the matter of final submissions, evidence and so on that is also before the commission, the fact that there are persons involved with AIRAC who were not a part of AIRAC when the terms of reference were issued in 1980.

What is basically being put, Mr President, is that those circumstances should be matters that are considered when any final view is taken of involvement with the report, with its opinions, and with the general remarks that are to be made in what would be an important and historical document of a group of scientists. Certainly they can be attacked for what

has been written, but to take it further than that, it is submitted is entirely inappropriate.

In relation to Dr Watson and what is submitted in (e) concerning his approach, it is submitted that the Royal Commission would not accept findings concerning, or not make findings concerning, his lack of scientific integrity and impartiality, with the circumstances of his role with this, in fact the evolution of the terms of reference and his attempts to deal with them particularly as contrasted with the facilities and resources available for the Royal Commission, would be matters that the commissioner would take into account in this matter.

The final submission concerning the integrity of the report as a whole would be this: the most general conclusion that was in AIRAC 9 was 1.21. That conclusion, which in the final submission has been somewhat modified for the work by Moroney, that conclusion has not been attacked or addressed or criticised by counsel assisting in any way. It would seem to be, in AIRACs submission on what was available at the time, an appropriate conclusion. AIRAC believes that the rest of the conclusions of counsel assisting in that regard point to the credibility of that conclusion and, in those terms, to the overall thrust and credibility of AIRAC 9.

Such a conclusion as wasstated in 1.21 3 years ago would it be submitted, and it is submitted, most probably the conclusion perhaps better expressed, but certainly moving in the same direction, that is a conclusion that would find its way into the royal commission's report and certainly we would submit has found its way into the final submission of counsel assisting the royal commission. But such a conclusion, the question of credibility, we would submit, takes on a further prospective and a wider prospective, and it should be from that position and the valuation of the terms of reference and the way that it was approached, that the royal commission would judge AIRAC.

Unless there are other matters with which I can assist you, Mr President, they are the submissions for AIRAC.

THE PRESIDENT: Thank you.

MR McINTYRE: Before you adjourn, I was in error. The evidence clearly shows Mr Moroney acknowledged he was aware at the time, shortly after the Tadje event, of the cobalt in the bomb. There is page reference here.

THE PRESIDENT: Who is next?

MR JAMES: Mr Mildred and I were going to sort out the order between us, but whatever that order might be, if I could use the remaining three minutes to outline those areas I will be addressing and they may be of assistance to the commission, bearing in mind the task in front of me.

I propose to say nothing about the ANVA New South Wales submissions. I propose to say nothing about the ANVA New South Wales written reply to submissions, which it was intended to pass up to the commission, except to say this, I see no necessity for me to embark on a personal defence of myself, and particularly in light of the allegations made against me.

There is nothing I wish to say about the submission Mr Eames will make on behalf of the Aboriginal people and individuals. Nor is there anything I wish to say in relation to the submission made by Anver Queensland. It speaks for itself, and indeed it corroborates a great deal of what has been put forward on behalf of participants.

I do not wish to make any comment about the submission of the United Kingdom veterans. Mr Mildred

will cover that. I wish to be very short about AIRAC, and I can do that in a few light references that would assist the commission. These are taken from AIRACs own submission. Firstly at page 3.5:

> Senator Carrick made it clear that the AIRAC report should be written in language readily comprehensible to the lay reader.

And AIRAC endeavoured to meet those requirements. Omitting the next sentence:

> However the report AIRAC 9 was intended to be the final expression of its opinions and to be intelligible to a lay reader. It was not a scientific document prepared for scientific review in the scientific literature, it was in our submission intended to persuade the lay reader that there was no substance and no necessity to investigate serious allegations.

The close of that submission contains a paragraph at 11.3:

> Thirty years ago an atmospheric test programme for nuclear weapons was accepted by a vast majority of the Australian public. Now it cannot. Would it be fair to castigate the men of 1955 for offending the mores of 1985.

It appears that what AIRAC has sought to do now by AIRAC 10 and by AIRAC 9, working backwards, is to embark on such an advance.

There are other matters referred to in the submission, in particular concerning the use of the word evidence, and the phrase there is no evidence, which came to light again today. I must confess that in one sense AIRAC deserves an apology. I understood that phrase would not be used in that sense by lawyers, and may I, following the luncheon adjournment, take the commission to the submission by the United Kingdom government, in which it appears the same phrase was used.

MR AULD: I must say it was used deliberately, having regard to the investigations of this commission.

THE PRESIDENT: We will adjourn until 2 pm.

LUNCHEON ADJOURNMENT

MR NASS: I appear for the Australian Nuclear Veterans Association, New South Wales branch. I distributed 15 copies of my client's reply to the other replies and I will just be tendering it, Mr President. I make no oral submissions.

THE PRESIDENT: RC877.

MR NASS: That is all, Mr President, thank you.

MR JAMES: I have said what I wish to say about that document. Prior to the luncheon adjournment, the question of the language of AIRAC 9 had been raised. I have said what I wanted to say about AIRAC 9 itself, and would recommend to the commission what I wish to say to the commission the finding they should make in relation to that document. When I did so, senior counsel appearing for the United Kingdom raised the language of AIRAC 9 and its adoption in the United Kingdom submission concerning a number of matters which have been the subject of evidence, I gather it is contended which have not been the subject of evidence before this royal commission.

Might I in those circumstances take the commission to what is said in the United Kingdom submission first, and particularly what is said in that submission at the introduction, which commences at page 2. At 1.3 of that submission (a) and (b) appear the propositions:

> That full disclosure in the form of documentary and oral evidence given by the Australian, United Kingdom governments and others, should produce . . . . . on the contrary the weight of the evidence is that no harm has been caused.

Then at 1.3(b):

> Equally there is no evidence that anyone involved in the conduct of the tests has been harmed by them . . . . . strongly points the other way.

I apprehend from the whole of the United Kingdom submissions that the words "all those involved", are not to be taken as including the evidence given by participants, servicemen and civilian personnel through the test, and indeed their evidence is in effect to be ignored for the purpose of assessing the contentions the United

Kingdom government would wish to make.

The phrase "there is no evidence that anyone involved in the conduct of the test has been harmed by them or their aftermath", I will submit are ambiguous at best.

Indeed, what appears to be contended is that unless affirmative evidence can be produced that a particular cancer or stochastic effect of exposure can be proven on the simple standard at least, if not beyond reasonable doubt, and notwithstanding the references made in that submission to the statute of limitations, then this commission should adopt the Scottish practice and find a verdict of not proven.

Our submission to this commission is that this is to fly in the face of the vast mass of testimony that has been produced, both by the participants and by scientists as to risk. It is not possible by the very nature of the ailments referred to to show that an individual ailment is specifically related to a particular exposure, and we do not suggest that the commission should seek to undertake such a task, but we do submit to the commission that the language used here, just as the language used in AIRAC 9, is rather to obfuscate the point in issue rather than to assist.

Might I take the commission next to what is stated in that further portion of the submissions of the United Kingdom in introduction, to page 7 paragraph 1.13:

> In the result the only area of inquiry for this commission in this respect - - -

and the respect that is spoken about is low level ironizing debate and its reflection in the recommendations of the ICRP:

> The only area of inquiry . . . . . were applied in practice.

We would certainly accept that it is a material matter for this commission to consider the application of those standards of practice. We would in addition submit the proper way to go about that is on the oral testimony of those who proffer themselves for cross-examination and who were not cross-examined or who, after cross-examination, retain their evidence as unchallenged or uncontradicted. That applies to

the vast mass of participants who gave evidence.

The United Kingdom chosen to refrain from coming forward as a party before this commission for a very lengthy period of time, although an intimation of a willingness to seek leave to appear at some later date was made quite early in the proceedings while many of the participants were still giving evidence, but chose when it was a party to cross-examine a little and in some instances not to cross-examine at all. For it now to suggest that the evidence given by those persons should not be accepted when it has been given on oath, is, with respect, to put forward a submission the commission would not adopt.

If I might take the commission to the summary of the submission which commences at page 11, chapter 2 at paragraph 2.7, there appears at page 12:

> The United Kingdom planned and organized all the tests and minor trials in such a way to ensure the safety of those involved in the tests and trials.

We would not contest that there was planning designed to avoid risk where possible, but at the same time that submission, in our submission, is far too wide and takes no account of the inevitable break down in plans and no account of those matters for which plans were not adequate; in particular the exposure of the air crew at Hurricane and Totem, and the exposure of the ground crew.

At paragraph 2.8 there is a statement which generally seems to be, as it were, a gloss on what has already been said about there having been no evidence, that is:

> The wide-ranging and detailed investigations of the royal commission show that no one in Australia has been harmed by the nuclear tests and minor trials.

As far as that goes, in particular cases that statement may be unexceptional. However, when it comes to looking at the totality of those exposed and at the probability that a number of them have sustained harm or injury, in our submission that statement should not be accepted. It seems to take refuge again in the stochastic nature of the ailments.

At paragraph 2.14 appears the proposition - in every test and minor trial careful provision was made to record the level of exposure to external ionizing radiation of every individual likely to be exposed. Certainly the various radiological safety orders and regulations made that an essential requirement of what was done. However, had we now been given the carefully recorded levels of exposure such a paragraph would entitle us to expect, it might be that there could be no quarrel with this paragraph. The commission is well aware of what we have been given instead, and by that I include not only the participants but in addition the commission itself. What we have been given are two documents, RC576, and taking the blue book and its front page, it makes clear just how useful it is as a dose record, that is, reading from portion of it:

> The information available was sparse, of very varied quality and often ambiguous or indeterminate. This document and any entry or lack of entry or of information therein is not and does not constitute and may not be construed or implied to be a formal summary record, a mandatory record or other record of individual doses or of exposures to ionizing radiations.

It cannot be said, in our submission, that the United Kingdom has put before this commission a dose record, nor can it be said there has been compliance with the radiological safety orders and regulations and, in our submission, when it comes to consider paragraph 2.14, whilst that may have been the intent, what we now have does not allow us to conclude that it was carried forth into practice.

At paragraph 2.15 we point out that what is said there is based upon there being available a dose record. What we have, in our submission, is not a dose record. At paragraph 2.16 there is again this reference to the question of the production of evidence of injury to health resulting from tests or minor trials, and then comes the statement:

> Where it has been possible to check allegations that exposure to ionizing radiation has caused injury to health, they have been shown to be unfounded by medical or other evidence.

That is not particularized and, indeed, not particularized throughout the submission. In our submission,

it would not be accepted. In additon, such epidemiological study in Australia as there has been suggests there are no grounds for concluding that Australian personnel who participated in the tests suffered any significant adverse health effects.

We accept the limitations of the Donovan study, the health survey, but the commission will recall that in re-examination counsel assisting at the conclusion of that study and, of course, Dr Donovan was present for cross-examination by the United Kingdom also if that had been sought, the question arose of the calculations of those health effects thought to be significant which could be attributable to chance, and following on the recalculation, what the commission can now conclude is that there are a number of significant adverse health effects in the test exposed population which cannot be attributed to chance. We put it no higher than that because I cannot take it further to show cause or lack of cause. However, we would ask the commission in evaluating what is put in paragraph 2.16 to consider what the evidence is.

The submission turns to a special section, chapter 3, the Royal Commission's hearing, and I am not going to seek to take the commission to all of that in great detail but I will take the commission to some portions in it since implicit in it is a criticism, or explicit perhaps, I should say, is a criticism not only of the commission, not only of the president and not only of counsel assisting, but it seems to be of more wide-ranging import to criticise Australian involvement in this commission.

Firstly, at paragraphs 3.1 to 3.4 is reiterated the total co-operation of the United Kingdom government. In our submission, this commission would not be satisfied in the manner in which co-operation has been effected, that the United Kingdom government has co-operated with the commission unreservedly and, indeed, contrary to what is said later concerning the production of documents and reports in London in an orderly manner, we will submit instead what occurred was the production of documents and reports in such a fashion as to afford quite some considerable degree of disadvantage to those who sought to use them. I note, of course, that the dose records as far as the participants are concerned, or those documents that might be called dose records, are still in a position where they will not be made available to those appearing for the participants.

Perhaps there is no necessity for me to refer to the balance of that material since there are undoubtedly matters to which the commission and counsel assisting would have to take themselves. Could I say in relation to what appears concerning Hurricane, particularly at page 62 paragraph 4.73, this by way of illustration - reference is made there to no ICRP guidance for permissible exposure to members of the general public at the time of setting the radiological safety order levels for Hurricane, and there is an argument put forward that the appropriate levels were occupational exposure limits as defined in the ICRP recommendations. Our submission to the commission is that unless the ICRP figures are accompanied by the health protection and monitoring standards the ICRP set forward, it is of no real assistance to say that the figures used corresponded with ICRP. Indeed,in the absence of proper dose records, they being in our submission one of the most essential bases of any proper system of radiological protection, it is not possible to draw a general conclusion that the ICRP recommendations were observed in the radiological safety orders in the Maralinga range safety regulations in practice, and it is the observation of those matters in practice that most concern those for whom I appear.

There is the general conclusion this can be found with any of the tests within the submission at paragraph 4.147, that there is no evidence that Operation Hurricane has caused or will cause any such death or effects. That submission is again put forward, no doubt, relying upon the fact that it is not possible to prove in an individual case a cancer or stochastic effect as resulting from a particular exposure.

At paragraph 4.152 there is a general submission though contained within the Hurricane portion. It reads:

> As already indicated in chapter 1 of this submission, it is impossible within the framework of this inquiry to test the allegations made by some witnesses that they were not subjected to such control or that they were able to bypass it. After 30 years it would be difficult enough in ordinary civil litigation, hence the practical need for and fairness of the statute of limitations.

Perhaps that submission speaks adequately for itself rather than for me to have to pass comment on it,

but I can indicate this - at paragraph 1.15 the United Kingdom submits this:

> In the course of the inquiry many detailed allegations have been made against the United Kingdom and Australian authorities, particularly in connection with the enforcement of standards of safety at and after the tests and in connection with the security of the ranges. The United Kingdom has attempted to investigate some of the more lurid allegations which have attracted particular attention. These are dealt with in the appropriate sections of this submission. As will appear, when it has been possible to check them against records of the time or through the evidence of others, these allegations have in the main been shown to be unfounded.

I take it there the reference is only to those lurid allegations it has been possible to check:

> But in general it is impossible to investigate and produce evidence so as to refute or confirm as appropriate each of these allegations. Most of them relate to matters over 20 or 30 years ago and could not properly be tested now in individual civil proceedings. The commission is certainly not equipped to make findings on them.

May the commission please, our submission on that aspect is as follows: sworn evidence has been given by participants who have exposed themselves to cross-examination. The radiological safety orders invariably require there to be kept proper records. If there is now some lack of resource in the United Kingdom, it arises solely because of a failure to do that which the orders required. If there is now sought to be based some challenge on the sworn evidence of the participants laying in the inadequacy of United Kingdom records, in our submission, the commission should accept the sworn evidence. It simply boils down to the proposition that if there are inadequate work records, if there are inadequate records of administration, if there are inadequate dose records, that should not deprive the commission of the power to make a finding and the basis to make a finding. That itself should support the finding we would urge the commission to make.

At paragraph 1.16 there is a concession that there are individual cases where the arrangements

did not work, but there is no evidence that harm resulted. In our submission, there are certainly individual cases where the arrangements did not work, and these individual cases have come forward and given evidence to the extent of some hundreds after a lapse of 30 years. This gets beyond the odd isolated occurrence, in our submission, and reaches instead a massive testimony that produces a conclusion that except for particular times in which there was particular concern it could be thought that those scientists charged with administering the tests were more concerned with their scientific endeavours than regulating the activities of young and somewhat undisciplined servicemen.

In our submission, the commission should make a finding that goes considerably beyond individual or isolated cases, although it would be possible to narrow the general areas in which such matters occurred to specific areas, the commission should find that there was in relation to those specific areas a disregard of the radiological safety orders.

At page 102 there is the discussion of the Koala incident and at paragraph 404 point 181 on that page there is the statement:

> Apart from a few clearly fanciful claims . . . . . or fall out from the explosion.

I gather that the words are chosen carefully so as not to refer to those that are subject to exposure through contamination. I should in relation to both this portion and also the later tests not pass without identifying a statement made concerning dose exposures in the submission again and again. An example of it appears at paragraph 4 point 175, the table which has been set out from Mr Saxby's evidence detailing dose levels where it is said "from the unchallenged evidence of Saxby on these readings" - and that phrase occurs again and again in the submissions, and indeed the evidence of Mr Saxby was unchallenged at the time at which it was given and unchallenged by me as to the various dose levels and what Australians experienced them. There was a very good reason for that. It was not until many months later, many calls for assistance later and many promises later that the listing of summary information with the names blocked out, exhibit 576, was made available to us at such a time, in our submission, as to make it useless to challenge Mr Saxby and as to make it useless for us to attempt to obtain information from the individuals whom we could attempt to identify from the sanitized document. Any suggestion that because of counsel's failure to cross-examine Mr Saxby about the various levels the commission should draw some conclusions in favour of the United Kingdom is to be met by the conduct of the United Kingdom during the continuance of this Royal Commission which made it impossible for there to be any challenge.

If I might take the commission to the general conclusions for Operation Hurricane at page 108, heading Summary, paragraph 4 point 202. The commission will note in C(ii) on page 109 no mention of - and also in E, execution of the test - no mention of the evidence that was given concerning the dropping of the normal limit for servicemen although that was an integral feature of the plan, and the conclusion at paragraph 110 concerning the air sampling exercise by RAAF Lincolns.

The evidence, including that from the RAAF medical services, shows that there was no harm to RAAF crews or ground staff involved. That is apparently a reference to a document in which Air Vice-Marshall Daley had been given an assurance

by somebody unnamed that no harm had been occasioned. It cannot be said that that document represents any positive allegation on behalf of the RAAF that there was no harm involved since it is patently clear from the RAAFs position they had no knowledge one way or another.

If I might take the commission now to what is said concerning Totem. There is a discussion at paragraph 5 point 101 to 5 point 105 of the evidence of Stewart concerning the radiation hazard group and in particular, in our submission, this entire portion illustrates a point of view common to the entire submission. It can be seen that there there is contrast between the evidence of the participant - this is at paragraph 5 point 102 - who gave evidence:

> That within hours of . . . . . .
> . . . remember ever seeing a control point.

Then comes the statement:

> It is very difficult to reconcile this witness's . . . . . .
> rejected as mistaken.

When regard is had to the evidence that Stewart gave it can be seen he gave general evidence as to the adoption of safety precautions rather than attempting to deal with specific situations. In our submission there is no reason to reject that witness's evidence in the light of what Dr Stewart said. To do so would be to commit the logical fallacy of attempting to deny the particular by referring to vague generalities. A similar generality can be found in the last sentence of paragraph 5 point 103:

> In cross-examination Stewart confirmed that . . . . . they would have been trained.

That passage gives one no comfort for the view that in fact individuals were trained, it expresses merely the general hope. I might say it states rather badly what appeared at page 188 in paragraph 5 point 108 concerning the necessity for supervision of RH5 when conducted by Australian servicemen:

> On the whole the men carried out well . . . . . tasks on their own initiative.

At paragraph 5 point 117 under the heading Dose Data appears the following:

> For the Totem trial itself as opposed
> . . . . . certain qualifications.

And then appears reference to the exemptions, RAAF air crew at Lincoln and the fact that the data do not include those Australians present at Totem who had film badges but who had no indicated exposures above the measurement threshold. Leave aside the question of whether or not the badges were developed, which is not referred to in the submission at all, for those who went it was not expected they would undergo significant contamination. At the same time this is again material that cannot in any way lead the commission to make individual findings. Apparently all that is produced is sought to persuade the commission that if one takes the doses as it were in a lump and divvies them up amongst the various personnel one could reach the conclusion that there would not be a safety problem. And one can see in the following page that:

> There is a breakdown of dose by
> number in a gross fashion . . . . .
> . . . . . defined lower integrated
> dose.

We would ask the commission to compare what appears there with the list of Australian doses obtained by Squadron Leader Thomas and in passing we would note that one of the matters which for the participants founds a serious criticism of all the tests is that Squadron Leader Thomas apparently off his own bat because he had seen the care with which the United Kingdom were treating their personnel decided to embark on the keeping of a dose list for Australian personnel. That of course was not done after the Totem explosions but it seems as far as the Australian government was concerned the entire question of dose to its own nationals and participants was left either to what Squadron Leader Thomas did or alternatively to what was done by the United Kingdom, and we have addressed that question in our written submissions.

We would ask the commission in relation to paragraph 5 point 125, part B on page 198. to contrast the oral sworn evidence with what T3/54 records concerning Australian ground crew that decontaminated the Canberra in Operation Hot Box.

In relation to air sampling that is dealt with in a submission at paragraph 5 point 127 and

onwards, and the general account appears at paragraph 5 point 130 and thereafter onwards. Indeed it is conceded here that it just simply did not occur to anyone, notwithstanding what had happened at Hurricane, to produce proper monitoring facilities for the air crew. The commission has heard much about that and I do not seek to take the commission to that in great detail except to indicate this: often enough in the submission there is reference to Captain McMichaels from the United States Air Force who had flown 25 prior services through atomic clouds.

We have heard the evidence given as to what the experienced Americans said about the contamination not of the aircraft closest to the ignition point but to the aircraft most heavily contaminated which had flown from Richmond, landed at Williamstown and eventually returned to Richmond. The anomaly that that aircraft remained the most heavily contaminated and the reactions of the United States Air Force experienced personnel sit very badly with what is said to be the reassurances that can be gained from AWRE personnel.

In our submission the commission is not in a position to find that doses for the air crew were negligible, and indeed there is no real material on ingestion at all except that which is referred to in this submission where it is suggested at paragraph 5 point 145 that it would be reasonable for the commission to infer that these men suffered not from ingestion, since they would have noticed grittiness in their sandwiches and would have undoubtedly given evidence about it had that been the case. That appears at page 211 5 point 146. I am sorry, there are two paragraphs 5 point 146. The one commencing at the top of the page is the portion to which I refer. In our submission that submission need only be spoken aloud to expose itself as being inadequate in basis.

The anomaly concerning the contamination of clothing for the T2 crews yet no film badge or dosimeter reading, received scant attention in the submission, although at paragraph 5 point 137 there is reference to the clothing being set aside for burial.

The blood tests are discounted at paragraph 5 point 138 on the basis of apparently that all of those with funny blood counts must have been passing around some sort of infection. Could I commend to the commission that one other cause has been advanced which seems much more probable. Working

on the analogy of the grittiness explanation advanced earlier, since there has been no evidence of some such infectional flu, why not look at what we know was there, and that is exposure to a source of ionising radiation. Mr Auld does correct me. He does say he does raise the possibility of radiation in the last few lines. He does at paragraph 5 point 138.

I think he mistakes my submission and my submission is why bother looking at infection as a possible cause at all. There is one clear cause that is there.

On the question of whether there were dosimeters at Totem 1, whether there was oxygen at Totem 1, the evidence speaks for itself. In our submission one cannot put either Group Captain Wilson's recollection, which is in our submission faulty, or the documents, or the existence of orders that oxygen be worn, up against the sworn evidence of men who say they did not wear oxygen, and indeed we point to that as an example. It cannot be said that because there is an order that people do or avoid doing things they will not be done. The mere existence of a regulation in itself unless properly supervised at proper times does not protect one against harm.

At paragraph 5.157 there is reference to the ground crew being told not to wipe their hands or overalls across their brows. The conclusion from the existence of that injunction is that it is unlikely for ingestion radio activity to have occurred. If anyone has seen mechanics working on a car, it might be all very well for the wives to tell them not to wipe things with their overalls, but the plain commonsense factual proposition is that every mechanic in the heat does exactly that.

Some reliance, for a purpose I do not really understand, seems to be placed on a comment by Group Captain Colhoun at paragraph 5.166:

> Secondly and related to the above the question was raised whether sufficient precautions were taken . . . . .
> . . . . . on the procedures.

Leave aside whether Group Captain Colhoun is expert or not. May I take the commission to the last portion of what is said there:

> But there is a possibility that the ground crew . . . . . .
> is the reason for our precautionary measures.

In our submission the portion cited would hardly lead one to confidence that those persons would nct suffer some discomfort, and "some discomfort" is either a very poor choice of language or alternatively indicates how little Group Captain Colhoun could be relied on for the medical consequences of ingestion.

If I might take the commission now to page 409, that dealing with portion of the indoctrinee force or alternatively the support group to the indoctrinee force during Buffalo, at page 409 paragraph 8.90 there is reference to the clothing trials. In our submission we have already referred to these trials and I will not reiterate what appears there. But, here, it seems to be justified, or the presence of the individual seems to be justified, on the basis they were volunteers.

The commission would be aware there are various classes of volunteers: those that come forth knowingly and actively, and those who are asked to take a pace forward. Then again, there are those who are simply detailed. In our submission the evidence establishes that those who embarked on the clothing trial were hardly volunteers in the first sense, may have been in the second sense, but were more likely in the third.

The conclusion that the protection afforded by the clothing was shown to be perfectly adequate may well be so in relation to beta radiation and in relation to gamma. The question however arises: what about inhalation and ingestion? In the portion Preparations and Training for Health Physics Control at paragraph 8.231 it can be seen there were here, as there were at Hurricane and as there were later for the ARDU, a series of lectures and courses for the officers. This contrasts remarkably with the education given to the men on the ground. We point to that merely as indicating quite clearly that there was a lack of, a general lack of, education amongst the men.

At paragraph 8.27, the concession that the film badges were not developed at the end of Buffalo but were left for the Australians to develop appears. At 8.275, page 457, and in the conclusions at page 465, paragraph 8.30, appears the conclusion that the radiation risks incurred were negligible. Again that appears to be based upon population data of Mr Sutton. At page 467 under the portion of that conclusion referred to as the Working of Health Control, Safety and Security Procedures, there is a statement that we would submit the commission would not accept:

> The arrangement that the safe conduct of the tests and controls of entry to the range afterwards . . . . . no person was exposed to a dangerous level of radiation.

That again appears to be entirely based upon what is said to be advanced as recorded doses. In our submission it certainly cannot be accepted in the broad terms in which it is put forward.

At page 556, paragraphs 9.242 and 9.245, there is reference made to the exposures. In particular, after round 2 there is reference made to the exposure of Smith. It appears to be suggested that in some manner Smith created a situation in which he received the dosage. When it comes to turn to the submission of counsel assisting, which suggested Smith was one of two persons who were volunteers, I will have a short comment to make; but our submission would be that it matters not if he volunteered for the task in question because that is quite patently a situation which he came to risk through an unforeseen event which had nothing to do with his volunteering.

At page 570 paragraph 9.291 there is the heading Execution of the Tests:

> The tests were conducted according to those plans and there was no danger to the participants.

In our submission it is again an unacceptable use of language, as would be also that portion at page 572 paragraph (d), Security of the Range:

> There is no evidence that anyone, whether authorised to be there or not, was exposed to danger during the series or on subsesquently entering the range harmed by exposure to radiation.

The submission has moved, I might say, considerably in language away from the question of whether people were or were not harmed, to whether there was ever any danger. It is incontrovertible at times there was danger.

In the postcript to that submission appear some general remarks sought to assist the commission. These again reiterate those matters to which I have taken the commission already, that is:

> The commission's investigations do not show that anyone in Australia has been harmed as a result of the nuclear tests or minor trials:

page 714, postcript number 9. It is to be noted that the purpose or the modern-day purpose of radiation protection appears at paragraph 7. It is expressed in this form:

> Radiation protection today is concerned to safeguard people while allowing the activities from which exposure might result.

With respect, as a proposition applicable to broad activity where the cost benefit analysis has been undertaken, we would not disagree with that; but, if it is meant to suggest that one simply nominates a task and the task must go ahead anyhow, we would say that really it may be said that proposition embodies what occurs during the test.

At page 715 paragraph 16 appears the following proposition:

> Some exposed participants did not accept that the stringent radiation protection measures . . . . .
> . . . . . is to report later this year.

That is the conclusion of the submission. It sits ill with protestations that no harm was or could have been caused to suggest that this commission should make any finding unless there has been a statistical study that produces material to corroborate the evidence that was sworn to by the participants.

Indeed, inherent in that paragraph is the concession that there well might be persons who will appear on a statistical study to suffer the effects of these tests and that in those circumstances what should be done is to defer a finding by this commission until after the NRPB studies. We address that in the submission. Leave aside anything else; it is practically useless for Australian participants.

Might I turn to the submission of counsel assisting. At page 1.3 of that submission in the final paragraph counsel assisting enters a caveat that the submission is not as comprehensive as he would have desired and in particular that he looked for assistance from veterans groups for the analysis of evidence of veterans. In that regard we accept what he says in his conclusions and indeed in the entirety of his submission to have been tentative and indeed to have been expressions of view against which have to be contrasted the sworn evidence of the participants. I should say at page 4.12 and subsequent is reference to the blue book and the histograms derived from the blue book. We caution counsel assisting in the same terms as the blue book itself does, that it is not a dose record. The information is sparse. I need not repeat the words. But it is not even any other record of any other doses or of exposure to ionising radiation. So in our submission that which is derived from the blue book is of little assistance insofar as it points to the safety of participants.

At page 5.15 and subsequent are derived various propositions concerning contamination rates of the Lincolns in Operation Hurricane. As to those and as to what is derived also later in the submission concerning Totem, as to what was said in AIRAC9 and as to what is said by the United Kingdom, our submission is that all of what has been calculated in an attempt to define "dose" is predicated on an unsafe basis.

When one starts with the proposition that the only estimate that can be made is within some orders of magnitude of error, then little assistance can be gained in the future when it comes to deal with such matters as exposure to ionising radiation. In this context, particularly because one does not have any form of dose record of any assistance, one has anomalies here and there and has to really rely upon evidence of those who would be most concerned to ensure that as few consequences would attach to air crew exposure as possible. By that I do not mean that Mr Gale and others might be shadowing their evidence to substitute safety, but it is a natural human thing for all those involved in an unexpected and possibly injuring event, to play it down as much as possible and certainly for the safety and peace of mind of the air crew.

Pervading the attitudes of the time, as even Sir Edward Pochin has mentioned, was the belief in the threshold theory, an emotional belief at roots and not an intellectual belief, but nonetheless here, and it cannot be said in the light of accepted reaction that small doses of radiation were not really all that bad, that anyone would have made a great fuss over the air crew. But one can put to one side the air crew and examine the balloon breakaways. Later on in the series though they were, they produced a formal sort of inquiry. The exposure to the Australian air crew produced a flurry of correspondence and a report, and they kept on heaving sighs of relief that there could be no obvious effect manifested soon. There is Group Captain Colquhoun's reference to a possible lack of comfort in later life which seems to have been the attitude taken. In those circumstances when one looks at 30 years later and attempts to do retrospective calculations, it is not surprising that those calculations would in effect seek to reassure us of their safety.

At 5.38 there is a reference to Beck in the submission by counsel assisting, and again we gladly look to it for some assistance, because it appears that the evidence of Mr Nicholas has been almost entirely disregarded, and that is evidence which substantially confirms what Beck says.

At page 6.41 we point out that counsel assisting has been under considerable pressures, but we would have hoped for reference in his submission to proper dose records having been kept. It does not appear in the summary of the radiological safety orders as far as I can see, but I do stand to be corrected.

At page 6.60 and onwards appear the calculations concerning the Lincoln air crew, which I have already addressed. Might we suggest what appears at 6.62 also

appears in the United Kingdom submission concerning the unlikelihood of contamination coming into the aircraft because of the continuous flow of air escaping out of the unsealed outlets from Mr Austin. One hypothesis put forward is the Lincolns were very draughty aircraft. There is no reason if air could get in through the holes, it would not carry dust with it.

At page 6.67 there is a reference to the anomalous high reading of the clothing, and just in case this should be mistaken, let us make it clear what the evidence established is not 2000 counts per minute, but the full-scale reading of 10.21 monitor, which was 2000 counts per minute and they are two different things. For all we know that clothing, which it is suggested might have been contaminated getting out of the aircraft, may have been contaminated to a considerable excess of the maximum reading of that monitor, and there is no evidence to the contrary. The hypothesis that there were spots of contamination on the clothing which necessitated the clothing being taken away and buried, is one hypothesis advanced. There is nothing in the evidence to support it.

As to the ground crew, we commend to the commission the sworn evidence of those who have given evidence, including Mr Naggs, and their experience of decontamination of the aircraft or servicing of the aircraft.

I have already referred to the opinions of the United States Air Force personnel, and in our submission one of the most important matters to be said about the establishment of the Amberley centre is the inability of the Commonwealth now to produce the Amberley doses. They have been called for again and again throughout this commission. There seems to be no reasonable explanation for their absence. Whether one particular medical officer saw them is not to the point, the point is where are they.

At page 8.14 is reference to the support staff of the indoctrinees not entering the areas controlled by the scientific health, AWRE. It does appear from the evidence that certain of that support staff were used in the clothing trials and some have given evidence of entering the controlled areas.

At paragraph 8.15 is the interesting statistic, 92 witnesses gave evidence of being at the Buffalo tests, and only 26 did not complain of ill health. Unfortunately the entire succeeding portion is missing from the copy of counsel assisting submission that I have been given, because it then turns to air tasks.

MR McCLELLAN: There is an errata designed to help you with that, but there is something lost somewhere, I am sorry.

MR JAMES: In that case, in the event the commission should wish assistance on that matter which particularly relates to the sworn evidence of participants, as soon as I can have that, whatever it is Mr McClennan wishes to say, I can let him have a written submission in reply.

In the conclusions, page 8.29, there is no discussion of the implementation of safety as far it concerns participants. Our submission is, of course, that in those circumstances there should be a discussion in the commission's report. It is a matter in which there has been considerable evidence given that the participants were exposed in circumstances which could not ensure one of their safety.

If I could turn to the initial Antler, page 10.55:

> Working in forward area without protective clothing.

The veterans allegations are set out in a summary form. Our submission is that certainly there was extensive control of safety systems, but that should not lead one to believe that therefore it was difficult for personnel to be put at serious risk. The two do not follow, although they are expressed in that fashion in submission, and there is no basis in our submission, except for a hope of their safety, that it should be concluded that they were not exposed to where they have given evidence of hazardous exposures.

The reference to steam cleaning without respirators or where respirators were ineffective, raises problems that extend over the whole of the decontamination of the tests. In our submission to say that, however, in some situations the respirators were effective and practicable is a gross understatement.

At 1057 is an eight-line discussion on dust storms. We point to the royal commission that is the sworn evidence concerning the dust storms, it certainly deserves more of a discussion in our submission than this. At paragraph (iv) later down the page, is a reference to the Smith incident and also references to the allegation of Brindley. It can be said in relation to Brindley that he did what he did at Turner's behest after the range commandant had warned him not to seek further exposure. Than cannot be said in relation to the Smith incident. In our submission that sentence concluding the page:

> Either way the decision to exceed the recommended dose rate was that of the individual involved

is neither helpful nor precisely accurate.

At page 10.58, the paragraph concerning aircraft decontamination measures, appear the two paragraphs:

> On balance it seems that some of the procedures followed may have been . . . . . inappropriate to draw adverse conclusions without further evidence.

We say why. If there is sworn evidence with factual support, tested in cross-examination and uncontradicted, there is no reason why this royal commission should not make a conclusion in favour of the participant that gave the evidence. Things are not going to prove over the next thirty years to be any better than they were over the last thirty. We have now all the documents we can possibly get, so we have been told. Why not make a conclusion on that small material in the participants favour.

There is one matter in respect of which we say there is inadequate material, and this is at page 10.59. Here is the acceptance in the submission of counsel assisting of the need to know requirement defeating the proper instruction of other ranks, and the conclusion is expressed:

> However it appears universally true that lesser ranks were adequately educated . . . . . exposure from an atomic explosion.

Instead of a conclusion thereafter following that that thereby may have exposed them to hazards, the nature of which they may not have appreciated, what follows is this:

> This lack of understanding led to an exaggeration of the reasons in the minds of many who were involved both then and now.

In our submission the commission would not accept that statement because quite clearly the evidence establishes that at the time they disregarded hazards rather than exaggerate them.

Cobalt 60 is referred to at page 10.71, and the conclusion is expressed:

> The whole event demonstrated the safety problems which can arise . . . . or the British.

Might I merely indicate that Dr Stevens and Admiral Lloyd have expressed their view of the safety problems inherent on the finding of the cobalt 60 pellets by Mr Rickard and then their

picking up by a training team. We are not contending in the context of the perils to be experienced after an atomic explosion these perils were extraordinary. We are quite content to have them remain as perils of an atomic explosion. What Admiral Lloyd says is very sensible and we would adopt it as our submission.

We would not seek to deal with what counsel assisting says about AIRAC 9. In our submission the documents and what has been put by AIRAC 9 speak for themselves. We would adopt a great deal of what counsel says and indicate this, it is our submission, as far as AIRAC 9 is concerned, that this was intended to be a layman's document, it was intended by Senator Carrick that it be drawn in layman's language, and the course that was taken in drawing it was a course deliberately taken to reassure those participants who were known to be considerably disturbed over the health effects attendant on their exposure during the tests.

In those circumstances I have put to witnesses that it was a whitewash. We would ask the commission to accept that it was a whitewash, and in the strongest terms to censor those responsible for its production, particularly since it was required to be produced in order to explain to laymen what the circumstances of their possible exposure were.

In the general material, at the conclusion of this submission, appears a discussion of dose, and a discussion based on recent analysis setting out those who would be likely now to be at risk by reason of irretrievable consequences. Again in our submission that is all an inadequate basis, the basis being taken from the blue book, which we point out again is not a record of dose at all.

In our submission it is not helpful to the commission to try to turn that which is now produced, which by its own terms is not to be regarded as a record of dose, into a base for calculation of risk to the Australian community. The best that can be said is whatever appears in the blue book should set far and away the lowest limit of risk.

In the conclusions following at page 19 and onwards, we would urge upon the commission not to accept the last sentence of conclusion 10:

> It is unlikely that the dose exceeded the level of dose which others involved in the programme were authorized to receive.

We would ask the commission not to accept the narrowness of the last sentence in conclusion 16:

(Continued on page 10,174a)

In general the organization of radiation protection was well demonstrated, although it is likely that some accidents or isolated breaches of the regulations did occur.

(Continued on page 10,175)

It is our submission there is simply too much sworn evidence uncontradicted and acceptable for the proposition to remain that narrow. We would ask the commission in relation to conclusion 17 to delete what appears in the last two lines, that is to say, the reference to many who either were not exposed to radiation or received only a very small dose. It is to deprive the conclusion of a great deal of its significance. In our submission, paragraph 21 based as it is on the inadequate foundation is entirely inappropriate. As to paragraph 23, the Donovan report, whilst it cannot be relied upon as an adequate epidemiological study, it does provide a valuable indication of the existence of significant health effects not explicable by chance alone.

Paragraph 26, in our submission, grossly misstates the position, that is, firstly, there are not any dose records, what we have seems to be simply a summation of figures over a population rather than individual dose records. Secondly, they are certainly not totally complete or totally accurate if one takes them on their own face, even without regard to the sworn evidence. We do accept the last sentence of paragraph 26 but would submit it should be considerably wider than its reference to some persons.

Reference has been made to the Commonwealth Employees Compensation Act within this submission and also by Mr McIntyre. There are a number of problems with that act which is what has led the participants to make the submissions they have concerning the course that the commission should recommend. Firstly, whilst that act is technically available and its benefits are generous and, indeed, I am almost inclined to suggest that so is winning Lotto, though the chances of achieving that benefit are somewhat slight, the Commonwealth Employees Compensation Act is administered in such a way as to deprive the great majority of veterans of ever being able to have resort to its provisions. Firstly, these events took place at a time that predated the 1971 act. That act applies to health effects manifest thereafter. So that it may well apply to veterans who now manifest health effects. Those who manifested health effects before the coming into operation of the 1971 act are cast back on the 1930 act, which does not have the beneficial reversal of onus in such terms as the 1971 act has it.

Secondly, notice provisions are required under the 1971 act, and there is a limitation provision which prevents benefits unless notice is given

within quite a short period of time. It is of no use, of course, to those veterans who have died. It does require to satisfy the commissioner under that act that there be produced adequate reference, and I will take the commission in due course to the commissioner's statement as to how he administers the act, but not only does he seek records from the various departments but in addition to that he seeks advice from technical experts attached to various bodies, and in the context of this case this might well mean that advice is sought from precisely those persons who have come forward and been attacked in cross-examination. The question of the Commonwealth proving the contrary for an adverse health effect might well be met in an individual case by obtaining advice to suggest that the probability of, for instance, a cancer of the bladder, although the veteran was suffering from that cancer, is one in a million, and the commissioner could in those circumstances happily conclude against the individual veteran, thus necessitating an appeal to the Administrative Appeals Tribunal.

There is a delay on the part of the commissioner of many years in dealing with the 100 or so claims that have already been lodged, and I will take the commission to what he says about that by way of explanation. Claims cannot effectively be backdated and the act does not cover the exigencies of persons who are employed by contractors, as far as I understand it, nor the United Kingdom veterans resident in Australia. It is also an act under which there are no legal costs of any kind payable; the application is made by letter and investigated by the commissioner on such evidence as seems to him fit.

If I might take your Honour to the portion relating to claims of this kind referred to in the latest report of the commissioner. It appears at pages 18 and 19 of that report, and I understand the original of the report is available with the commission, indeed, I thank my friend, counsel assisting, for making this portion of it available to me.

The commissioner having referred to the existence of certain claims then turned to that publication on which he relied to establish the background of those claims, and that is AIRAC 9. Having turned to AIRAC 9 he indicated that the study was being undertaken by the Department of Resources and Energy coordinating investigation activities into claims. To 30 June 1983, 119 claims had been received. Liability had been found in six cases, including

one in which it was determined that the claimed condition was due to causes other than to exposure to radiation. 45 cases had been disallowed, and one claim was withdrawn. Investigations are continuing in 67 cases. As I apprehend it, those investigations are still continuing. There were 12 requests for review and, of these, 11 were applications to the Administrative Appeals Tribunal and one request for reconsideration to the commissioner.

The commissioner then sets out the statutory scheme and goes on to say at page 18:

> The practical effect of sections 30 and 31 is to shift the onus of proof from the claimant to the Commonwealth for those diseases which can be shown to be generally associated with certain types of employment.

That is what we had understood AG7 to be recognising, and that is what we still understand AG7 to be recognising, unless what Mr McIntyre said this morning is meant in any way to advise the commission differently. He then goes on to say:

> The office of the commissioner for employees' compensation deals with each case on its individual merits and has indicated that it will rely on specialist medical opinion to determine future cases as they arise, as has been done in the cases dealt with to date. It might also be noted the commissioner or delegate has both the power and obligation to satisfy himself that he has all the relevant facts before making a determination. The decision-maker is not obliged to determine a case only on evidence which is submitted by either of the parties, ie the claimant or the Commonwealth.

Such case could go on, of course, forever, and that is supported by what the commissioner then says in his last paragraph:

> The investigation of these claims is usually a protracted exercise due to the nature of the supporting evidence required and the difficulty of collecting such evidence. Assistance is being given by the Departments of Health Resources and Energy and Defence

in providing evidence on behalf of claimants.

If this royal commission is any guide to what has to be produced to obtain one satisfactory claim under such a scheme, it could be a very long while before any claimant receives any assistance under that act even with the reverse onus provision. It may be the commission will come to the conclusion that that act would be a satisfactory way of dealing with the claims of veterans. If that were to be the case, we point to these persons who would not be covered by it and would seek from the commission some machinery to turn the act into an effective source of redress, because as it stands at present it affords the participants little.

Might I in concluding commend to the commission certain portions of the written submissions on behalf of those for whom I appear.

THE PRESIDENT: Before you pass from the consideration of the submissions by counsel assisting, would you give me some indication of your reaction to number 20 on page 19.3.

MR JAMES: During the conduct of the commission we had not sought to deal with the wider issues affecting the population of Australia, having seen them as matters peculiarly for counsel assisting and for counsel appearing on behalf of the Commonwealth of Australia. Counsel appearing for the Commonwealth of Australia had not addressed that issue nor the issue particularly related to veterans. Our submission in relation to that is that it seems clear on the evidence that there could well have been a substantial number of cancers caused to the population in Australia; the number probably will never be capable of being fixed. This as an estimate, in our submission, would be rather low, and if it is in any way to be tested on the same basis as the estimate made of the number of cancers amongst the participants population, our submission would be that it is simply inadequate as a basis for defining the order of magnitude and the persons that could have been affected.

Unless there is any further matter on which I can assist the commission?

THE PRESIDENT: No, thank you, Mr James.

MR BIGG: As you are aware, I represent the Australian Nuclear Veterans Association of Queensland and Western Australia. I do not propose to go through

the evidence in any detail, I do not propose to take the other submissions which are relevant to the veterans case apart because my friend Mr James has done that save for one instance only, and this is on page 647 of the United Kingdom submission. It is paragraph 11 point 45 dealing with operations in a DC12 building at Maralinga, and it deals in particular with Mr Rickard's evidence. It says:

> Rickard alleged that during his period at Maralinga he helped an English chemist . . . . . as reported in T13/60 and T28/63.

That seems particularly important to my clients because throughout this commission the United Kingdom in particular has placed great reliance on the accuracy of the documents. Mr Rickard's evidence that he had to jury-rig breathing equipment is, in fact, substantiated by a letter from Mr Turner. Unfortunately, I do not have the reference with me, I believe it is in RC143, it is a bundle of documents, and I believe that may even be 2AWRE in which Mr Turner does describe the lack of proper breathing equipment and the fact that vacuum cleaners were used to provide positive pressure.

In the paragraph I quoted the United Kingdom refers to report number T13 of 1960 and on page 8 this report notes that self air sets were used, and it goes on to indicate they were ordered especially for this purpose from the United Kingdom. It would seem clear from that that at least in February/March 1960 when further removals were carried out at Maralinga, there were no self air sets, and in this regard Mr Rickard's evidence has been corroborated.

As I said, I do not intend going through the evidence, the royal commission has heard it all over many days and has to weigh the cogency of it. In weighing the cogency of the evidence of the veterans and the evidence against them, regard has to be given to the fact that as even counsel assisting the commission pointed out in his final submission, the ideal course would have been for this royal commission to gather together all the relevant documents and allow all parties to properly digest them before it embarked on the taking of oral evidence.

For a variety of reasons that is not possible and we do not quibble with those reasons. This commission had a limited life but it must be borne in mind that on many occasions documents were not able to be properly tested by veterans' representatives, nor were witnesses who gave evidence contrary to the veterans' case. In fact at times those proofing the veterans and even those examining them before this commission had themselves only the foggiest idea of the matters under consideration. This was in strict contrast to the detailed preparation and proofing of the witnesses from the United Kingdom. I do not mean by saying that for there to be any criticism of the legal representatives of the United Kingdom. The manner in which they carried out the proofing and preparation of their witnesses is obviously the proper way to do it and we are regretful we were not able to do the same job ourselves.

The submission of the United Kingdom amounts basically to a rehash of those T reports which set out operational plans for various operations. A lot of time is spent in the United Kingdom's submission in particular in setting out what should have happened at the various trials. What follows then is usually a fairly bland statement that everything went according to plan and often official dose records were relied upon to substantiate that.

This ignores the fact that much evidence before this commission has illustrated that those records cannot possibly tell the full story. For a start not all exposures were recorded. If they were recorded there is no guarantee that they found their way on to the serviceman's record, and even if they were recorded and did find their way on to the record there is evidence before this commission to demonstrate that the methods of dissemitry were not all that accurate anyway.

My friends from the United Kingdom have pointed out in their submission it would be impossible to test individual allegations made by the veterans to the effect that they at various times were not subject to proper health physics control, and this is certainly a proposition with which we do not agree. The commission has heard much evidence of the veterans that in fact this is what did happen and it is up to the commission to weigh the cogency of that. Clearly many veterans in giving their evidence were confused, they mistook dates, times, places. Over 30 years the memories of many veterans have been embellished. Ten years, ten miles may become two, the size of the blast will change. This does not suggest that the veterans were giving evidence dishonestly, it merely demonstrates the frailty of human memory and there is no reason to

suspect that such frailty does not also exist on the part of the United Kingdom witnesses.

We will not try to deal individually with the allegations that veterans at times were exposed to radiation. As Mr McIntyre has pointed out this morning the boundaries for contaminated areas had the habit of being moved as decay of the fission products and other radioactive isotopes reduced the levels of ionising radiation. Clearly many veterans were confused as to whether or not they were in fact in a contaminated area. However, many veterans have given evidence that they did in fact encounter ground zero and it was clearly identified by glazing on the surface and other indicia. This is evidence which by and large has not been shaken and if the evidence of the veterans that they encountered ground zero is to be accepted, then in our submission there is no reason why other evidence of theirs should not also be accepted, that is to say, evidence to the effect that they were in other circumstances also exposed to radiation.

The refusal of the United Kingdom to recognise the importance of this anecdotal evidence, and even at times to not recognise its existence, is disturbing and it is uncomfortably reminiscent of AIRAC 9. On numerous occasions in fact, as my friend Mr James pointed out this morning, the English submission lapses into the familiar formula there is no evidence that - and then whatever the proposition is. At one point in the British submission when discussing the fact that individual allegations of the veterans cannot be adequately tested after 30 years, it was suggested that this was a good reason for maintaining the law relating to limitations.

I find this somewhat disturbing. The law of limitations has been created to protect and unwitting defendant against an unscrupulous plaintiff. That is certainly not the situation here and we submit that the suggestion that the errors and omissions of those in authority which have allowed veterans to encounter ionising radiation with possible deleterious health effects, the suggestion that should be a good reason for maintaining limitations does not do the United Kingdom government any credit at all.

We could spend considerable time debating the precise levels of exposure and extent of exposure of veterans to ionising radiation but one thing is quite clear: that even if the level is increased many times or manyfold by factors of perhaps two, three or even more, the fact is they were still exposed to relatively low levels of ionising radiation by and large. There are some notable exceptions.

Indeed some of the submissions which have been tendered have in fact recognized that there were breakdowns in procedures and that veterans at times were exposed to levels but they then go on to say, so what. The proposition seems to be that the levels they were exposed to were so low as to be safe.

This royal commission cannot have failed to notice that the concept of a safe level of ionising radiation is one which has pervaded the evidence of many of the scientific witnesses, those who were in a position of authority at the time of the testing programme. This seems strangely at odds with the view which was invariably adopted by them that they had rejected the threshold theory and embraced the linear dose response relationship between radiation and injury with there being no threshold.

The evidence also indicates that frequently those in a position of authority were concerned mainly with reducing levels of radiation to a point below the standard set for the appropriate test series. This makes a mockery of the Alara principle. The principle that radiation exposure should be kept as low as reasonably achievable has been recognized as early as 1950 by the ICRP and indeed it was incorporated in one form or another into all trials and orders and safety regulations and yet the evidence is full of instances where veterans were gratuitously exposed to radiation, they were taken on sight seeing trips where their exposure was at best frivolous and at worst negligent.

There is no such thing as a safe level of ionising radiation and, indeed, Sir Edward Pochin in his evidence asserted this. He stated there was really no safe level and indeed the word safe should only ever be used with an appropriately responsible adverb. My friends from the United Kingdom in their submission picked up this point but then they apparently forgot it because time and again in their submission they referred to levels of radiation which were so low as to be safe or not dangerous, or similar words to the same effect.

We make no submission that iodising radiation is inherently evil. However, it is inherently dangerous even at low levels. Unfortunately, it has been recognized time and again before this commission that there is no way of distinguishing a radiation induced illness from one caused by some other harmful agent. The size of the effect, with respect, is unknown; that is to say the size of any harmful effects which will flow from a given population dose of radiation and all that is available are best estimates.

The figures are extremely rubbery because even the best estimates themselves are under attack. We heard from Professor Radford that the T65 dose figures for the Japanese data are themselves likely to be revised downwards with a consequent upward revision in the strength of the dose response effect.

The annals of science history are full of instances where over a period of time permissible levels of exposure to a variety of harmful agents, not only to ionising radiation, have been steadily reduced. This is a recognition that as our medical sciences, biological sciences develop, we are beginning to realize things are in fact more harmful than they first appeared. It may well be that in future years when the effects of synergism and other like effects are taken into account it will be clearly established that the veterans who participated in these tests even given the relatively low levels of exposure were at risk for significant health effects.

However, this commission must also recognize that the veterans will only get one chance and this royal commission is it. It will not do the veterans any good if in future years their case is substantiated if this royal commission does not now make the appropriate findings and recommendations. To merely state that in population terms the effect of a given dose of radiation will be relatively small ignores the very real cost to the individuals in which that community cost is crystallized.

My associations hold no malice and they hold no grudges. They make no judgment on the need for the tests or their utility. It is sufficient that the community of which they were a part derived a benefit, be it real or illusory, and that being so it is only just that community must bear the cost of those programmes. That cost can never be known but certainly there is no difficulty with the concept. It then becomes a question simply of deciding or trying to anticipate exactly what the community would regard as fair in relation to a claim by a veteran that his ill health now has been caused by his participation in the test.

There is no doubt ionising radiation is a dangerous thing and even the staunchest supporter of the nuclear programme would agree to that. It can be argued that where a dangerous thing is used and it causes harm to another then the user should be strictly liable for that harm. This concept is not foreign to our law and in fact it has been

recognized in many parts of the western world. The principles of Rilands and Fletcher involving the escape of dangerous products are well known. In this country the master and servant law is moving steadily towards strict liability and strict liability in tort for the manufacture and marketing of dangerous products was sanctified 20 years ago in the second restatement of torts in the United States and has now been adopted in virtually every jurisdiction in that country.

The problem remains though that even if the veterans were given the benefit of strict liability they would still have great difficulty establishing causation, and that has always been the nub of their problem. It is not the fault of the veterans they cannot show causation. If anything it must be the fault of those who conducted the tests. If the safety standards - with which we have no qualms, my clients believe that the standards were fairly enlightened by the standards of the time - if they had been rigorously applied at least it would have been possible to demonstrate that because there was no exposure to radiation then that could not be the cause of the ill health now suffered by the veterans, whatever other agent may be the cause.

The record abounds with instances of the inept and incompetent enforcement of the safety critera as regards to veterans welfare and we submit that it if is the case the veterans were exposed to relatively low levels and that was more through good fortune than good management, it was not because of those in authority but that it was despite them and there was a great deal of luck involved.

In deciding what the community will regard as reasonable it should be borne in mind that any compensation paid to the veterans will be paid by the government. The government is not some entity which exists separate from other individuals in the society and has the rights of a citizen. Rather the government of a country owes its very existence to those citizens that it governs and it ought have care and consideration in the way in which it manages their affairs.

This is when the activities of the government have caused injuries to any veterans. The government owes them the highest degree of compassion and consideration. It must also be borne in mind that any injuries suffered by the veterans are not the result of simple vicissitudes of life, but rather they flow directly from the negligent and incompetent application of the safety regulations insofar as they relate to veterans.

In the point of view of the individual's rights, it can fairly be said that the criminal law in this country imposes a reverse onus of proof on the Crown. Furthermore, the standard of proof is the highest known to law. The Crown must show beyond reasonable doubt that all elements of the alleged offence have been met. The philosophy behind this is that it is preferable to have 100 guilty people go free than to wrongly convict a single innocent person. Undoubtedly there are criminals wandering our streets free.

We submit that there will be no less a standard applicable to compensation which is to be paid to the veterans. The veterans are not criminals; they are people of good character, they served their country loyally and often under difficult conditions. They were prepared in the course of their occupations to risk their lives for their country if necessary and, indeed, many of them did see active service in various theatres. It is not the fault of the veterans that causation cannot be proved, but this commission must bear in mind that it can also generally not be disproved.

The Royal Commission should, as we have outlined in our submission, recommend a scheme of compensation in favour of the veterans. There should be a reverse onus of proof and it should go to both causation and to exposure. If it is acceptable to the community that 100 criminals are permitted to walk free rather than wrongly convict a single innocent person, then it must also be acceptable to our community that 100 veterans are mistakenly paid rather than to deny benefits to one veteran with a genuine claim. Thank you, Mr President.

THE PRESIDENT: Thank you. Mr Mildred?

MR MILDRED: Mr President and commissioners, I would, like the last two representatives of the veterans, like to begin by saying what I do not propose to discuss. You will be relieved to hear that the ambit of what I have to say will be restricted, since the interests of the British servicemen do not extend to several matters canvassed at very great length in the submissions that have been made in writing to you.

These matters include inter-governmental relations, the present-day condition of the firing areas and their future use, the extent and effects of continental fallout, and the exposure of Aboriginal persons in the community to radiological hazards.

Consequently I intend to say nothing about the final written submissions by the Commonwealth, AIRAC, or the Aboriginal community. This leaves the submissions of the other veterans associations of the United Kingdom and of counsel assisting. My clients wish to associate themselves with the submissions of the Australian veterans organizations except that of ANVA New South Wales. This is because we do not think it appropriate either to advance the constitutional point regarding the membership of the commission or to express an opinion about the quality of the evidence given by a particular individual without having had the chance to hear that evidence at first hand. Nor should my client wish to enter into a debate concerning the extent to which financial assistance has been available to parties or to the manner in which it has been shared out.

They, on the other hand, will remember the gratuitous assistance they have received from the Attorney-General's Department and contrastit with the gratuitous pleasure with which the then responsible British official in London was able to deny their request for financial assistance to be represented in these proceedings.

I should just note the reply of ANVA New South Wales, which we have been handed today, and in particular the comment therein that my clients submission contains an implicit plea for unilateral disarmament. May I simply say that is explicitly rejected. My association, no doubt like all the other veterans organizations, contains perhaps a measure of unilateralists, several multi-lateralists, and probably quite a considerable number who would like to drop it on a number of nations. I see also that we are branded as Marxists, but then there is Mr James, and the defence rests.

We do associate ourselves with the submissions made on behalf of ANVA Queensland and ANVA Western Australia with the exception, which I shall develop later, that we do not accept that any veteran's claim is statute barred. I shall do my best however not to waste the commission's time - - -

THE PRESIDENT: Do you say you do not accept the proposition that under the law as it is no veteran's claim is statute barred?

MR MILDRED: Yes, Mr President, either in Australia or in Britain.

THE PRESIDENT: That will be interesting.

MR MILDRED: I shall do my best not to waste the commission's time by duplicating the oral submissions just made on behalf of the Australian veterans associations. The United Kingdom Government in paragraph 1.3(b) of their submission asserted there is no evidence that anybody involved in the tests has been harmed by the tests or their aftermath, but rather that the evidence both of a scientific nature and of those involved in the tests points strongly the other way. Of course, Mr President, this is the crux of the whole matter from the veterans' point of view.

We say that scientific evidence in the context of harm occasioned to personnel involved in the tests can only mean evidence of doses sustained or likely to have been sustained. Evidence of those doses has been requested regularly and without respite from the beginning of the London hearings until the beginning of September. I am reliably informed that Mr James mentioned the subject once or twice after the Royal Commission's return to Australia.

Mr President, adherents of the cock-up theory of history will be amused to recall the outcome. My regular reminders to the authorities in London met with no response. On 4 September this year I telephoned the Treasury's solicitors office in London to check that no further information, or to be strictly accurate, no information at all, could be forthcoming. On receiving that assurance I knew my submission could safely go to press. But by the very next day, and indeed by the very first post of that day, there arrived the personalized dose records, served without caveat or disclaimer, of those British veterans who had both testified and waived their rights of confidentiality in respect of their dose records at the hearings in early January in London.

Worse was to come. On arrival in Sydney I learnt the same dose records of the entire British service population - even if in an anonymous form and hedged around by disclaimers so elaborate as to make me wonder whether one could ever contemplate buying a second-hand car from the British Government - which were apparently unavailable in London, but had been filed by the Treasury solicitor with the Royal Commission in Sydney.

THE PRESIDENT: A Leyland perhaps.

MR MILDRED: I do not appreciate the significance of that. Since you will appreciate, Mr President, there are no longer any left arms still attached to the British body politic, I can only conclude this was another case of the right hand not knowing what the right hand was doing. In any event the proposition

that no one involved in the tests was harmed by them simply cannot be supported. The dose records, however incomplete, however inaccurate, however partial, disclose a cumulative dose, which neither the British Government nor counsel assisting has sought to argue is incapable of giving rise to a measureable extent of cancer morbidity or mortality.

Whilst it is true that the scientists involved in tests did not leap to admit that harm had been caused to any of the participants, although we should say that those of them who are prepared to countenance as a reality the possibility that the implementation of the rules and standards on the ground was less perfect than that described in the T reports, were, by far, more plausible witnesses. A very considerable body of witnesses, both Australian and British, which set out to show that all was nowhere near as perfectly executed and free of risk in practice as in the orthodoxy of those in charge, these veterans, many of whom do not have doctorates in nuclear physics, gave evidence and, although taken in detail by counsel assisting, was not challenged by the United Kingdom by cross-examination.

This, in our submission, makes it all the more insupportable for the United Kingdom both to maintain that the oral evidence of rank and file servicemen is inherently less credible than the written evidence of management and to criticize the objectivity of counsel to the commission, in paragraph 3.27, for not testing the evidence of veterans telling lurid stories more rigorously. In paragraph 4.152 of the United Kingdom submission it is said to be impossible within the framework of this inquiry to test the allegations made by some witnesses that they were not subject to health physics control or that they were able to bypass it. This of course on one level is true but the consequence is not that the evidence should be discarded but rather, in our submission, that the evidence be given such weight as the commission thinks fit.

Our view is that the commission should not side, nor would it wish to be seen as siding, ipso facto with the generators of paper reports rather than those servicemen charged under military discipline with the task of getting their hands dirty in the service of the Crown and in the execution of the plans of the scientists which went wholly unexplained to them. It is perhaps a cynical mind which lights with suspicion upon the approbation of the United Kingdom at the end of the same paragraph for the statute of limitations to protect the defendants against such allegations as have been made by servicemen, both Australian and British, in this case.

Firstly it appears that the United Kingdom, which has throughout its appearance in this commission sworn blind that it seeks only to assist the commission and has explicitly disavowed an adversarial role in the proceedings, is now seeking to set up a Limitations Act defence to the common law actions against which it will shortly be entering an appearance. Secondly my client cannot accept for a moment that time, in the sense of limitation, has even begun to run against them, seeing that the government has only recently begun to discharge information on the basis of which an opinion could be reached as to whether or not an action may lie. Secondly, there has been until recently no actual or constructive knowledge on the part of the servicemen as to the radiological hazards unvolved in their service at the tests.

It has been the government's case that there is no evidence, or no substantial evidence, or perhaps no true evidence, for an association between such service and subsequent illness. Lastly, they are fortified in that opinion by the as yet unpublished conclusions of the National Radiological Protection Board's study, which are due to be made and published about a year from now. Limitation in any event specifically requires knowledge of the injury said to give rise to the action. In a case such as this where there may be a very long latent period before the injury comes to light, time cannot begin to run until the manifestation of the injury.

May I turn to the second chapter of the British Government's final submission which lists a number of conclusions which it thinks will probably be reached by the Royal Commission. Paragraph 2.6(a) reads as follows:

> The investigations of the Royal Commission have not produced evidence of any death or injury to the health of participants . . . . . suffered any significant health effects.

There are a number of points: firstly, on a strict view of the problems of proof of causation, it would not be possible as a matter of practice to prove a causal relationship between exposure to radiation and injury to health without either proof of a dose large enough to cause unambiguous non-stochastic effects or a large-scale methodologically sound epidemiological investigation of the test population.

Until recently we could not advance with any confidence the possibility of non-stochastic effects after the order of doses said to be measured during the test programme. However, we put forward purely as an example a piece of research shown as annexure 3 to our final submission as evidence, at its lowest, of the uncertainties of the subject compared with the certainties with which officialdom seeks to comfort us, and of the pace at which those uncertainties in biology are being unravelled.

The Donovan report, to which reference is made in paragraph 16, was that until recently it was either to be of no evidentiary value whatsoever, or to be evidence against the veterans in Australia. However, errors in that report, elicited in re-examination by counsel assisting and our evaluation of the results of the report, lead us to submit, contrary to the assertion contained in paragraph 16 , that at the worst, if the Donovan report contains no evidence of causal relationship to exposure of radiation dose and safety and health problems, it certainly contains no evidence against that proposition, but it may well be that the report throws up evidence of an increased incidence of injury after service of the dose.

Fourthly, in this context we invite counsel for the United Kingdom in his closing speech to give an assurance that since the methodology of the epidemilogical study currently being undertaken in the United Kingdom by the DRIB is said by the government to be even further above criticism than Caesar's wife, any excess of cancer mortality or morbidity thrown up by that study will be accepted by the government without argument or backsliding as caused by radiological exposure at the test.

Fifthly, the results, if not the intention of the United Kingdom position is to create a double bind for the veterans. Suppose we had produced a series of veterans to give evidence in London, who could only say I was at Maralinga or I was at Monte Bello and now I have cancer, this would certainly and correctly have been written off as merely anectodal and irrelevant to the causal effect.

Now however it seems that our approach of producing witnesses who could say something of interest, whatever their state of health, about the conduct of the tests as perceived by the ordinary serviceman, has been taken as proof that there is no evidence of anyone coming to any harm as a result of the atom bomb tests.

Finally, that the government is seeking to justify its assertion on the ground of the doses recorded . Our submission would be it is abrogating to itself the right to select the evidence and expose it belatedly and only partially, and then pass judgment upon it.

In paragraph 1.11 of the United Kingdom's submission about the commission's terms of reference, that the commission is not equipped to resolve a debate over what, if any, are safe levels of exposure to radiation. We said the same in our submission and we also agree that the commission's most important concern is for safety.

We also agree that one aspect of the commission's task is to test the safety standards employed against the internationally recognised guidance of time, but that is all the commission has done, or should in our submission do. And it is inconsistent for the United Kingdom to then conclude in paragraph 1.13 that the only area for inquiry is the extent to which the standards adopted for each test were applied in practice. This in any event we were told cannot properly be done - you will remember, Mr President, that is why veterans were not cross-examined on behalf of the United Kingdom. And even if it could be done, it is only part of the story. As the United Kingdom say only two paragraphs earlier, the commission can use hindsight and consider the efficacy of the then current radiation safety level.

So we submit we are back in the double bind. Madcap allegations by unreliable veterans cannot be tested and therefore must be disregarded. The only worthwhile evidence is not committed to paper and signed by professionals, even though apparently when the going gets tough professionals could say they were not responsible for the contents.

The issue of radiological safety is just as easily resolved. You simply take the doses on trust, ignore the exemption clauses, you are impressed by Mr Dunster scaring the life out of the nuclear fraternity, and this part of the commission's labours can be resolved on a single side of A4 paper.

My clients have every confidence that the Royal Commission will not be seduced along this paths. There has been ample evidence before it to show that the doses are partially recorded, their significance barely understood, safety standards are justly in a state of flux and our certainties are confined to two - firstly, that there is no

safe dose of radiation and, secondly, that beyond that our knowledge of the subject is still in its infancy.

Whatever the outcome of this Royal Commission, my clients will have profited from it by a dramatically enhanced knowledge of the circumstances, the purpose, the outcomes and the hazards involved in the British test programme in Australia. We do not wish to reopen the debate about the provision and preparation of documentation. We do acknowledge during the time the commission spent in London the very considerable efforts of Mr Auld and those instructing him in supplying relevant documentation.

It is our understanding that only three documents have remained classified at the end of this inquiry and accept that these could not assist the British veterans purposes. We reflect with pleasure, but with no surprise, that the disgorging of all this information, until so recently adorned with various badges of secrecy has not brought so much as a single brick, let alone the entire walls of Whitewall tumbling down. I hope we shall in due course hear counsel for the United Kingdom acknowledging the foolishness of his client's ways thus far, confirming that the breeze of open government and the public's need, and right, to know is now blowing down the corridors of power and thanking the Royal Commission for bringing his clients to this painless state of grace.

Without the Royal Commission it seems a reasonable certainty that this information would not have seen the light of day, or rather would not have been exposed to independent scrutiny. This puts the members of my client association in a very strange position. Those who have had the benefit of an inquiry have had to wait for that inquiry to be set in train by another sovereign state. But the majority of members of the association served not in Australia, but at the thermo-nuclear tests at Christmas and Malden Islands.

I hope I will hear Mr Auld's assurance in his address that he will be advising his clients that, in the light of their experience of this inquiry, they have nothing to lose and a very great deal to gain by establishing a commission of inquiry into the Pacific test programme. In that way the undoubted perfection of the design and execution of that test programme will be clear for all to see.

There is in paragraph 1.16 a concession by the United Kingdom that in any large human endeavour there will always be some who do not always keep

to the rules. Ignorance of the nature of the effects of radioactivity, and to how to cope with them, is profound enough today. Inevitably that ignorance was all the greater in the 1950s. In our submission this ignorance, coupled with a lack of explanation provided to the troops, imposed the very strictest standard of care on the United Kingdom, and it will not do simply to shrug the governmental shoulders at any infraction of the rules.

One of the constant refrains of those appearing for the veterans in this inquiry has been about the inadequacy and inaccuracy of film badges as a means of measuring and recording doses. It therefore becomes instructive to see how the United Kingdom has dealt with the associated problem of ingestion and inhalation of radioactivity.

Paragraph 4.90 deals with protection for internal radiation at operation Hurricane. It contains the remarkable reasoning that since the ICRP was silent on limits for internal exposure, no attempt was made to set an internal dose limit. A policy was therefore arrived at of avoiding internal exposure absolutely. Not surprisingly this counsel of perfection did not work. But the disbelief which inhibited the imposition of dose limits without the ICRP seal of approval has been so willingly dispensed as to characterize those exposures which did in part occur as insignificant or inconsequential. There again, the United Kingdom is having it both ways.

In paragraph 4.98, again for operation Hurricane the subject changes to the measurement of external radiation by the familiar means of film badges. It recites the requirement that film badges were worn by all persons at all times, whether or not they were in a contaminated earea.

The summary dose records, produced as exhibit RC811, can be seen immediately to be defective since for a number of servicemen present at operation Hurricane there is no dose shown at all. The only way that these two documents could be correct would be if the blank dose record meant that the exposure was less than the minimum recordable threshold of 20 milligrams. This would surely, however, conventionally be shown as 20 milligrams or not exceeding 20 milligrams.

Further, on the very first page of the listing a dose is shown as 10 milligrams. This argues much more strongly against the view that no figure in the total dose column of the records should be interpreted as meaning that no dose, or alternatively

a dose below the minimum recordable threshold, was actually maintained.

With these gross uncertainties as to doses sustained, added to the uncertainties of the proper risk estimates to be applied to the doses, we submit that it would be imprudent and indeed unscientific to put any quantitative guess, because it can be no more than a guess, on the health consequences for the British veterans of their attendance at these tests.

I would now like to pass to a couple of matters of special interest to the British veterans, namely HMS Diana, and the indoctrinee force. I mention HMS Diana now simply because there is at last in the United Kingdom's submission an attempt to say exactly what was going on. None of the scientific witnesses in London were able to help. The account begins at paragraph 7.95 of the United Kingdom's submission. There was some uncertainty, and we submit that uncertainty is not dispelled by paragraph 7.100 of the United Kingdom's final submission, as to whether the crew of Diana were in fact wearing film badges. HMS Diana's report says it was not worthwhile to attach details of the doses, because with a few exceptions they were all below 10 milligrams. I cannot find any entry at all in RC801, in the dose column, for any personnel associated with HMS Diana, not even an entry of below 20 milligrans or an entry reading film damaged. The calculation prescribed in pargraph 7.103 is hard to follow.

Why should we reduce the dose on the deck by half simply because radioactivity which falls on the sea sinks, and do we not duplicate this exercise by giving a further discount of 75 per cent to take account of a pre-existing system. Even these rationalisations for the human experiment that HMS Diana's voyage constituted do not explain or justify raising the total hypothetical dose after the first trial from 5 to 9 rontgens according to paragraph 7.103, the whole point of using 5 rontgens as the base line is that it would in practice produce inside the hull a sustained dose of .3 rems, which was the normal working rate. By that logic a base line of 9 rontgens could be relied upon to produce a sustained dose of almost twice the normal working rate, and we have no dose records at all to show the actual as opposed to the hypothecated outcome. The only thing of which we can be certain is that nothing is certain.

Turning now to the activities of the indoctrinee force, the submission of the Commonwealth makes the interesting concession that it is not certain whether there was one tank or two containing members of the force at Marcoo. The United Kingdom government's submission explicitly refers in paragraph 8.92 to tanks in the plural, thus it seems relieving the Royal Commission of the distasteful burden of deciding between competing members of the officer class to which I alluded in my final submission.

The omission of any reference to members of the indoctrinee force crawling in addition to marching to contaminated areas in paragraph 8.90 of the United Kingdom's final submission was, I am prepared to accept, wholly accidental. The quotation from the Symonds History contained in paragraph 8.94 is, with respect, quite irrelevant to the allegation with which it is dealing.

We are, of course, content that the purpose and the nature of the exercise be left to the powers of inference from the facts which the Royal Commission has announced it will exercise.

One of the conclusions of counsel assisting in his submission was that members of the indoctrinee force were not exposed to excessive radiation doses. If, indeed, the Royal Commission should find this is the case, we should like a rider to be added to the effect that this outcome was more by good luck than by good judgment and should not encourage any further experimentation with human safety.

On the subject of the final submission of counsel assisting, I would wish only to draw the Royal Commission's attention to the fact that the section on likely cancer incidence on the basis of the recorded doses refers to the Australian veterans only. I suspect this may be due to the difficulty in arriving at a total dose from the incomplete form in which the records are presented in RC8.11 for the British service population. Were it otherwise, I should have sought to take up the cudgels with him over both the reliability of the dose records and his range of risk estimates. Mercifully the Royal Commission is spared this.

As I said at the beginning of this speech, concerns of my clients were contained within a very narrow compass. Whilst they have been impressed by the breadth of the inquiry, we have done our best to keep within that compass.

Now I invite the commission to draw the following conclusions: firstly, that in commanding men to serve in the face of poorly understood but potentially cataclysmic hazards for its own military purposes, the United Kingdom imposed upon itself a very stringent burden of responsibility for their welfare. Secondly, that the onus should therefore be on them to show that they have discharged that responsibility, and not upon the servicemen to prove the reverse. Thirdly, that they should seek to resist claims from British veterans if at all on the merits, and not by a peace-time abuse of the Crown Proceedings Act. Fourthly, that oral and unchallenged evidence of ex-servicemen should not be held inferior per se to the printed word of the managers of the test programme. Fifthly, that the uncertainties about the doses of radioactivity sustained and the degree of ill-health which they are likely to have caused are so profound as to make the proper course for the commission not to commit itself to a finding in relation to the health effects in the case of the British servicemen in respect of whom the results of a National Radiological Protection Board study will be available a year from now. The commission should, in our submission, invite the United Kingdom to accept and act upon the findings of that study whose praises it has so loudly sung.

Finally, Mr President and Commissioners, may I extend to the Royal Commission the good wishes and gratitude of my clients and record the pleasure and interest which I have derived from my part, however marginal, in its proceedings.

THE PRESIDENT: Mr Mildred, we thank you for those sentiments. Before you sit down, do you suggest to the commission that it is within its terms of reference to offer advice to the British government as to the standards which that government should adopt in its treatment of claims made by British veterans? What weight would be given to it is another matter, but do you say that that is within our terms of reference?

MR MILDRED: Mr President, I say that since you are charged with discovering whether or not health effects from radioactivity were caused to people participating in the tests, and since you have accepted by giving my clients leave that that extends to British as well as Australian individuals, you have at least the power of making findings in relation to those foreign personnel.

THE PRESIDENT: You are inviting us to go beyond the mere making of findings, you are inviting us to advise the British government in all sorts of matters as to what follows from our findings.

MR MILDRED: Mr President, I think that the line may not be quite as clearly drawn as your question implies. Something of what I said was certainly a request to Mr Auld rather than a suggestion of how your Honour would treat his report. I say that given that you have the duty to consider the effect of the tests upon British as well as Australian personnel, it may follow from what you may find as fact that you consider - whether of course it would be acted on, Mr President, you know is another matter, whether that should not be added as a suggestion in a helpful and friendly manner as I know you would make it to the British government. And, of course, I am indebted yet again to Mr James who points to the end of the terms of reference where you are directed to make such recommendations arising out of your inquiry as you think appropriate, including, although, of course, one might say without prejudice, the generality of what you want to do, regarding the future management and use of the test sites. It is a general command, a general imperative to make such recommendations as you find in light of the evidence.

THE PRESIDENT: Thank you again, Mr Mildred, for your informative and entertaining address. We will adjourn to 10 o'clock tomorrow morning.

AT 4.15 PM THE MATTER WAS ADJOURNED
UNTIL TUESDAY, 24 SEPTEMBER 1985