



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

JOINT STANDING COMMITTEE ON FOREIGN AFFAIRS,
DEFENCE AND TRADE DEFENCE SUBCOMMITTEE

Reference: Royal Australian Air Force F111 workers and their families

FRIDAY, 17 APRIL 2009

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**JOINT STANDING COMMITTEE
ON FOREIGN AFFAIRS, DEFENCE AND TRADE**

Friday, 17 April 2009

Members: Senator Forshaw (*Chair*), Mr Hawker (*Deputy Chair*), Senators Arbib, Mark Bishop, Ferguson, Fifield, Hanson-Young, Johnston, Ludlum, Moore, O'Brien, Payne and Trood and Mr Baldwin, Mr Bevis, Mr Danby, Ms Annette Ellis, Mr Gibbons, Ms Grierson, Mr Hale, Mr Ian Macfarlane, Mrs Markus, Mrs Mirabella, Ms Parke, Ms Rea, Mr Ripoll, Mr Robert, Mr Ruddock, Ms Saffin, Mr Bruce Scott, Mr Kelvin Thomson and Ms Vamvakinou

Defence Subcommittee members: Mr Bevis (*Chair*), Mr Baldwin (*Deputy Chair*), Mark Bishop, Ferguson, Fifield, Forshaw (*ex officio*), Furner, Johnston, Ludlam, O'Brien, Payne, and Trood and Mr Danby, Mr Gibbons, Ms Grierson, Mr Hale, Mr Hawker (*ex officio*), Mr Ian Macfarlane, Mrs Markus, Mr Oakeshott, Mr Robert, Ms Saffin, Mr Bruce Scott and Mr Kelvin Thomson

Members in attendance: Senator O'Brien, Mr Baldwin, Mr Bevis, Mr Hale, Mrs Markus, Mr Robert, Mr Scott, Mr Thomson

Terms of reference for the inquiry:

The committee will investigate and review claims for compensation from former F-111 deseal/reseal workers including the Commonwealth's response to the health and support needs of former F-111 deseal/reseal workers and their families. The Committee should ascertain whether the response was adequate, whether it was consistent with the findings of the Study of Health Outcomes in Aircraft Maintenance Personnel (SHOAMP) and whether the overall administration and handling of the program was adequate.

The Inquiry will consider the adequacy and equity of the Health Care Scheme in meeting the health and support needs of participants and their families and whether this was consistent with the SHOAMP findings. Matters to be considered will include, but not be limited to:

- The differences, and transitional arrangements, between the interim health scheme and the final Health Care Scheme;
- The timing of cessation of access to the Health Care Scheme;
- The range of treatment and health benefits provided under the Health Care Scheme;
- Whether the current Health Care Scheme is consistent with the range of treatment and health benefits available to persons under other Health Care Schemes;
- The adequacy of arrangements under the Health Care Scheme affected family members (including widows) or serving members; and
- If the Health Care Scheme is not considered to be an adequate response to the health and support needs of participants and their families, consider and report on possible alternatives that are considered to be adequate in light of the findings of SHOAMP and other Health Care Schemes.

The Inquiry will consider the adequacy and equity of the financial element of the Ex Gratia Scheme and whether it was consistent with (i) the findings of SHOAMP, (ii) the Health Care Scheme response (iii) the Tier definitions, and (iv) one off payments to other veteran groups. The Inquiry will consider, but not be limited to:

- Whether the lump sums available under the ex gratia scheme were appropriate;
- Whether the lump sums available were appropriate given the findings of the SHOAMP;
- Whether the lump sums, when considered along with the benefits available under the Health Care Scheme, were appropriate;
- Whether the lump sums available under the ex gratia scheme were appropriate, when considered along with the full range of benefits and compensation available under other Commonwealth or State statutory schemes;
- Whether the lump sums were consistent with the definitions of Tiers of participants;
- Whether the lump sums were consistent with other one-off payments made to veteran groups;
- When assessing the question of adequate remedies whether regard should be given to the establishment of a dedicated administrative assessment and settlement scheme, and
- If the lump sums available under the ex-gratia scheme are not considered to be financially adequate, discuss what compensatory payment would be appropriate in light of the SHOAMP findings, other one-off payments made to

veteran groups, and the full range of benefits and compensation available under other Commonwealth and State statutory schemes or common law damages available under Australian law.

The Inquiry will consider whether the overall handling and administration of ex gratia and compensation claims was appropriate, timely and transparent for both participants and their families. The Inquiry will consider whether, but not be limited to:

- Cross agency cooperation was effective;
- The documentation and records held by both Agencies as they relate to deseal/reseal activities was adequate;
- The standard of evidence required to substantiate a claim was reasonable and, if not, whether alternative standards of proof may be used when making an eligibility determination;
- There has been equitable treatment of service personnel, public servants, civilian employees and contractors involved in deseal/reseal activities;
- Staffing resources were adequate to produce a timely result;
- There were unreasonable delays in the process, taking into account the complex nature of issues; and
- The overall handling and administration of ex gratia and compensation claims was appropriate and timely.

WITNESSES

BROWN, Air Vice Marshal Geoffrey, Deputy Chief of Air Force.....	27
COLLINS, Mr Gary, Acting Deputy President, Repatriation Commission	27
DANEK, Mr Stefan, Defence Scientist, Department of Defence	27
DOUGLAS, Mr Ken, General Manager, Service Delivery Division, Department of Veterans’ Affairs	27
FARRELLY, Mr Sean, National Manager, Compensation and Income Support Group, Department of Veterans’ Affairs.....	27
FRASER, Mr Ian Raymond, President, F111 Deseal/Reseal Support Group Inc	18
GARDNER, Dr Ian, Senior Consultant in Occupational and Environmental Medicine, Department of Defence.....	27
HENRY, Mrs Kathleen Mary, Vice-President, F111 Deseal/Reseal Support Group Inc.....	18
LAWSON, Group Captain Robert, Officer Commanding Strike Reconnaissance Systems Program Office, Defence Materiel Organisation	27
LYSEWYCZ, Mr Michael, Acting Assistant Secretary, Legal Services, Department of Defence	27
OAKES, Dr Diana Joy, Lecturer, Discipline of Biomedical Science, University of Sydney	12
ROEDIGER, Mrs Julie, Deputy Director, Australian Institute of Health and Welfare	2
TELFORD, Mr Barry, General Manager, Policy and Development Division, Department of Veterans’ Affairs.....	27
WEBSTER, Professor William Somerville, Reproductive Toxicology, University of Sydney.....	12
WILSON, Ms Eileen, Epidemiologist, Strategic Research and Development Section, Department of Veterans’ Affairs	27
WINZENBERG, Mr Roger, National Manager, Rehabilitation, Research and Development Group, Department of Veterans’ Affairs.....	27

Subcommittee met at 9.01 am

CHAIR—(Mr Bevis)—I declare open this public hearing on the parliamentary inquiry into the F-111 deseal-reseal workers and their families being conducted by the defence subcommittee of the Joint Standing Committee on Foreign Affairs, Defence and Trade. I welcome all those present. Before we commence the formalities of the hearing, I need a resolution from the subcommittee to authorise the broadcast of today's proceedings.

Mr HALE—So moved.

CHAIR—That is carried. I think it is appropriate just to make a brief statement for many people with a keen interest in these matters, who would be aware that the inquiry conducted hearings last year. At the time, we anticipated that there would be no further public hearings, but here we are. Welcome back. I think it is worthwhile to note that during that period there were a number of important documents and other exhibits that the committee accepted that have been under consideration. They include the E500 series of maintenance documents held by RAAF; the technical maintenance plans for the F-111; research done on the effects of desealant formulation SR-51 and its individual components by Moscova, Oakes, Pollak and Webster; the Australian Institute of Health and Welfare 2009 third study on mortality and cancer incidence in aircraft maintenance personnel; a further study involving Oakes, Ritchie, Woodman, Narup, Moscova, Picker and Webster on toxicology and industrial health; a further study by a number of those researchers being the final report into the toxicological effects of chemicals used in the F-111 deseal program; a claim for lump sum payment by an F-111 deseal-reseal participant; the RAAF F-111 deseal-reseal board of inquiries volume 1 and 2; and, of course, the SHOAMP reports, which were the subject of some quite extensive discussions in previous hearings and the various volumes 1 through 5 involved in that. All in all, it has been a busy few months going through those many documents and relevant background material.

The subcommittee today will scrutinise a number of witnesses and take evidence from a number of witnesses involved in some of those research activities and from the Department of Veterans' Affairs and the Department of Defence and representatives of the deseal-reseal support group. With those formalities out of the way, I would now like to invite the witness from the Australian Institute of Health and Welfare for the first session to come forward.

[9.05 am]

ROEDIGER, Mrs Julie, Deputy Director, Australian Institute of Health and Welfare

CHAIR—Welcome. Whilst the subcommittee does not require you to give your evidence under oath, I do advise you that these hearings are legal proceedings of the parliament and therefore have the same standing as proceedings of the respective houses. Would you like to make any opening comments?

Mrs Roediger—I have some material prepared, but I would like to give the committee whatever it needs. If you like, I can provide you with a short description of the methodology that we have used or I could go straight into the key findings.

CHAIR—I assume the methodology for this third study was the same as the methodology in the preceding studies?

Mrs Roediger—It was with one change.

CHAIR—Perhaps if you identify the difference in the methodology, then you can take us to the findings.

Mrs Roediger—Sure. The one change between them is that we conducted the study across two time periods. Previous studies had all been run commencing in 1980. We split the data to run a study commencing in 1980 and a second one commencing in 1999. We did this because there were some anomalies in the mortality data between 1980 and 1999. During that 19-year period there were only three deaths identified and yet in the six years between 1999 and 2004 there were 13 deaths identified. This seemed a little odd to us. They are very small numbers so it is possible that it is just a statistical anomaly, but it did seem like odd numbers and it did seem possible that there was a cohort identification effect in here in that, because the cohort was identified in 1999, there may have been additional people who died prior to 1999 who were not identified into the cohort because there was not anybody to identify that they had been part of a deseal-reseal program. So we conducted the two analyses separately to try to separate out that possible selection effect.

CHAIR—Can you tell us what that demonstrated?

Mrs Roediger—One finding was changed as a result of that. It was in the comparison of the exposure of the deseal-reseal personnel with the Richmond personnel. Taking the longer period, there was actually a lower mortality rate amongst the deseal-reseal personnel, which could be explained by that selection effect. That was a statistically significant lower rate. It was quite an unexpected result. Taking the analysis from 1999 to 2004, it showed a higher rate—a non-significant higher rate but a higher rate.

CHAIR—One of the issues that has been raised is that the process of selection effectively for these studies, if you like, has been volunteer based.

Mrs Roediger—Yes.

CHAIR—Those who wished to participate put their hand up. The point has been made that those who died before this process started were not there to put their hands up.

Mrs Roediger—Yes.

CHAIR—From what you have just described in layperson's terms, what is your view of that?

Mrs Roediger—I think that that effect is showing up in the numbers.

CHAIR—So if we compare the third study with the second study, or if we look at the second study, we should take into account the probability or the likelihood that that effect has applied?

Mrs Roediger—There is some evidence that there is a sampling effect for those earlier periods.

CHAIR—Thank you for that.

Mrs Roediger—It is not conclusive but there is some evidence that there is a sampling effect.

CHAIR—Would you like to go on and talk about the other key findings of the third study?

Mrs Roediger—Certainly. Do you mind if I read so that I get the numbers right?

CHAIR—No. Not at all.

Mrs Roediger—Thank you. Starting with the comparisons to the overall population, the overall cancer incidence in the male personnel involved in the deseal-reseal programs was up by 44 per cent compared with the Australian male population. However, due to the very small numbers, this is not a statistically significant result. It is possible that it is a clustering. The lip cancer incidence for the deseal-reseal personnel was four times as high as the general Australian male population. This result is statistically significant, but it is based on only four cases. The cancer incidence in personnel in the two comparison groups, which was a group of personnel at Richmond that was not involved in technical tasks and a technical group at Amberley, was similar to that of the Australian male population. So the differences do not seem to be due to being part of the RAAF or working in a technical capacity.

The overall mortality rate was lower for the personnel involved in deseal-reseal when compared with the Australian male population. That is expected. That is the healthy soldier effect coming into play. However, there were two cases of non-Hodgkin's lymphoma, which was higher than expected. Again, it is two cases. The mortality for the two comparison groups was lower than the Australian male population, and these results were statistically significant. As I say, that is just the healthy soldier effect. When comparing within those three RAAF cohorts, the exposed group, when compared with the Amberley personnel, showed no significant differences in mortality or cancer incidence. But when the exposed group was compared with the Richmond personnel, they showed an increased cancer incidence, which was statistically significant. The results for mortality were less clear, but that is what I have just read out to you. If you take the

longer period, it was lower for the deseal-reseal. That is probably a selection or possibly a selection effect. If you take just that shorter period where we are more confident of the selection of the cohort, it was higher but not statistically significant. Overall, those results are very much like the results from the first two studies.

Mr BALDWIN—When you did your comparative analysis to people at Richmond, were you comparing it to people who had been working in a similar situation in the Hercules?

Mrs Roediger—Yes.

Mr BALDWIN—Were there any tests done on those who may have been working on the Caribous in similar situations?

Mrs Roediger—We do not know. We were provided with the two cohorts from the RAAF. The information that we were given about them was that the Amberley based cohort was a cohort of 7,577 people. They were at the same base but they were in non-technical positions, so they would not have had any of the environmental exposures of the deseal-reseal group. The 9,408 men working at Richmond were involved in technical jobs, but the detail of those technical jobs I could not give you.

Mr BALDWIN—Since this inquiry has started, we have been contacted by people who have similar claims of ill-health who have worked on Hercules and Caribous in confined spaces. That is why I was asking the question. Have any studies been carried out on those people?

Mrs Roediger—I am not aware of any study that has selected down within the technical cohort to just those who have been involved in cramped conditions with particular exposures. This is a wider cohort of technical people.

Mr BALDWIN—Have you done any other studies?

Mrs Roediger—No. I am not aware of any other studies that have been done on that particular group.

CHAIR—This touches on a point that was raised last year at one of our hearings with regard to the selection of the cohort, the Richmond control group. As I recall, there was no effort to determine whether or not those in Richmond may previously have been at Amberley and indeed been engaged in the F-111 reseal-deseal or pick and patch work. Is anyone able to tell me whether or not they were screened for that?

Mrs Roediger—There was some crossover identified between the two groups, but I do not think it went as far as saying whether they had actually been involved in the deseal-reseal.

CHAIR—Or F-111 pick and patch?

Mrs Roediger—There were 277 people who had been at both Amberley and Richmond, but whether any of those people had been involved in the deseal-reseal at an earlier posting, we do not have that information.

CHAIR—Or whether they had been in the squadrons involved in pick and patch?

Mrs Roediger—I do not have that information. I only have that there are 277 personnel in common.

CHAIR—It just strikes me as odd that if the control group against which the F-111 folk were being measured did not exclude people who might also have been a few years earlier engaged in that activity, that corrupts the findings.

Mrs Roediger—Anybody who had been identified as part of the deseal-reseal group was removed from the other cohorts. But whether there were people who were not identified, they are not identified.

CHAIR—But separate to the deseal-reseal programs, we all know there was an extensive pick and patch program that involved virtually identical work, if for different periods of time. From your perspective conducting the research, does that not give rise for some concern? I would have thought that with the control group that was clean from contamination of the environment—

Mrs Roediger—It depends on the question you are trying to answer, Chair. The question here was whether particularly the deseal-reseal presented a higher risk than other technical jobs being done, in which case you want all those other technical jobs to be part of your cohort. But if the question is about another cohort with another potential exposure, you need to set up a different cohort for that study.

CHAIR—So we can measure it against the general population, which the studies go to. You refer to the healthy soldier effect. Everyone who was part of the study in RAAF had already gone through a medical to get their job.

Mrs Roediger—That is right.

CHAIR—So you expect them to be healthier than the average John and Mary citizen.

Mrs Roediger—Yes.

CHAIR—So when people you expect to be healthier turn out to be less healthy, does that get factored into your assessment as to whether it is statistically significant?

Mrs Roediger—Yes. The other two cohorts have the same selection process. They have all been through a RAAF selection. They have all had to meet the physical requirements and the ongoing fitness requirements to be a RAAF member. The other two cohorts are selected so that we are comparing three groups who have all been selected with that healthy effect.

Mr BALDWIN—By the sheer fact that you have not gone to any length to eliminate people who have been involved in the F-111s in the Richmond or other area of Amberley study, do you not think that corrupts your findings? If you have people who have been involved in the F-111 that you are measuring against those who are from a broader military population, some of which may have been involved in the F-111, that would start to neutralise the effect of the outcomes.

Mrs Roediger—One of the cohorts was selected from non-technical personnel, so they should not have had any sorts of exposures. So that is your control group for separating out people who have not had any of those sorts of exposures. We were not asked to look at other sorts of risks internal to different types of technical activities, so we have not done a breakdown of all of those other sorts of risks. But by taking a non-technical group, we have had a group that did not have any of those sorts of exposures. We have also had a group that has had the more general level of exposures. The reason for choosing those two cohorts is that the question was whether this particular deseal-reseal was a cause of higher levels of mortality and of cancer and morbidity generally. In order to determine that, we have to separate effects due to being an RAAF person, which comes from both of those cohorts, but also separate out effects that come from being a technical person outside of being in the deseal-reseal program, which has a range of other exposures. So that is why the two cohorts were chosen in that way. It is specifically to look at that deseal-reseal group.

Mr BALDWIN—But you have not said that in your technical cohort you have excluded everybody that may have been involved in a deseal or reseal or pick and patch operation.

Mrs Roediger—Not the pick and patch. We have separated out those people who were identified as the deseal-reseal, which was the target population to look at for this research question.

Mr BRUCE SCOTT—Thank you for your work. I want to ask a question about the types of cancer. Put it in layman's terms. Have we got clusters of types of cancer? There is cancer of various forms in humans.

Mrs Roediger—The non-Hodgkin's lymphoma was an unexpected result. The lip cancer is very high, unexpectedly high.

Mr BRUCE SCOTT—You could not speculate as to why lip cancer?

Mrs Roediger—You really need to ask a medical doctor as to the aetiology of how you go from an exposure to a lip cancer.

Mr BRUCE SCOTT—Have you done any work in relation to other workplaces that might have used similar types of substances?

Mrs Roediger—No. This is unique, in our experience. We know of other studies that have been to do with sick buildings. But this particular study is unique, in our experience.

Mr BRUCE SCOTT—With Agent Orange and those who served in Vietnam, is there any comparison with the sort of morbidity rate you are getting because of exposure to this?

Mrs Roediger—That is a very interesting question.

Mr BRUCE SCOTT—Including the types of cancer.

Mrs Roediger—Yes. It is a very interesting question. I have not done the analysis so I could not say, I am sorry. It is an interesting research question, though.

Mr ROBERT—In your key findings, you say that in the control groups the cancer incidence was similar to that of the Australian population. So the control group would seem to be on par. The mortality was less, which is that healthy soldier effect.

Mrs Roediger—Yes.

Mr ROBERT—You then said in your first key finding that the cancer incidence in male personnel involved in the program was elevated by 44 per cent.

Mrs Roediger—Yes.

Mr ROBERT—I am not a doctor, but that seems bloody high. That is when compared with the Australian population. You then made a statement. You said that this could be possibly a clustering. What do you mean by possibly a clustering?

Mrs Roediger—When you have extremely small numbers, when you take the 21 million of the Australian population and you pluck out an extremely small number, the chances are that the extremely small number will not reflect the overall characteristics of the population.

Mr ROBERT—What number is that extremely small number? Is it 100 or 200?

Mrs Roediger—Yes. It depends upon how many different variables you are looking at. The more variables you are looking at, the larger the number that you need. The numbers here, where we have 13 deaths, are smaller than you would need to be really confident. It is not a long way off. I have to say that the bounds of statistical confidence are getting quite close. It is not a long way off being statistically significant.

Mr ROBERT—Just on that, on key finding one, how many people are we talking about in the DSRS group?

Mrs Roediger—I will have to look at the findings.

Mr ROBERT—I am just trying to reconcile a 45 per cent increase with not statistically significant.

Mrs Roediger—It is just the small numbers. It is simply the small numbers.

Mr ROBERT—I am just trying to get an idea of how close to statistically significant it is.

Mrs Roediger—Very close. And closer with this study than it was with the previous study, even though it is about the same height above the general population. If we saw the same sorts of proportions occur in another few years, that would make it statistically significant. That would be enough to make it statistically significant.

Mr ROBERT—I want to start with exactly how many people we are talking about and the key findings. What numbers?

Mrs Roediger—I can read out for you the numbers of people with different things, if you like. I am not sure which numbers you are asking for.

Mr ROBERT—You are saying that the overall cancer incidence in people involved in the program was 44 per cent. How many people in the program was your study based on and how many cancer incidences is there?

Mrs Roediger—There were 873 people in the exposed group. Forty people have cancer. There were 16 deaths over that long period back to 1980, or 13 deaths back to the shorter period to 1999.

Mr ROBERT—So this is 44 per cent higher than the normal Australian population?

Mrs Roediger—That is right.

Mr ROBERT—For it to be statistically significant, what do the numbers need to be, out of interest?

Mrs Roediger—Not a lot more.

Mr ROBERT—I am just trying to get an idea of exactly how close. What does ‘not a lot more’ mean?

Mrs Roediger—Two or three.

Mr ROBERT—So you are saying that if there were 42 incidences of cancer, it would be statistically significant?

Mrs Roediger—It is that close.

CHAIR—So if we wait and a couple more die, it becomes more significant?

Mr ROBERT—Just on that, Chair, you are saying—

Mrs Roediger—Well, on time.

Mr ROBERT—In this number of 873 people and 40 with cancer, 16 had died before this study, which means they were excluded from it. Is that correct?

Mrs Roediger—No.

Mr ROBERT—They were included?

Mrs Roediger—They were included. The people who had died were included.

Mr ROBERT—Are there any deaths that we are not aware of?

Mrs Roediger—I am not aware of deaths that I am not aware of.

Mr ROBERT—You have 873 people in the exposed group. Are there any more in the exposed group? Are there people who have died who never put their hand in the air and said, ‘You know what? I am in the exposed group?’ Are we confident that you have got all of the people exposed that were in the study?

Mrs Roediger—No. We are not confident that every single person who was exposed is in that 873. I have already spoken to the effect that, for the people who were exposed and had died prior to 1999, the numbers indicate that there is some chance there is an underreporting of those people.

Mr ROBERT—So am I right in saying that we are two lots of cancer off being statistically significant?

Mrs Roediger—Yes. We are very close to being statistically significant.

Mr ROBERT—But we still have no confidence that all the exposed people have been identified?

Mrs Roediger—We do not know that all the exposed people have been identified. In particular, the main area of uncertainty is in that period of people who had died prior to the actual cohort selection. We believe that extensive work was done. The Department of Defence made every effort using networks, photographs and records to identify as many people as they possibly could. The fact that the numbers show that there were potentially some people who died earlier than that points to the fact that this did ultimately depend upon people having been approached confirming this or somebody confirming it on their behalf.

Mr ROBERT—So people could well have died who therefore were not counted in your numbers?

Mrs Roediger—There may well have been people who died prior to 1999 who were not counted in the numbers. The numbers suggest that is possibly the case.

Mr ROBERT—The numbers suggest it is possible that a number of people may have died that were not in the numbers?

Mrs Roediger—Yes.

Mr ROBERT—And we are two off being statistically significant?

Mrs Roediger—Yes.

Mr ROBERT—This is my last question. You indicated that the 44 per cent increase in cancer may well have been a clustering.

Mrs Roediger—Yes.

Mr ROBERT—What are the odds of that?

Mrs Roediger—It is something I cannot rule out is what I would have to say. On this amount of data, I could not rule out that it is a clustering.

Mr ROBERT—But, mathematically, is it one in 100? Is it one in 1,000?

Mrs Roediger—No. Higher than that.

Mr ROBERT—So it is one in 10,000? One in 100,000? One in a million?

Mrs Roediger—No. Higher than that. It is one in 10ish.

Mr ROBERT—So there is a 10 per cent chance that it could just be a cluster?

Mrs Roediger—For a 95 per cent confidence interval, yes.

Mr HALE—Desealing and resealing would not have been unique to the Australian Air Force. Have there been any studies done in the United States or Great Britain with regard to servicemen that were exposed to the same sort of chemicals?

Mrs Roediger—We are not aware of any such studies, no.

Mr HALE—So there has not been anything out of the United States?

Mrs Roediger—We are not aware of any such studies.

Mr BRUCE SCOTT—I want to return to the types of the cancers. We have obviously got types of cancers.

Mrs Roediger—There are some that are already there, yes.

Mr BRUCE SCOTT—Lip cancers and the non-Hodgkin's lymphoma. Were there any other cancers?

Mrs Roediger—The actual incidence of the different cancers is in appendix 2 on page 19.

CHAIR—Yes. We do have the document.

Mrs Roediger—You do have the report in front of you. The first column is the actual number observed within that cohort. The second is the expected number from the general Australian populace. So the proportions between those two numbers give you the variance, which is given in that third column.

CHAIR—If there are no further questions, I thank you very much. We appreciate that the work that has been done in these mortality studies has been a very important part of informing the debate. I know it has been looked on eagerly by many people engaged in the work and those

administering the various systems in government. You have been given a task to do. You were given a selection that others made. I think you have gone about the work in a way that has been very helpful in informing the debate. Obviously from the questions that we are asking, having digested some of the material from last year, they go to some of the underlying questions as well as the outcomes. But your evidence here and the work that has been done by your group in these studies has been very valuable in informing us as a committee. I am quite sure it is eagerly sought after by a lot of people in the F-111 deseal-reseal community. If there are no further questions, I thank you for your testimony.

You will be provided with a copy of the transcript. If there are any matters that require correction, you are invited to make them. I have been reminded that the secretariat may want to follow up with some questions. That is a heads-up for everybody, actually. A standing order of the arrangement is that you may get questions from us after this just to clarify some things. I thank you for your evidence.

Mrs Roediger—Thank you.

[9.31 am]

OAKES, Dr Diana Joy, Lecturer, Discipline of Biomedical Science, University of Sydney

WEBSTER, Professor William Somerville, Reproductive Toxicology, University of Sydney

CHAIR—Welcome. I invite you to make any opening comments that you wish to. You probably heard me say this to the other witnesses. I should advise you that you are not required to give evidence under oath but that the proceedings are proceedings of the parliament and should be treated with the same respect as the proceedings in the various houses. With that said, I invite you to make any opening comments.

Dr Oakes—I thought I would give a brief overview of the experimental work that we did on the chemical SR-51. It was highlighted in the board of inquiry as one of the high risk chemicals of concern. As background, our research group uses laboratory experiments to focus on investigations assessing the toxicity of chemicals. Our main emphasis is really to focus on how chemicals exert their toxic effects, so it is focusing on the mechanism. We use a range of techniques—experiments that are done in a test tube, which we refer to as the *in vitro* experiments, and whole animal systems, which we refer to as the *in vivo* type experiments. It was in response to a concern that exposure to SR-51 may be the cause of cancer in some of the desal-reseal personnel that we undertook a series of studies in which we investigated whether exposure to SR-51 could damage DNA. We did this because damage to DNA is a common and known mechanism of how chemicals can cause cancer. So from these results and a series of *in vivo* and *in vitro* experiments, we found no evidence that SR-51 damages DNA.

We also did a number of other general toxicity studies. I understand that you have our publications as exhibits, so we are happy to answer any questions.

CHAIR—Thank you. I am looking at the executive summary of one of the reports. This is from November 2005, so it may be altered. There are a few reports I have read over the course of the last few months that you have been involved in, but this is exactly on this point of SR-51. You comment that, due to methodological and paradigmatic deficiencies, the results neither prove nor disprove that SR-51 exposure in mice affects memory. I wonder if you could expand on that for a start and whether or not that is the same area of study as the question of the DNA.

Dr Oakes—It is not the same area as the DNA experiments. Those studies really came out of one of the SHOAMP studies that showed there were issues with memory loss in some of the men. There was a group in the University of Sydney that had developed this test in mice where they could look at neurotoxicity. They used, I think, drugs of abuse to assess how they affect short-term memory. It is called the object recognition test. So we thought we would try that test in the mice that we dosed with SR-51. We included a positive control. We went to great lengths developing the technique. What we found is that the positive control, scopolamine, which is a known memory loss affecter, did not show a positive effect in the test. So as soon as you do not get an effect in your positive control, it means the results do not have meaning. So we were critiquing the actual methodology. For whatever reason, it did not work when we treated our SR-51 mice.

CHAIR—The same report does make reference—that is why I thought it may be the same one—to the point that there is no evidence that exposure to SR-51 damages DNA. That was one of the findings mentioned in the same report. It says it confirms the previous studies on SR-51.

Dr Oakes—That is right.

CHAIR—But you also note, though, that SR-51 was shown to be affected by increasing temperature. Were you able to take that into account in coming to your conclusions—that is, the variation in temperature?

Dr Oakes—I think the point we were making is that it is a volatile chemical. The vapour phase is going to contain some of the volatile components of SR-51. When we analysed SR-51—we were just wanting to know what was in this formulation—we found that the thiophenol in the vapour phase was oxidised. That was not unexpected. It was highlighted in the board of inquiry report. We were just making the point that volatile chemicals will be in different combinations in the vapour as opposed to the liquid phase.

CHAIR—So does that make it more toxic at higher temperatures above 40 degrees?

Prof. Webster—I believe it is less toxic.

CHAIR—Less toxic?

Prof. Webster—The converted substance is less toxic than the thiophenol.

CHAIR—Does it alter the way in which it might get into the body?

Prof. Webster—No. I do not think so.

CHAIR—I must say I had difficulty reading a number of the reports over the last few months because the number of reports referred to the effect of temperature but did not actually, where I could find anyway, explain what that effect on toxicity was. Your advice to us is that in higher temperatures it is less toxic?

Prof. Webster—Diana is probably a better person to describe this. When we analysed thiophenol or SR-51 that was heated, we found that the thiophenol changed into diphenyl sulphide.

Dr Oakes—Diphenyl disulphide.

Prof. Webster—There was more of an oxidation product present—diphenyl sulphide. But there is no reason to suspect that this is more toxic than the primary compound, thiophenol. So it changed the proportions a little bit by heating it. It did not introduce any new chemicals. It changed the proportions.

CHAIR—Again, in the executive summary of the paper, it says in reference to that effect of the oxidisation at higher temperatures:

This could potentially alter the toxicity profile of SR-51 if exposed via inhalation.

Prof. Webster—Sure. So it could make it less toxic, for instance.

CHAIR—But do we know?

Prof. Webster—Well, we do not know for sure, no.

CHAIR—That might be why I had trouble finding the answer to the question when I was reading the documents.

Mrs MARKUS—Thank you for your work. In the executive summary, point 5 talks about the hypothesis that SR-51 or other chemicals may increase oxidative stress on mitochondria and may hasten the ageing process. I have had a look at the definition of mitochondria. If you had to explain to a layman, first of all, what oxidative stress was and how that impacted on the mitochondria and how that may then hasten the ageing process, could you clarify that?

Dr Oakes—First of all, mitochondria are inside cells. There can be anything from hundreds to thousands of mitochondria within a single cell. It is the energy factory of the cell. It produces the energy components that are used by the cell to function. So muscle and brain tissue would have a lot of mitochondria because they have a higher energy requirement. There is a lot of interest in mitochondria just by the fact that they themselves in the natural metabolism of the body will produce these reactive oxygen species. These are very reactive species that can bind to DNA and potentially damage the DNA and so on. But they are constantly being repaired and so on. There is a correlation that as we grow older, this natural oxidative stress that is produced by the body damages the mitochondria. They suggest it might be part of the ageing process. But that is just a correlation. It is not a known mechanism. So there is, I suppose, a theory that some chemicals can increase oxidative stress in the body and perhaps lead to an increased rate of mitochondrial damage and, therefore, might affect ageing. So it is just a hypothesis about chemical exposure.

Mrs MARKUS—So was there any evidence in your study that that was or could be the case as a result of SR-51?

Dr Oakes—No.

Mrs MARKUS—So the mitochondria is separate to the DNA?

Dr Oakes—Yes.

Mrs MARKUS—That is my understanding. So you were testing what happened to the DNA, not necessarily the mitochondria, which is repairing cells? That is my understanding.

Dr Oakes—Yes.

Mrs MARKUS—So SR-51 could still have caused damage to the mitochondria, to what replenishes cells? You did not disprove that that was the case?

Dr Oakes—Well, we did not look at mitochondrial function.

Mrs MARKUS—It was only DNA?

Dr Oakes—That was really just a case of further work. I think it was after discussions Bill had with Frank Bowling about mitochondria and exposure to chemicals. So it was more of a hypothesis.

Mrs MARKUS—But you did not prove or disprove it?

Dr Oakes—No.

Mr BRUCE SCOTT—So really with your work there is no link that you can establish that SR-51 has a toxic side effect that could cause cancer?

Prof. Webster—This was the main function of our work—to look at that. I am sure you have heard all this before. Because SR-51 has such a very, very strong odour, you can detect it at extraordinarily low levels and way, way below—probably 1,000 times—the occupational health and safety levels that people think it is safe for people to inhale this at. So people are constantly aware that they have been exposed to SR-51. With the slightest amount on their clothes, they are going to keep smelling it. It is very clear that when people are exposed to chemicals that they can smell, they have an automatic emotional response to it. They either like it or they dislike it. Because this is a sulphur compound, they dislike it. So if you can imagine in working with a chemical that you are constantly aware that you are being exposed to, it creates anxiety in people. If you look at all the press reports that came out from the men that worked on this deseal-reseal, they commented on this exposure to SR-51 and the fact that they could smell it. They went home. They were barred from this. People did not want to sit near them. So they were constantly aware that they were exposed to this chemical. It is not in the least surprising that they became fearful of it. Certainly in the anecdotal reports that I have seen and the newspapers et cetera and at the SHOAMP meetings, the men have expressed concern that it was this exposure that was causing them damage.

It was our aim to examine whether SR-51 had properties that could cause cancer. There are very, very standard techniques for looking at these chemicals. The ones that are done by drug companies before chemicals can be registered and the ones that are done by pesticide manufacturers, they are all very standard tests. They are the ones that we performed. They showed quite clearly that SR-51 did not have any properties that would lead to DNA damage as far as we could tell from those studies. In the absence of it causing DNA damage, it becomes highly unlikely that it is going to cause cancer. So that was the main part of our work. You focused on some other parts of it that were not so fundamental. But this was the main part of our study.

Mr BRUCE SCOTT—The report from the Australian Institute of Health and Welfare shows that there is a higher incidence of lip cancer and melanoma in the list of cancers. If a worker there was perhaps constantly touching their lip because it was hot and sweaty, could that have—

Prof. Webster—Of course it is possible. Of course it is possible.

Mr BRUCE SCOTT—Rather than the odours, the actual fluid itself?

Prof. Webster—When I look at this and when I hear these human studies, I immediately think, ‘Well, what degree of cigarette smoking was taking place?’ I am amazed that it is not even mentioned in the reports. That would be the first thing I would look at. How many of these men who had cancer of the lip were cigarette smokers? That is what causes those sort of cancers. That is what causes a large number of cancers. Cigarette smoking is a tremendous component yet it does not even seem to be mentioned in the studies that have looked at cancer incidence.

Mr BRUCE SCOTT—It was an elevated element. Perhaps the anxiety may have led to smoking that may have led to the lip cancers. It could have been a causal link. We accept, until very recently, that those in the services were provided cigarettes in their ration packs and that there is a responsibility on the Commonwealth to provide compensation for those who had cancers related to smoking. I am only trying to suggest that there could well be a link here. The anxiety may have led to smoking, which in effect led to a higher incidence of lip cancers.

Prof. Webster—Look, I am sure that you are quite right. With the combination, particularly of sunshine that you are going to get at Amberley—more sunshine than you get down here in New South Wales—

Mr BRUCE SCOTT—Not lately.

Prof. Webster—you would expect an increased risk of melanomas. You would expect an increased risk of lip cancers. If chemicals are contributing as well, you have a double dose. That is quite possible.

Mr BRUCE SCOTT—Thank you.

Senator O’BRIEN—Yesterday we received some evidence that none of the desal-reseal compounds or chemicals had been shown to cause a deleterious effect on mitochondria but that substances in the fuel in the tanks had been a cause. I see in your executive summary that you are proposing future research. That was back in November 2005. Has any further research been done, or is that still prospective?

Prof. Webster—We have not done any further research because we were not funded to do any further research.

Senator O’BRIEN—Are you seeking funding or is that post prospective funding, if I can put it that way?

Prof. Webster—It was indicated to us that funding was not available. I think there are new pieces of evidence that have appeared in recent years. There is Frank Bowling’s work that you heard about yesterday on mitochondria. It is very interesting. There is the possibility of continuous exposure to volatile chemicals. All chemicals are toxic. You cannot say anything is safe. All chemicals, if you have enough of them, are toxic to you. If mitochondria are already reduced in number or are already stressed, it is quite possible that this further chemical exposure leads to further stress and could damage a person.

Senator O’BRIEN—It seemed from Professor Bowling’s work, as put to us yesterday, that there was evidence that substances in the fuel which was in the tanks had been shown to have a

negative effect on mitochondria. Should that be directing us towards that aspect of the work potentially being the cause of greater problems for these service men and women?

Prof. Webster—Well, I do not think that damage to mitochondria would necessarily point us in the direction of cancer, if that is what you are primarily worried about. I do not think that the two are particularly linked in the literature.

Senator O'BRIEN—Thank you for that.

Mrs MARKUS—What would it point us to? Damage to the mitochondria? You have suggested that further research be in this area. So what could it point us to, if there were further research on the impact on the mitochondria?

Prof. Webster—We were also interested in the possibility of whether chronic exposure to, for instance, jet fuel fumes does lead to stress on mitochondria and leads to further damage to mitochondria. Mitochondria are absolutely fundamental to a cell surviving. Although many cells have thousands of these mitochondria, if you start to compromise the function of them, you start to compromise the function of each cell. Overall, that has an effect on the body. Diana said that overall that might be the mechanism by which we age and eventually die.

Mrs MARKUS—And you focused, Diana, particularly on the brain.

Dr Oakes—I just highlighted those as tissues that are going to have a lot of mitochondria.

Mrs MARKUS—Muscles?

Dr Oakes—Yes. And muscle, yes. Often mitochondrial diseases will be myopathies—muscle diseases—or neuropathies. They will just have a lot of mitochondria. So if you get non-functional mitochondria, you will probably notice it in those sort of tissues first.

CHAIR—If there are no further questions, I thank you. It is good to put a face to the names. I have been reading your material for the last few months. I appreciate your evidence today. It has helped clarify some of the outstanding questions in our minds. You will be sent a copy of the transcript of the evidence that you have given today. If there are any adjustments that need to be made in terms of detail, you have the opportunity to do that. Should there be any matters that the secretariat of the committee needs to pursue with you, the secretariat will be in touch. Thank you once again. Ladies and gentlemen, we are in the happy situation of being ahead of time, which is the first time that has happened in a long time at a parliamentary committee inquiry. I propose to steal a bit of that time and, rather than resume at 10.45 am, resume at 10.30 am. We will break until 10.30 am.

Proceedings suspended from 9.54 am to 10.30 am

FRASER, Mr Ian Raymond, President, F111 Deseal/Reseal Support Group Inc

HENRY, Mrs Kathleen Mary, Vice-President, F111 Deseal/Reseal Support Group Inc

CHAIR—I welcome representatives of the Deseal/Reseal Support Group. Thank you for making yourself available again to come before the committee. We appreciate your appearances on earlier occasions. As you know, the committee does not require you to give your evidence on oath, but I do advise you that these hearings are legal proceedings of the parliament and therefore have the same standing as the representative houses. Do you wish to make any opening comments?

Mr Fraser—Yes, we do. We also have a submission for the committee that we will speak to in our opening comments. One of the things we want to open with is the statement about statistical significance or not being statistically significant. Clearly, the people who wrote the BOI report had a fairly good idea of what would occur in the years ahead. In annex 5 on page 109 of the BOI, there is a fairly strong paragraph on not relying too heavily on statements about not being statistically significant. Dr Hopkins points out some very interesting parallels to criminal law. Just because a finding is not statistically significant does not mean it is not a valid finding. We would just like to well and truly point out that fact. Although a lot of these reports come out with this statement, we ask the committee to look past it and look at the real meaning behind the reports and not the spin that seems to be put on top of them.

Mrs Henry—Thank you for releasing the toxicological studies that have been raised in the last couple of months. Once that information was released, there was a lot of anger within our group over the fact that we had been told repeatedly by previous ministers and previous department managers that because there was no toxicological evidence of effect, there was going to be no compensation and there was no evidence. The fact that these documents are from 2005 onwards has created quite a stir within our community in that we have known and we have been saying the whole reason we have not given up on this is we have known that there is something terribly wrong with our partners. To be told constantly that we had no proof and therefore we had no claims has been a key contributor to the ongoing stress, anger, rage and acceleration and aggravation of the men's conditions and the females' that have been involved in it as well.

For it now to be finally exposed and shown that they have known since 2005 that these toxicological reports were available is a validation of our claim and a justification. However, we would like to know why they have been hidden from us, why the truth has not come out in the past and what ramifications these reports are going to have to the current benefits that are available through the health care scheme and to the benefits available under the section 7.2 of the SRCA. With evidence in the last couple of days showing effects on mitochondria and other symptoms—the increase in cancer and the increase in mortality—there should be some form of ramification into the SRCA provisions that are available at the moment.

The spouses psychological study is the other area of great interest to us. We thank you again for having that brought up in the last parliamentary hearing and then released to us after the hearing. We were very disappointed with the comments made at the last hearing. It was actually disregarded by the speaker, who said it was typical for carers and no more than expected. The

study was disregarded as a minor study with no cohort. However, on reading the study, it showed there were two cohorts. It showed a significant increase in effect far above the military partners and the Australian population. That is another report that has been withheld from us for over two years.

In the position of vice-president, I have been dealing with many, many of the partners and trying to assist them where I can while at the same time going through my own way of trying to cope with the situation at home. We have been crying out for help. We have been crying out for help for a long, long time. The fact that this study shows that and that we were willing to receive outside the box, outside our own idea of how to help and it has been denied us, we are really outraged. We are really, really angered by it. What I am concerned about is the number of marriage break-ups that have happened in the last two years and the deterioration of the wives' health in the last two years when the psychological stresses could have been alleviated.

The minister is aware of our anger towards this. We would like to know why. Why has this study been withheld? Why have the recommendations not been instigated for the partners? We are the ones that have to care for these men. We are the ones that have to keep the family together. We are the ones that need just as much help as they do. At the moment, all we have been entitled to is five sessions of psychological counselling. It does not cut it when you are talking 12 years. We have been on record repeatedly for the last three years about access to this document. It has not been forthcoming.

CHAIR—I am pleased that, if nothing else, the process of this committee's work has enabled a number of those studies to be readily accessed by you and others with an interest in this.

Mrs Henry—Absolutely. I am very happy that this has happened because it has given us justification that what we have been saying and what we have been needing has been there. But the evidence has been hidden. Hopefully as a result of this we will start getting some action in all of the areas that we have been discussing over the years.

Mr Fraser—Following on from that, one of the recommendations from the BOI was a study into our children. For one reason or another, that was not done. So here we have a very clear report on the spouses that shows some quite alarming issues. We have children now that have two very dysfunctional parents in most families from this cohort. We would like the BOI recommendation of the children's study to be acted upon. Our children will be here a lot longer than we will be. If they have even suffered a fraction of what their parents have suffered, there are some very serious consequences for our children going forward.

CHAIR—I do not want to interrupt your opening comments. I want to get clear on that. In respect of the children, are you looking there at a behavioural psychological study or are you looking at a physical study?

Mr Fraser—Both.

CHAIR—Both?

Mr Fraser—Both. Clearly there has to be some psychological effect on the children. There was much discussion yesterday from Professor Bowling about the mitochondria defects only

being passed on through the mother. There is sufficient evidence to show that we do cross-contaminate our wives so they may well have passed on mitochondrial damage to our children. So that is another aspect that we would well and truly like covered.

On lip cancer, one of the things we had to do when we were laying the sealant was put a bit of saliva on it. From time to time you would get a bit close to your lip and you would get sealant plastered all over your lips while spitting on your finger to get saliva to smooth the sealant. So I would say that that is probably a reason for the increase in lip cancers.

With regard to the mice study and the SR-51 study, during SHOAMP I made some comments about testing only SR-51. We did not use SR-51 in isolation. We used SR-51 in a cocktail. By the time we reached a point where we had become highly exposed to SR-51, we had other chemicals like ED500. We had degraded sealant from the desealing process. We had retained or captured avtur within the tanks. So we were not just exposed to SR-51 in the chemical deseal phrase. We were exposed to a cocktail.

Another issue is that they did not test SR-51. They tested a mixture that they made. So none of the SR-51 that was tested was actually produced by the El Dorado Chemical Company. This was a concoction that they put together from their understanding of what SR-51 was simply because there was no SR-51 available. I believe they looked for it, but they could not find it. I would just like to point out that SR-51, the chemical we used produced by El Dorado, was not tested.

Another point is that the mice were forced to swallow SR-51 rather than absorb it through their skin or take it in as vapours. They also had to anaesthetise the mice to dose them. We unfortunately did not have the option of being anaesthetised before we went into the tanks.

Mrs Henry—I would like to go to the discussion about the mitochondria we had both yesterday and this morning. Professor Bowling yesterday gave this presentation. In it, he listed the chemicals that are known to be substances toxic to the mitochondria. SR-51 is not in that list. However, the other chemical cocktails that were used and the fuel are in this list. So SR-51 was only one of the chemicals that was used, as Ian said. However, thiophenol is on his list of substances toxic to mitochondria. So rather than looking at either SR-51 or jet fuel, we have to look at all of the chemical components that were there. That has been one of our arguments for many years. It has always been a cocktail. It is not a standalone one or the other. We just ask the committee to look at that entire list of chemicals that Professor Bowling has included in his study and reflect on that rather than just the SR-51 or jet fuel as a cause and effect.

Mr Fraser—We may be a little early in jumping the gun, but we would certainly like to introduce some discussion around compensation at this point. DVA WorkCover Queensland do not pay compensation if there is negligence. Clearly we have a situation of extreme negligence, which is why we are all sitting here today. Somebody was clearly negligent. Over the last 10 years, there has been an ongoing defective administration or failure to address our issues, which has compounded the problems that many of us have faced and our families have faced. We understand that in this current economic climate there could well be a significant impact on the Commonwealth to compensate our people. We would like to introduce a concept rather than total lump sums. In here we have some proposals about where we would like to go with that. It is in the submission that we hand to the committee for consideration. Clearly it is not a log of demands. It is just our consideration of where we would like to see that go.

CHAIR—Thank you. Have you provided that to the secretariat yet?

Mr Fraser—That is here now.

CHAIR—Can we get copies of that data, please?

Mr Fraser—We only just completed it. They are yours.

CHAIR—I put it to the subcommittee that we accept that as sufficient for publication. It is carried.

Mrs Henry—This has just come to light to us. Andrew Hopkins, who was on the board of inquiry, has included in his book *Safety, Culture and Risk: The Organisational Causes of Disasters* the F-111 deseal-reseal situation within the Royal Australian Air Force. We have been calling it a disaster for years and now it is in print that this has been Australia's largest military disaster. We also ask that this committee look at it in that light and allow our members to get the justice that they deserve.

CHAIR—Can you just tell us the title of the book again.

Mrs Henry—*Safety, Culture and Risk: The Organisational Causes of Disasters* by Andrew Hopkins.

Mr Fraser—We should be able to get the ISBN.

CHAIR—That is okay. I am sure we will be able to locate it from that. That concludes your opening remarks?

Mrs Henry—Yes, it does.

CHAIR—Thank you for that. There are a number of points you have raised and related issues that I am sure members of the subcommittee will want to seek your thoughts on. I will go to one of the matters you touched on—the Coxon study on the psychological effect on family members. In its conclusion, they said:

The results of the study indicate that there are significant deleterious effects on the psychological functioning of spouses of individuals involved in the F-111 Deseal-Reseal program as a result of the program itself.

You mentioned limited support that family members have received to date. What sort of support do you think is most useful for those families who have suffered the sorts of psychological difficulties that the Coxon report identified?

Mrs Henry—We definitely need group counselling. Part of the difficulty of this for the first 10 years has been isolation—that one of the spouses has been handling it at home in isolation. We need to be provided with the ability to meet together and have psychologists who are versed on partners of veterans—the Vietnam veterans is a possibility—to assist us with coping skills for dealing with the effects on these members. We need to have respite. We desperately need to have respite. It is not forthcoming. That should also be a group respite as well so that we can just get

away even for two to three days. We can get away from our environment and have our partners cared for in that time so that we can just get some time out and get some space to recharge our batteries. I think they are the first two priorities.

CHAIR—Thank you.

Mr Fraser—There is also the recognition of the issues that our partners have faced over the years. Clearly under the DVA they are not entitled to anything. But there is absolutely no doubt that our spouses have suffered terribly psychologically. That leads on to the physical aspects of the suffering for many of them. Currently they are a group of people that have no access to any justice at all for the pain and suffering inflicted upon them.

CHAIR—When it goes to issues of how the system can cope with this—you were here yesterday and you will know from earlier occasions—there is a list of symptoms identified. They do not lend themselves to identification according to recognised diseases. The system is geared to treat diseases rather than symptoms. You are very familiar with the obstacle that that presents to the people you represent. In terms of dealing with that, I know there have been suggestions made in previous hearings and other submissions about whether we use the VEA or the SRCA. The timeframe of the work covers both. I would be interested in any thoughts you have in respect of that. I know VEA section 180A has been mentioned. It is something that has been explored. You may be aware of the advice from Defence and/or Veterans' Affairs that that presents some difficulties from their perspective. The provisions for those who receive the ex gratia payment gives them easier access to the provisions of the SRCA. I would be interested in your thoughts about the most appropriate vehicle to best address the sorts of concerns that you and those you represent have confronted.

Mr Fraser—Nothing we see from within the Department of Veterans' Affairs offers any real solution to our problems. I receive the ex gratia payment. In theory, I had easier access to compensation yet I am due to go to the VRB to argue much of my case, which has been rejected by DVA and primarily because there is no disease associated with the symptoms from which I suffer and from which many of the desalers suffer. So, based on that, there is nothing the department has within its current framework that can work for us. What is the answer to this? For 10 years we have said that DVA does not meet our needs. It still does not meet our needs. I see maybe we need to have some legislation specifically to deal with the desal-reseal situation because it is so complex and so difficult to nail down the actual problems that we as a group suffer from.

Mrs Henry—Having said that, if we had to choose between them, we would elect section 180A, which can be activated because we have civilians involved who are not receiving compensation from WorkCover or ComComp. In the military compensation system, there are actually four acts that apply to our personnel. They vary from, 'Yes, we can recognise your condition but we have no provision to make payment' to the current act. So under the military compensation, even with the ex gratia, it is not necessarily the SRCA that the personnel are being determined under. They are going back to the 1971 act when DVA deems your initial exposure, which could have been 1979. That puts you under the 1971 act, which provides no payment for psychological injury or for the diseases but only for a loss of arm, leg, eye or ear. So ideally it would have to be VEA. We would need to instigate a special provision under section 180A to acknowledge the civilian employees.

CHAIR—You may be aware of the submission we received from Defence and Veterans' Affairs. It is publicly available. If you have not seen it and wish to, the secretariat can make it available for you. On that point, the departments' submission to the committee is that that would not be an appropriate vehicle. I am paraphrasing them, but I do not think I am doing an injustice to the submission. There are plenty of representatives here so I am sure they will correct me shortly if they believe I am. They make the point that those provisions have only been activated on one other occasion and that it is a very special provision which, when it was put in place, was specifically stated to be for unique and special circumstances. I guess you would argue that this is one of them.

They also make the point that were it to apply to this case, it would afford a level of support not provided to any other service personnel on overseas active service. The one case that it has been applied to, I believe, is Vietnam. So the argument is that it would accord people who have never been overseas on active service a benefit that is not available to those on active service. What is your response to that?

Mrs Henry—My response is that, from what I understand, previous section 180A was actually a payment made to the children of Vietnam veterans who had spina bifida and cleft palates.

Mr Fraser—If you look at the political situation and the imperative to have these aircraft desealed and resealed and serviceable, although we had no declared war with a northern neighbour, these aircraft were required as a deterrent against that neighbour. Whilst we were not in a warlike situation, we were certainly pushed into a situation that was clearly vital for the defence of our nation at the time. A number of desealers do have qualifying service. All servicemen engaged in the activity of the service are doing it in the defence of their country, whether they are on active service or not. The simple fact is that with the F-111 deseal-reseal case, we were placed at unnecessary risk and exposed to chemicals for an operational requirement.

Mrs Henry—I want to state in addition that the Repatriation Medical Authority and the entire Veterans Entitlement Act does not appear to have provision for the biological, toxicological or chemical effect of technology that has rapidly increased in our Defence Force and others since the late 1960s. That needs to be addressed. Provision needs to be made for that. The whole purpose of the Australian Defence Force was to stay technologically on the edge. Providing a brilliant service—Army, Navy and Air Force—and the best technology brings risk to the workers. Therefore, that risk needs to be addressed. If ours is the catalyst for that, it has to be done. If it is not us, it is Iraq or it is Iran, Afghanistan, Somalia or Timor. This is the 2000s. The provisions are still reflecting 1950 and 1940. We need to bring the DVA and veterans entitlements into line with current actions in the military.

Mr KELVIN THOMSON—I am somewhat new to the inquiry so you might excuse me if I ask questions that have been asked before. How many people are involved in your organisation?

Mrs Henry—We have 400 members plus their partners and children.

Mr KELVIN THOMSON—And how many of them are deseal-reseal program personnel?

Mrs Henry—Approximately 320. The rest are pick and patch or ancillary firefighters or suppliers.

Mr Fraser—Attendants and so on.

Mr KELVIN THOMSON—And what is the nature of your interaction with other veterans representative bodies?

Mrs Henry—We have had a very good rapport with the RSL, Vietnam Veterans Federation, Vietnam Veterans Association and the Defence Organisation. They have assisted us. They have petitioned. Those on the national advisory committees have assisted us. The feeling from many of them is this is Agent Orange all over again, and they want to see it fixed.

Mrs MARKUS—You talked about counselling and what you have received up to date not being sufficient. You have talked a little about that. Could you talk a little further about what form, how often and who you would see having access to it? Obviously there are spouses, but there are children and so on involved. Could you just clarify that in a little more detail.

Mrs Henry—Certainly. The current provisions of the health care scheme allow for group 1 participants and those who have been identified as those who entered the tanks. They are group 1 participants. Their partners and children are classed as group 2. They are entitled to five sessions of counselling. Originally it was through a psychologist. Now it has to go through VVCS counsellors. You can also have three sessions of genetic counselling. So if you need more counselling from that, you must apply back to the health care scheme to get permission to have more counselling. Each one is done on an individual needs basis. However, those of us who have been to our own counsellors are now being told we have to go to VVCS counsellors. That is, 'Let's start all over again.' When you have been to a psychologist and you are just starting to get trust in them and having to change and go through your whole story again, it is too hard.

Mrs MARKUS—So what would you like to see happen?

Mrs Henry—I would like to see the same sort of system that they have with the Medicare system, where you are entitled to 20 sessions and then you can seek more. The partners definitely need more than five sessions. Group sessions for the children might be good to break the ice for them. I do not believe that a lot of the children are confident enough to want to talk about it. I know the partners of veterans in the Sunshine Coast set up a camp for the children of Vietnam veterans. It brought them all in without parents and gave them a weekend. They went away from that weekend understanding what their parents had been going through and were then prepared to have counselling. That may be an initial requirement for all the children because they are varying in age from their 30s down to some that are babies, because our age group has changed so much.

I think we probably need psychiatrists or a hospital program or many hospital programs, because we are scattered around Australia. Cognitive behaviour therapy, I believe, is not available to you unless you have private health cover. That is something that would need to be considered for the wives. Greenslopes, apparently, has a very good program, as an example in Brisbane. Other repat hospitals around Australia would probably have them too. Does that help?

Mrs MARKUS—That is fine. Thank you for that. You talked a little about respite. I am asking for a little more detail, Mrs Henry. What would that respite need to look like? Respite services can vary in terms of what they look like—what is provided and who has access to them.

Mrs Henry—Currently, the provision of respite for carers in Australia is that carers are entitled to 21 days respite a year. Your partner goes into hospital or into an aged care facility. Our partners are not old enough to go into an aged care facility. However, what we as a group of women together have seen as the ideal would be a lifestyle management course run by VVCS. There is one specifically for the F-111s. Not exactly that but the same format as that, which allows for two and a half days away together as a group to then receive coping skills on a group scale. So you have morning sessions of stress management, anger management, communication skills, how to use your team of doctors and counsellors and friends and family and things like that. But there is also provision for walking, relaxation and a pampering session. I know from experience that if you can get away for two days, it really is as good as six months. So it keeps you going for that time. So it is not a long-term respite that they would need, but they would need it regularly every four to six months just for a couple of days.

Mrs MARKUS—So what about the care for the person that you have been caring for?

Mrs Henry—To care for that person—

Mrs MARKUS—You mentioned that obviously aged care you did not think was appropriate.

Mrs Henry—Well, aged care facilities are not appropriate for people in their 40s, really. However, there are organisations such as Spiritus, Blue Care and RSL Care, all of whom are funded by government, that come in and do in-home respite. They could be approached to do it for that period.

CHAIR—Are there any other matters that you want to put on the transcript while we are here? I know we thought we had finished public hearings last year, but I am very confident this will be the last hearing. So if there are some matters that you want to put on the transcript before we conclude, now would be the time.

Mrs Henry—I would like to very much thank the committee. I would like to very much thank the government, the minister and all of the committee here for activating this parliamentary inquiry. I hope that you have a better understanding of the battlefield we have been in for 12 years. Government ministers have previously said it is a very complicated and complex issue. I think that is probably the understatement of the decade. We have had to live it. We would like to see it—I know it is a mountain of work for you—sorted out.

CHAIR—I think one of the key difficulties, though, is going back to that question I asked before about the disconnect between symptoms, which we can identify and record and know about, and a compensation structure, whichever act you pick, by and large, which relies nearly exclusively on internationally recognised disease classifications. Those two do not come together very comfortably. I wonder if there are thoughts that your group has about dealing with that. I know you mentioned section 180A of the VEA as one way of, in a sense, circumventing that. I understand that. If there are thoughts that you have in addressing that dilemma, I think we would appreciate them. So if a light bulb goes on tomorrow when you are back in Brisbane or

Ipswich or wherever, please feel free to contact the secretariat. If there are no other questions from subcommittee members and you have no other statements, I thank you again for the work you have done and your willingness to participate productively in our efforts to try to find some way through this. Thank you.

Mrs Henry—Thank you.

Mr Fraser—Thank you.

CHAIR—For the purposes of the committee secretariat, who has some work issues, we will suspend the hearing for 10 minutes only. We will resume at 11.20 am.

Proceedings suspended from 11.09 am to 11.20 am

BROWN, Air Vice Marshal Geoffrey, Deputy Chief of Air Force

COLLINS, Mr Gary, Acting Deputy President, Repatriation Commission

DANEK, Mr Stefan, Defence Scientist, Department of Defence

DOUGLAS, Mr Ken, General Manager, Service Delivery Division, Department of Veterans' Affairs

FARRELLY, Mr Sean, National Manager, Compensation and Income Support Group, Department of Veterans' Affairs

GARDNER, Dr Ian, Senior Consultant in Occupational and Environmental Medicine, Department of Defence

LAWSON, Group Captain Robert, Officer Commanding Strike Reconnaissance Systems Program Office, Defence Materiel Organisation

LYSEWYCZ, Mr Michael, Acting Assistant Secretary, Legal Services, Department of Defence

TELFORD, Mr Barry, General Manager, Policy and Development Division, Department of Veterans' Affairs

WILSON, Ms Eileen, Epidemiologist, Strategic Research and Development Section, Department of Veterans' Affairs

WINZENBERG, Mr Roger, National Manager, Rehabilitation, Research and Development Group, Department of Veterans' Affairs

CHAIR—I welcome representatives from the Department of Defence and the Department of Veterans' Affairs. Thank you for your appearance before the subcommittee today. As you know, the subcommittee does not require you to give your evidence today on oath, but I do advise you that these hearings are legal proceedings of the parliament and therefore have the same standing as proceedings in the representative houses. As with a number of other witnesses, I know that the committee is very appreciative of the time and effort that you and your staff have applied to this task in assisting the committee in previous hearings and in between hearings. As chair, I am personally grateful for that cooperation and support. At the outset, are there any opening comments that you would wish to make?

Air Vice Marshal Brown—Mr Chairman and members of the subcommittee, Defence is grateful for this further opportunity to assist the committee in finding a resolution for personnel and their families whose lives have been so deeply affected by the F-111 fuel maintenance program. I would like to reiterate Defence's commitment to helping this committee find solutions. I think firstly it has to be acknowledged we have not always got it right. The outcomes of the research commissioned by Defence into the psychological functioning of partners and

spouses of the deseal-reseal personnel was not communicated to the people affected. There were no communications planned for the results of that research, with Defence intending that the report would be provided to the Department of Veterans' Affairs for their consideration in the ongoing health scheme. The report was not provided to DVA until 2008 even though it had been received by Defence in 2006. It was in the process of this inquiry that it was brought to our attention that the report had not been received by DVA as we had intended. The committee will recall that an expansion of this study was raised as an option in the previous joint submission by Defence and DVA.

However, I think an example of Defence's commitment to finding answers is the work of Professor Bowling, who gave evidence yesterday. Defence first began funding that research in 2004. The results that Professor Bowling spoke of yesterday were the results of the third stage of tests, which have now identified a scientific hypothesis for personnel exposed to fuel and solvents. That hypothesis requires a larger scale trial. Defence is now investigating the best way to take that research forward. This cutting-edge research into mitochondrial disease was commissioned by Defence as a first step into seeking out the underlying causes of some of the health problems by F-111 maintenance workers. It is still early days, but it may provide some answers to help not only affected F-111 workers but also workers from a variety of industries with exposure to petrochemicals and solvents.

I also understand that the subcommittee has further questions about aircraft maintenance, documents and technical maintenance plans. Group Captain Rob Lawson, the officer commanding the strike reconnaissance system program office for the F-111, is present here today to assist. We have provided to the committee an overview of the technical maintenance plan for the F-111 and examples of the kind of maintenance documents that exist. Also present is Dr Ian Gardner, the senior consultant from the Defence centre for occupational health, to assist with questions on medical studies and Mr Michael Lysewycz, the assistant secretary of legal services, to assist with any questions on civil claims that are being progressed through a settlement program.

The focus for Defence remains on closely working with DVA to help our people who have been affected by their work in F-111 fuel tanks, including access to just compensation and appropriate health care. We welcome questions from the committee. Thank you.

Mr Telford—Firstly, I apologise for the deputy president of the Repatriation Commission, Gary Collins, who has been delayed at another function. He will be here hopefully in the next 10 minutes or so. I apologise for his delay. Our chief legal officer, who appeared at the last hearing, is not available today. If there are any particular legal questions, we would appreciate taking them on notice if we are not able to address them. We share Defence's commitment to finding a solution to these problems going forward in line with Air Vice Marshal Brown's comments.

CHAIR—Thank you. There are a range of matters that I think we need to address during today's proceedings. Some of them have been matters of information that has been provided to the committee since we were last in a formal hearing. It might be easy if I just go through some of them to commence with. The maintenance procedures and documentation for the F-111 were sought and provided. There was some suggestion provided to the committee that these documents would detail the trades required to undertake specific tasks and that personnel documents in the E500 series would provide the specific details of which individuals had done

what work on aircraft. I think for the record it would be useful if we could clarify exactly what in fact those documents do provide. I am happy if you make a statement about that, or I can ask some specific questions. In terms of the information that those records that I mentioned provide about either trades in detail that would be undertaking activities or, in the case of the E500 series, the names of individuals who would have undertaken specific work on given aircraft at given times, how would you describe the information those documents provide?

Group Capt. Lawson—The package of information I have provided you outlines, firstly, how the maintenance policy for the aircraft is defined and then documented. Part of that process identifies the particular trade groups with responsibility for particular scheduled or unscheduled maintenance tasks. So that gives you an outline of the trade group responsibility basis of the types of skill sets and the groups of individuals that would be drawn from within the squadron to perform those particular tasks as they arose.

The EE500 documentation and the planned servicing schedules are the primary means by which performance of maintenance is recorded. Those documents capture the trade group and the details of the individuals who certified for the performance of the task or for the progressive inspection, if it is a task that is required to be checked by a trade supervisor. Then there is a third level inspection, if that is necessary, mainly for critical flight issues. The EE505 is the form within those work packages that captures the details of those individuals and their specimen signatures so that when you are reviewing the performance of maintenance at the end of the servicing, for example, you can correlate the initials in the relevant certification area with the individual that actually certified the performance or the checking of that maintenance.

CHAIR—Just to clarify, they identify the person certifying? They do not necessarily identify the range of people who are actually engaged in doing the work?

Group Capt. Lawson—No. For tasks that may have involved a number of tradesmen, even a number of trade groups, there is only one tradesman who certifies for that maintenance in the maintenance documentation. So the EE505 will not capture all of the people who are involved in that kind of a task.

CHAIR—I am not being critical. Just so we are clear what we can and what we cannot determine, it is not only that they do not identify all the people; they identify only one, really. Do they not identify the person who certified it?

Group Capt. Lawson—Those who certified the maintenance, yes.

CHAIR—In all likelihood, from what we know about how the work was done and so on, most of the people who would have worked on a particular project in pick and patch or repair work would not be noted?

Group Capt. Lawson—A fuel tank repair, in fact, is a classic, where there would be multiple individuals involved but normally only one certification per step of the maintenance task.

CHAIR—Thank you. Are there any other questions in respect of that material?

Mrs MARKUS—It is understood that the records only exist after 1992. Is that correct?

Group Capt. Lawson—That is correct, yes.

Mrs MARKUS—Obviously we have talked just briefly now. But with the EE500, can you just clarify again the difference between the EE500 and the 505?

Group Capt. Lawson—The EE500 is quite a thick document that lives with the aircraft. Wherever the aircraft goes, it goes. It is probably best if I work through an example to show you how the system of the EE500 documents all fit together. I will use the example of a routine servicing schedule for the aircraft at, say, 200 airframe hours. The fact that the aircraft is due for that servicing will be recorded in the EE500. We call that ‘Using the aircraft’ in the EE500 for the purposes of a routine servicing level number 2 to be carried out.

What happens is the maintenance control section will raise a work package. That work package will consist of an EE505. It is blank at the time that it is issued. That is the form where the guys who get involved in the maintenance certification process enter their details and sign off. There will be some EE508s, which are in there for the purpose they may document some unscheduled maintenance task that needs to be performed. While the aircraft is offline for routine servicing, there might be modification, for example, that needs to be incorporated as well. That will be captured on the EE508 so that the technicians who will be performing the servicing know that they have that additional task to perform. Behind that will be all of the planned servicing schedule sheets for the routine servicing itself. So that work package is issued. As the guys step through and perform the maintenance, they certify and sign it off. When all the tasks are complete, that completed work package goes back to the maintenance control section, which double-checks that no tasks have been missed. The EE500, which is the pack that sits with the aircraft, will then be signed off as the R4 servicing having been completed.

Mrs MARKUS—Is there any other form of records that would identify these particular personnel as engaged in this task?

Group Capt. Lawson—As far as listing every person who had been involved in the task, no, not within the maintenance record system. Only those who are certifying maintenance personnel will be captured.

Air Vice Marshal Brown—It is probably worth saying that the design of the documentation was around making sure the maintenance had been performed rather than who had done it.

Mrs MARKUS—I understand.

CHAIR—There is a pretty useful summary document of a range of research undertaken that Mr Danek provided a report on. I want to ask some questions arising from that. Mr Danek, thank you for the report you did, which I think is a very useful summary of a range of research on issues associated with the issue at hand. I will just go through your report.

Mr Danek—Before you do so, Mr Chair, could I please make an opening statement?

CHAIR—By all means. I should have given you that opportunity.

Mr Danek—I was waiting for it. I would like to be able to take the opportunity of putting my report into its context. I have worked with the coatings and sealants technology group with the DSTO for the past 15 years. Since the RAAF's acquisition of the F-111 aircraft in the mid-1970s, the Defence Science and Technology Organisation has provided scientific and technical assistance and support to the Air Force on F-111 sealant related issues. The poor hydrolytic and thermal stability of the OEM polyester sealant used to seal the F-111 fuel tanks and its early degradation in service leading to fuel leaks has been well-documented. When the problem of the fuel leaks first arose, DSTO mobilised a team of scientists headed by Dr Brent Paul, now retired, to undertake scientific and technical research to understand why the sealant was in fact failing and to investigate ways in which the integrity of the F-111 fuel tank sealant system could be restored.

A substantial corporate scientific and technical knowledge base on the F-111 fuel tank sealants was subsequently built within the DSTO over many years. When the fourth reseal program was halted in January 2000, DSTO was asked to provide technical assistance to the investigating officer appointed by the Air Force to examine existing spray seal procedures and hazards. DSTO continued to provide technical assistance to the board of inquiry when it was appointed in July 2000. Numerous reports from various subject matter experts were commissioned by the board of inquiry, including a toxicological assessment of deseal-reseal chemicals, the resistance of personal protective equipment, such as gloves and overalls, to various selected chemicals, the monitoring of airborne contaminants during specific processes associated with the deseal-reseal programs and the modelling of potential exposure or potential airborne contaminants of these same chemicals.

DSTO was then approached by counsel assisting the board to summarise these often lengthy reports and to provide a concise document to the board. I accepted this task and produced what is referred to as the Danek report, which is included in volume 2, part 1, chapter 7, annex D of the board of inquiry final report. I wish to emphasise that my professional background is that of an organic chemist. Through my work with the coating and sealants group at DSTO, I have built a wide working knowledge of many of the chemicals, products and processes employed in painting and sealing aircraft. I am not, however, a toxicologist or an occupational hygienist. My role in preparing the report was that of an editor to bring together the key facts and findings reported by other subject matter experts in the numerous reports commissioned. So I am here today before you as an editor and to answer any questions you might have on the content of my report. But I may not be able to answer anything that is outside my area of expertise. If the chair will allow, I would like to give you a brief indication of the structure of my report.

CHAIR—Yes.

Mr Danek—Initially, apart from providing a very brief introduction to toxicology, a 101 toxicology introduction, the aim was to identify the toxic materials that we use—all the products that we used in the deseal-reseal program and from the material safety datasheets and the composition of the products indicated therein to identify the most hazardous materials employed in the various deseal-reseal programs. Some 15 separate products were employed in the first and second deseal-reseal program. Thirteen products were employed in the wing deseal-reseal program and six products were employed in the spray seal program. All together, looking at all those, there were some 60-odd hazardous materials identified as having been employed throughout the four programs.

From these, the toxicologists identified the 12 most key risk materials. We saw that yesterday afternoon. Based on those key risk chemicals, we went back to look at and identify what were the highest risk formulations. I tabulated in my report nine formulations that we used in the various programs in order of their risk factors. They were assigned a risk factor of between one and nine. The highest nine I have indicated, and I then pursued those further.

The way the report was structured was to look at the composition of those formulations or report those compositions in my report; to look at what the state of scientific knowledge was with respect to the exposure standards of those various elements making up that formulation; and how that state of knowledge actually changed over the period of the programs. I reported on the toxicity of the individual components and looked at the work environment hazard to our deseal-resealers for the various workplace scenarios, including inhalation risks and the like. I also looked at the potential for skin absorption risk where that was available. Based on that, I tried to give some sort of estimate of what the significance was to the RAAF personnel employed. I am happy to field any questions you might have on my report.

CHAIR—Thanks very much for that background. It may be that the first question I have falls into that category that you want to flick-pass. But it is actually the risk ratings. You made reference to that. There are three substances you identified with a high risk rating. They had a maximum of nine. Just so I can get it clear, is the scale of one to nine purely a scale comparative of the substances under consideration, or does nine tell me not simply that it is worse than eight and much worse than one? Does nine tell me it is actually dangerous—that is, it is an absolute, as it were, rather than a relative assessment?

Mr Danek—It is considered as both a relative and an absolute risk rating based on the likelihood of exposure to those chemicals.

CHAIR—I understand exposure is a factor in determining the risk ratings. With a rating of nine, SR-51 gets a guernsey.

Mr Danek—It does indeed.

CHAIR—I am wondering which literature you were looking at to give it that rating when you would have heard this morning evidence that it does not have carcinogenic effects. That does not mean it is good for us. But I am just wondering how that rating came to be.

Mr Danek—Those ratings were put together by Miller and Connell in their report on the toxicological assessment of deseal-reseal chemicals. So I took that from their report and presented it as such. But it is interesting that you ask about the SR-51 because I have prepared a summary that, if the board will allow, I would like to present.

CHAIR—Please.

Mr Danek—In many ways, it agrees with the comment you made. SR-51 and SR-51A are just variants of each other. There is a high concentration of the thiophenol in the latter. But the key points I take away from that are, firstly, it is a brew of four separate chemicals. Thiophenol is somewhere between 5 and 15 per cent, depending on the formulation. Then you have the

petroleum solvent traction, which is up to 80 per cent of the formulation, and then a number of others.

The chief function of the thiophenol in this whole desalant is to actually digest, if you like, the sealant. If you like, it is a pair of scissors cutting up a long rope into small pieces. It goes from being a fairly solid rubbery material to something that is quite fluid or relatively fluid. The other materials in there act as chemical softeners to allow that thiophenol to get in and do its job. What you end up with is a sludge, I guess, of digested sealant, which is largely terminated with phenyl disulphide bonds, or phenyl disulphide groups.

As was mentioned earlier today, the thiophenol has a highly objectionable odour which is indicative of its class of compounds of being a thiol. Everyone who has worked with it will vigorously attest to that. As also reported earlier today, the odour threshold for thiophenol is 0.3 parts per billion. As correctly indicated, that is over 1,000 times lower than the workplace exposure limit that is current now as well as what was current back in 1978.

With respect to workplace toxicity, the US Library of Medicine database for thiophenol notes that thiophenol has been used in aircraft maintenance and production without any reports of chronic effects. That was noted at the time of the board of inquiry in 2000 and 2001. It was also correctly mentioned that there was a study undertaken by DSTO by Dr Brent Paul and Peter Hanhaller. They looked at SR-51 residues upon storage. They found that very quickly the concentration of the thiophenol in that sludge drops away once it is taken out of the tank and it goes into storage. They also correctly pointed out that there is some sort of oxidation process and autoxidation process which actually speeds up during this storage time. So after storage for about a month, essentially no thiophenol was detected by our laboratories, or extremely low levels were detected.

So if you put that into context, the risk associated with SR-51 was not so much with the thiophenol in the residues during their incineration, storage and disposal but possibly more with virgin SR-51 when it was being placed into the fuel tanks or when it was being removed from the fuel tanks and then any leakage of that SR-51 desalant during the time of the digestion. I also note from the various reports that the dominant pathway to exposure to SR-51 components is most likely to be inhalation of vapours. Various modelling was undertaken. Models are always difficult because numerous assumptions have to be made which may or may not be correct. But, still, you have to start somewhere and it is indicative of what you might expect. The modelling undertaken by Miller suggested that significant overexposure to thiophenol may have occurred in the rag hangar if suitable breathing protection was not worn at the time. I should also say it would have occurred if there was sufficient spillage. He noted about 0.2 per cent vapour loss at the time or if a major spillage occurred, particularly on a hot day.

There was also a chance of overexposure with entering fuel tanks post draining of the SR-51 and when suitable breathing protection was not worn. Perhaps from that perspective and an understanding that a concentration of the thiophenol in that digestion decreases with time during the disposal process it is likely that exposure to the various solvents in that formulation may be more of an issue than exposure to thiophenol itself.

CHAIR—So why is it dangerous?

Mr Danek—Why is it dangerous? I do not have the details of the toxicology information that I included in my report, but it indicates in there why it is a toxicant.

CHAIR—If it is not too much trouble, if you are able to locate that and provide it to the secretariat, I would appreciate that.

Mr Danek—If you like, you could locate it fairly promptly now.

CHAIR—Perhaps after—

Mr Danek—Okay.

CHAIR—because there will be a time, I am sure, while other people at the table are fielding some questions. Again, on your report, the report refers to the effects and presence of methyl ethyl ketone. Whilst, again referring to O'Connell and Miller, they identify a worst case scenario, you do point out that the levels inside the tank would be approximately 25 to 100 times the exposure standard. To a lay person, 25 to 100 times an exposure standard sounds pretty unfriendly. How should I interpret it?

Mr Danek—To interpret that, I would suggest, firstly, we look at the assumptions that were made. As I said to you, we have to start somewhere. Whilst I do not have the details immediately to hand, I think the comment was made that it could be up to 100 times in certain scenarios. I believe that is zero ventilation of a fuel tank and then assumptions of a certain large usage rate of the methyl ethyl ketone. Nevertheless, whether it is 100 times or 10 times or five times, it is still a very high risk activity to undertake chemical or solvent cleaning inside a fuel tank in the absence of any ventilation and without wearing appropriate breathing apparatus.

CHAIR—Again on MEK, at paragraph C62, you note that SIMTARS also assessed the concentration of MEK during typical equipment cleaning activities. The levels of MEK were found to be extremely high, with an average concentration exceeding the TWA by a factor of 15. Again, as a layperson, that sounds to me like an unpleasant place and something I should avoid.

Mr Danek—Absolutely. One has to be aware that MEK is a very, very volatile solvent. It has a very low boiling point so it evaporates very, very quickly. If you are using copious amounts of methyl ethyl ketone in any cleaning processes, and particularly if you have a large surface area of the solvent exposed, evaporation rates are going to be quite high. In the immediate vicinity above the pan or wherever you are working, the concentrations will be very high. SIMTARS recommended, rightly so, that any cleaning activity should be undertaken in a fume hood.

CHAIR—You have also referred to some of the research on the personal protective equipment and the gloves and the coveralls. It does not paint a very comforting picture when some of the chemicals cause the protective clothing to disintegrate within seconds and other protective clothing degrades dramatically within minutes. From memory, the recommendation was that they should not be used, as it were, for a second shift. Although the advice we have had from many people engaged in the activities was that if they had any protective equipment at some points in time, it was a bonus. They certainly did not get issued with new ones every new shift. What is your understanding of the effect of the chemicals on the protective clothing and equipment that was available?

Mr Danek—I am aware of the tests that were undertaken on the protective equipment that was employed during the spray seal program. I think it is difficult to get information on what was actually employed in the earlier programs. I think you indicated, or I have read reports, that either PPE sometimes was not available and they had to make do without or they had to make do with inappropriate dust masks, for example, rather than canisters and items like that. So I will restrict myself to answering your question with respect to the fourth program, the spray seal program.

The Tyvek Barrier Man coveralls, which were employed in that program, yes, they had very poor resistance to methyl ethyl ketone and to toluene, both of which were in the formulation of the primer MMS-425, which was employed in that program. In fact, the test undertaken by David Bromwich showed that there was an almost instantaneous breakthrough of the solvent through those coveralls. That is not surprising when one looks under a microscope or even with the naked eye. You could see what appeared to be almost like air pores to allow the coveralls to breathe somewhat. It was a very, very thin protective layer of plastic over whatever the substrate was underneath.

With respect to the gloves, the nitrile rubber gloves that we used in that program showed that they had a breakthrough time of methyl ethyl ketone of the order of four minutes. If you are using those gloves to undertake cleaning processes or cleaning activities in the fuel tanks and you are holding wet rags or rags wet and dripping with MEK, clearly that is not acceptable. If you were undertaking programs of perhaps even spraying, it may have been okay, depending on the residence time of the material on the gloves. But, in any event, the butyl rubber gloves should have been used in the first place. You indicated that there is some consideration given as to whether they should be used a second time. Bromwich's investigation into that looked at continuous immersion of those gloves in methyl ethyl ketone solvent, which is something that you are not going to have occur in any of the programs. At worst, it would be holding damp rags for some period of time and then cleaning inside. But, beyond that, in any of the spraying processes, you would not come across that.

CHAIR—There is a point that is made elsewhere in your report at paragraph C162. It says not only can coveralls act as bellows, but the absorption rate of chemicals by hot skin can be considerably higher than that by cool skin.

Mr Danek—The temperature effect again.

CHAIR—Again, tell me how we should interpret that.

Mr Danek—The way to interpret that is, again, to ask: what does it all mean? We have someone inside a tank. They have either torn their coveralls or they may have had a breakthrough because of exposure to some solvent. As a result, there is a gap. As they move, it draws air from outside in closer to their skin. So the coveralls are no longer providing a barrier, but it is allowing movement of what might be air that is heavily contaminated with any of these solvent vapours into close proximity of the skin. When skin is warmer, as I understand it, the rate of dermal absorption increases.

What effect that might have is difficult to determine. Miller attempted in some places to try to put a figure. In worst case scenarios, what will happen if, for example, 100 per cent of your skin

was exposed to that amount of solvent vapour or at a certain concentration? I believe his conclusion was that it was not particularly significant under most circumstances if very highly concentrated vapour was exposed to 100 per cent of the skin. He took it up to three times, I think, the reference dose. But really that is a worst case scenario and very unlikely to occur. Nevertheless, it does demonstrate to the subcommittee and everyone else in the gallery the complexity of trying to work out what the exposure of our workers may have been over the years. When you have the potential for inhalation exposure, dermal exposure and, as was testified this morning, licking your finger and rubbing over a seal, you have gastrointestinal effects.

CHAIR—We have seen photographs of people working inside the tanks in Stubbies shorts and nothing else.

Mr Danek—Absolutely.

CHAIR—And anyone who has actually worked in a factory environment in south-east Queensland in the middle of summer under a tin shed can identify with that, no matter what the warning might be about the nature of the environment you are in. So I am not quite sure whether it is better to have protective clothing that disintegrates in minutes or acts as a bellows or to be there in a pair of Stubbies shorts. I do not know that that is a question. But it just strikes me as a bad choice to have to make. Are there any other questions on Mr Danek's work?

Mrs MARKUS—Considering that the men were in Stubbies shorts, or whatever clothing they did have, I am assuming they would have had to be washed. Given the nature of the chemicals, would your understanding inform us about whether they could indeed have been washed out? I assume they would have been washed. In normal washing, would these chemicals remain in their clothing? I am just thinking about continued exposure given that they would put the same clothing back on.

Mr Danek—It is a fair question.

Mrs MARKUS—Of course, it is returned home, where other people may have exposure to it.

Mr Danek—I will begin by pointing out that whilst I mentioned there were some 60 hazardous materials identified as being used throughout the programs, a formulation for a sealant or a formulation for a paint may contain up to a dozen. In our particular case, 10 is the highest number that were identified in the material safety datasheet. Of a number of those hazardous materials that were identified in the MSDS, whilst they may be hazardous as powders and may be fillers—the silicas, or whatever, in the actual seal formulation, for example—they are chemically fixed. They are no longer powders, so they are no longer considered a hazard. When the sealant cures or the paint cures, you also have to understand that various chemical processes occur which lock what is a hazardous material into place so that it is no longer hazardous and becomes benign.

A classic case of that is for the isocyanate, for example, present in the PR-2911 sealant. Isocyanates are hazardous materials, but when they react, you get a different chemical entity when they crosslink and they become urethanes or ureas. They are no longer hazardous. So when

polysulphide sealants continue to cure, you end up with disulphide links. The whole thing progresses and you end up with a cured, hard, rubbery material.

If your clothes are contaminated by solvents, very quickly they evaporate. So what might occur, then, that would enable contamination to build on your clothes from time to time and continue to cross-contaminate, if you like? That is difficult to answer given what I have just said to you. In some cases, where you are using some chemical such as chromates, which is present in the MNS-425 primer, for example, any overspray that may fall on your clothes is a high risk contaminant because it is a very fine powder and you can readily contaminate by transferring it to the hands. If you do not wash before you eat, you can ingest. There are very, very tight controls on the exposure standards for chromates now. Chromates are a chromium 6 material. Chromium 6 is hexavalent chromium, which is a suspected human carcinogen. Over the last 20 years, the exposure limits have gone from a very low level of 0.5 milligrams per cubic metre down to 0.001 or 0.0005 milligrams per cubic metre. So it has dropped by the order of 50 to 100. So there is the potential for contamination with that material.

But with a lot of the others, we may react, they chemically fix and they are no longer considered hazardous. The solvents evaporate. They are gone. They are no longer hazardous on clothes.

Mr ROBERT—I want to ask a question of DVA and get Mr Danek's response. Noting what you just said—and I think I follow it—in layman's terms I think you are saying it is highly unlikely for spouses to be contaminated from washing clothes. That is what I think you said.

Mr Danek—I did not say that.

Mr ROBERT—Right. Can you say it again?

Mr Danek—Whilst I did not say that, in most cases that would be a fairly valid conclusion to draw unless your clothes are contaminated with the material in which the hazard is not, if you like, made benign. We do not know a lot about, for example, the digestion products from the digestion of the polysulphide. From what I have read, it is expected that they are relatively benign. Yet we do not know because it is such a complex brew.

Mr ROBERT—Notwithstanding the many caveats, Mr Danek, you just put on the issue of whether indeed chemicals and solvents and so on can be transferred to washing clothes, I note that page 4 of the deseal-reseal report—and I will read it—says, 'We are also reminded that this week one partner has been paid compensation for washing the clothes of her partner and becoming sick also.' Can I get DVA to respond on that one line from the deseal-reseal report. Has compensation been paid for washing the clothes of a partner? If so, can you give me something on that? I will get Mr Danek to comment upon that.

Mr Farrelly—Has compensation been paid by DVA?

Mr ROBERT—That is the question I am asking, sir.

Mr Farrelly—No. Not to a partner in their own right. I take it you are referring to the James Hardie case?

Mr ROBERT—Yes. That is right, yes.

Mr Farrelly—That was a common law case. Common law matters are for the Department of Defence to deal with. Within the veterans system there have been no payments made on that sort of basis in this case.

Mr ROBERT—Mr Danek, are you across the James Hardie case with respect to the compensation paid this week for washing clothes that carried asbestos and other chemicals? Are you aware of that case?

Mr Danek—I am not. You are saying it is nothing to do with deseal-reseal chemicals?

Mr ROBERT—What I am saying is that there would seem to be compensation paid if indeed the Deseal/Reseal Support Group statement is correct that, within the James Hardie case, this week a partner was paid compensation for washing the clothes of their partner and becoming sick. I am just trying to reconcile—

Mr Danek—That was with contracting mesothelioma?

Mr ROBERT—I would suggest so.

Mr Danek—The only comment I can make on that is that it is well-documented that for some people exposure to only one fibre of asbestos may be sufficient to bring on the onset of that disease. That is about the only comment I can make on that.

Mr ROBERT—So is it correct to say that the chemicals we are talking about with the deseal-reseal group are very different to the fibres from asbestos?

Mr Danek—Well, fibres on clothes remain hazardous. Of the materials I discussed earlier, a lot of them become benign as they cure. So the hazard goes away.

CHAIR—That is probably all at this time, Mr Danek. Thank you very much for your evidence today and clarifying those matters and for the work which you did, which I imagine Defence and others found useful at the time it was commissioned. I certainly found it useful as well. Thank you.

Mr Danek—You are welcome.

CHAIR—Senator O'Brien has had to leave, but there is a matter he has raised with me that I will ask on his behalf. I guess it is principally to Veterans' Affairs. Have there been any occasions when compensation has been awarded to veterans or veterans' families specifically to compensate for the effects of chemical exposure on the veteran, the veteran's spouse or families? If there are, can we be provided with the details?

Mr Farrelly—I will provide the same answer on the assumption that it is a question about whether a spouse or a partner of a veteran has been specifically compensated in his or her own right. The answer, to my knowledge, is no other than as a war widow via the veteran's own condition.

CHAIR—Yes. I am not quite sure about the caveat ‘in their own right’. If we take, for example, the Agent Orange case, is that the partner getting compensation in their own right?

Mr Farrelly—There are some programs for children of Vietnam veterans for treatment of things like spina bifida.

CHAIR—Can you tell us about that?

Mr Douglas—They are administrative schemes provided by the government in recognition of health issues. They are not compensation per se under the terms of which the Commonwealth would administer compensation under either the Veterans Entitlements Act or the Safety Rehabilitation and Compensation Act and so on.

CHAIR—So what is the head of power if it is not the—

Mr Douglas—These would be administrative programs provided under appropriation as acts.

Mr Farrelly—In repatriation administration we tend to talk about things like the disability pension, the war widows pension and things like that as compensation and health care as health care, not compensation.

CHAIR—If we talk about health care as distinct from compensation as you have just defined it, what are examples of health care being provided to family members?

Mr Douglas—Well, the prime example is the one we have just mentioned, which was for the children of Vietnam veterans for the condition of spina bifida and acute myeloid leukaemia. Those people have been given access to treatment assistance for their conditions.

CHAIR—What are the criteria for access to that?

Mr Douglas—That they would have one of those four conditions and be the child of a Vietnam veteran who served in an area of exposure to Agent Orange. Another example is the access given by the government to the partners of Vietnam veterans for counselling services. A third example, of course, is the SHOAMP health care scheme itself.

CHAIR—I am not sure if anyone at the table or indeed in the room is able to assist with the next question. Those examples you gave of spina bifida and so on, for which payment is made, are they caused by—

Mr Douglas—Sorry, Chair, I want to correct you. They are not payments being made. Treatment assistance is provided.

CHAIR—When you pay for the treatment, I tend to think of that as a payment.

Mr Douglas—I am drawing a distinction between a payment made to an individual and a payment for a service rendered.

CHAIR—I understand that I am using common sense and not the department's definitions. I am sorry. I am not trying to be a smart Alec in saying that. It is just paying for the medical costs as opposed to providing a payment. I will try to get my mindset in sync with yours. When the medical bills are paid for spina bifida and those other things, those conditions for which that medical service is provided, are those conditions a product of damage to DNA or mitochondrial DNA? Does anybody know? The reason I ask is that you would be aware that yesterday we took some evidence about the question of whether or not exposure in this sort of work is linked to damage to mitochondrial DNA. The issue came up again this morning. We were advised that it is highly improbable for damaged mitochondrial DNA to be transmitted from the father to the child. So my question, which you may like to take on notice and we may pursue with some of the researchers who have separately provided advice to the committee, is about those conditions which Veterans' Affairs makes medical payments for now in respect of certain Vietnam veterans. If those conditions are produced as a result of damage to the DNA or mitochondrial DNA—and I do not know whether they are or they are not—how does that sit with the advice we were given that it is not possible to transmit those diseases from father to child?

Mr Telford—We will take it on notice. How this came about, Chair, was that as a result of the Vietnam veterans health study undertaken some years ago, these four conditions amongst the children were shown to be higher than one would have expected in the general community. The government decided, as Mr Douglas has outlined, to provide help for those four conditions.

CHAIR—Short of determining causation, the correlation was regarded as sufficient?

Mr Telford—Yes.

CHAIR—I think, Dr Gardner, you have joined us to help me in my dilemma.

Dr Gardner—I can answer that question in part. My understanding is the issue in relation to Agent Orange was a political solution in relation to the conditions that were given at the time. It is highly controversial even to this day. There is certainly no evidence that the conditions there are related to DNA damage. I would also like to point out that there has been frequent comment this morning about mitochondrial DNA. I remind the panel and the members that, on the mitochondrial DNA issue, the majority of cancer causing agents are not cancer causing because of effects on mitochondrial DNA. They are effects because of effects on the DNA on the nucleus of the cell.

The work that Professor Bowling and others have commented on is an emerging work of very specialist nature. He mentioned yesterday possibly 3,000 diseases of which only, I think, he said six or seven were actually listed currently in the ICD9 classifications relating to mitochondria. So this is rare. It is possible; I am not discounting it. But it is not the common cause of cancer causing agents. So from my understanding, the Agent Orange issue was a special solution to a problem at the time. It is still controversial as to whether, how and why certain conditions are in or out. But there is no evidence that it has worked, if it does work to cause those problems, through a DNA damage mechanism.

Mr ROBERT—Dr Gardner, on the issue of the four conditions for children of Vietnam veterans, when the study was done and the subsequent act of parliament was put through, do you

recall whether the cases of children with those four diseases was statistically significant or otherwise?

Dr Gardner—No. I did not have any knowledge of that inquiry. It was before my involvement with Defence. Again, you have raised the issue of statistical significance. It is important because it was raised this morning. Just because something is statistically significant does not necessarily mean cause and effect. All statistical significance means is that this is unlikely to be a chance finding at a certain level. It is not the proof positive, which I think one of the witnesses this morning talked about. In direct answer to your question, I do not have any specific knowledge of the inquiries into Agent Orange and other issues.

Mr ROBERT—It would be nice if we could find out, because you have made the point that you believe the piece of legislation—section 180A of the VEA—used in the case of these four illnesses in children of Vietnam veterans is the one time it had been used. You made the point that you thought it was a political solution. It would be interesting to know if it was statistically significant or otherwise.

Mr Telford—I will make one comment. 180A was not used in respect of these four conditions that we are talking about. The government established an administrative scheme in order to deal with those four conditions and the payment of health care associated with them.

Mr ROBERT—Yes. My understanding is that they put a piece of legislation through to establish that to deal with it. If someone could find out whether it was statistically significant, that would be helpful. We heard the professor speak yesterday about the mitochondrial study. I asked what would be required to continue the study to get some type of outcome. He said, 'Probably 100 patients. It might take about a year.' Do you have any idea what the costs of that would be, out of interest?

Dr Gardner—Yes, Mr Robert. This has been discussed in general. At this stage, Defence is interested in looking further into it. We are at the stage now, with input from the Deputy Chief and others, of asking those questions. It really relates to the kind of equipment that is needed, the numbers of people that are needed to make the study valid and access to trained laboratory specialists. I think it is very early days. There is goodwill and intent on behalf of Defence and, in particular, Air Force, to look at this, but it is still too early to tell.

Mr ROBERT—I am cognisant that my understanding from the professor yesterday is that he is particularly interested because he found that in the 20 cases he was looking at, there were five proteins that were evident in all 20 cases, if I recall what he was saying. He did not know what their names were. Are there any other organisations out there that are looking at this issue and, in particular, looking at those five proteins?

Dr Gardner—I will correct one thing. He did not actually say 20. He said less than 20 cases. In fact, the number is significantly less than 20 people that he has currently at this third stage. The protein work is being analysed through the University of Queensland. I am reliably informed that the results should be available within the next few weeks. Once those proteins have been appropriately identified, it will be possible to develop special enzyme linked tests that would enable more rapid screening for those proteins if they are in fact significant. So that is why this is really a work in progress. It is cutting edge research. We do not want to hold out

hopes of magical treatments, but it is clearly work that needs to be looked at and followed up. It is just a matter now of how much money, which location, which technology is used, who does it and by when.

Mr ROBERT—So for the mentally untrained—I put myself in that slot—let us say in four weeks the University of Queensland comes up and gives a name to these five proteins. So what? What have we learnt? What next?

Dr Gardner—Once they have been identified, there are techniques currently available which are used widely in a whole range of other pathological and diagnostic areas using antibodies to find evidence of those proteins in cells. So once you have identified what you are looking for, you can develop a test to rapidly search for them. You might recall yesterday that Professor Bowling talked about only being able to do three to five tests per day max. Once you have an automated test, you can do thousands.

Mr ROBERT—Let us say an automated test was made and we did thousands and we worked out that X number of the desal-resealers had an issue with these five proteins. Again, so what? What have we learnt?

Dr Gardner—The information which I understand and which is in Professor Bowling's report but which may not have come out very well yesterday was that some of his findings point to effects in a wider group than just desal-resealers. And that is what needs to be looked at. Of course, the issue which has always been on the table in this whole F-111 issue is whether it is just an F-111 specific issue. Is it a desal-reseal chemicals issue or is it a combination of fuel, solvents and others all together? You might recall Professor Bowling mentioned yesterday that there was some evidence of stem cell changes at the bone marrow level in people who had not been involved in desal-reseal processes.

Mr ROBERT—But had had contact with avgas?

Dr Gardner—Well, maybe avgas and certainly aviation fuels, of which the common fuel for the last 10 or more years in this case has been JP8. It is basically a complex mixture of kerosenes very similar to diesel but with additives.

Air Vice Marshal Brown—Can I just say that our intention is to take this research forward to get an answer, basically, on this.

CHAIR—When there is some progress on that—and we understand it may be in a couple of weeks that there will be some additional information—if the committee can be informed of that, that would be helpful, I am sure. Dr Gardner, you referred before to the issue of statistical significance, about which we have been around the garden a few times. An alternative concept that has been suggested to us as perhaps more important is clinical significance. It has been suggested to us that rather than being too hung up about whether it is statistically significant, we should be focusing on whether it is clinically significant. Would you like to tell us why that may be so?

Dr Gardner—In some of my earlier discussions last year at inquiries 1 and 2, I raised this point and, in particular, talked about things in the Bradford-Hill criteria for determining whether

particular laboratory findings actually relate to disease in people. Statistical significance is only one of the ways that you can say, 'Is this likely to be a real result?' There are numerous occasions in the literature where there are spurious findings which have subsequently been disproved 20 or 30 years later but at the time were accepted as orthodoxy. However, if things are consistently statistically associated and you get it in multiple trials and multiple locations with multiple different researchers and in large numbers of people, it is likely to be true.

Basically, nearly all clinically significant diseases have a statistically significant underlying cause and effect. I do not know of any off the top of my head where that would not be true. In relation to this particular case, I would say that the issue, for example, in the most recent reanalysis of the data by the Australian Institute of Health and Welfare using the updated mortality and cancer incidence statistics showed for the first time a slight increase in lip cancer. You may recall there were four cases of lip cancer in the most recent cohort versus one expected. Therefore, that is a four times increase. In all of the occupational literature in relation to lip cancer, the accepted causes for the last 100 years have been sunlight; herpes simplex infection; cigarette smoking, which is probably number one; and, in the dim distant past, evidence of a relationship to the radium paint on radioactive dials et cetera on watches, where women used to lick the brushes. That caused both lip and bone problems. There is nothing in the literature in relation to exposure to fuels and solvents causing lip cancer. So here is an example where, yes, at the moment it is statistically significant. As to whether it really is clinically significant, I am still in the doubting camp. That is why the final recommendation in the AIHW report was that this research needs to be repeated. They recommend 2011, which is five years from the date of the start of their analysis.

CHAIR—In terms of the reports, there is a number that have now been commissioned by Air Force or Defence—I am not quite sure under which auspices; I think Air Force—as part of this ongoing program since it was first recognised that there were problems. Do we know how much has been paid for these various research endeavours? How much has Defence, Veterans' Affairs or Air Force paid?

Air Vice Marshal Brown—Mr Chairman, we will take that on notice and get back to you on that.

Mr ROBERT—Dr Gardner, I assume you have read the third study of mortality and cancer.

Dr Gardner—With interest, sir.

Mr ROBERT—Marvellous. I was speaking to the representative here from the Australian Institute of Health and Welfare and asking about the issue of statistical significance. It was all about whether it was possibly a clustering. He indicated that there were 40 cancer results in 873 people and that if it had been 42 cancers, it would be statistically significant. That is, the 10 per cent chance of clustering, I guess, would be substantially less than 10 per cent. It was also indicated that there was little confidence that all the exposed people had been identified. That is, some could have died and some were not identified. Indeed, some could have cancer right now and they only developed it a month or two after the studies began. All of that is possible. Considering this is so borderline with respect to knocking out the possibility of clustering, do you have a professional opinion on the report's findings? The report, of course, speaks of borderline significance and non-significance and that the current data is inconclusive. Yet it is

only two diagnoses of cancer away from saying, ‘You know what? It is not a cluster. It is a fact that there is a 44 per cent increase in cancer in desealers-resealers.’ It just seems like the report is two diagnoses away from saying, ‘You know what? It’s statistically significant. It’s not a clustering issue. The bottom line is there’s a 44 per cent higher case of cancer in desealers-resealers.’

Dr Gardner—Yes, Mr Robert. Certainly with better data and more time this may absolutely become statistically significant. You will notice if you look on page 19 of the report in the far right-hand column that the important numbers there are the 95 per cent confidence intervals. These are the estimates of how accurate in this case the standardised incidence ratio, the SIR, is as an estimate of the true rate of this disease and the underlying condition. You can see there that the confidence limits range from 0.99 to 1.88. The accepted orthodoxy is that if those confidence limits start at a figure higher than one, it is likely to be a real finding more than 95 times in 100.

If you look halfway down the bottom of the page, you will see in relation to lip cancer that it says lip, four and one expected, with an SIR of 4.13. Over on the right-hand column, you will notice that the confidence limits here start at 1.12. In other words, this is likely to be true 95 times in 100 if this were repeated, because that is above one. You can see up on the top where it says ‘all cancers’ that it is very close. As they rightly said this morning, a few more cancers would change that.

Mr ROBERT—Whilst I acknowledge that further tests and more time will produce better results, I am not too sure many of our personnel have a whole lot more time left.

Dr Gardner—Of course, the only problem—this has been right from the very first study of this and then the second one—is that there is still the unexplained findings of how come you have a 44 per cent increase in cancer but substantially lower death rates from cancer. So you have a higher number of diagnoses but substantial deficits in death rates. There is something not quite right there. That is why I think time is the answer. Some of the questions from the panel this morning were basically asking AIHW what they had done. Basically, they had done nothing. They were given the data and said, ‘Here is the cohort. Apply the newest figures’—by the way, they date pre 2006, so they are already three years old—and tell us how it has changed.’ Basically what they have said is, ‘Nothing significant has changed apart from two cases of one and four cases of lip cancer.’

Mr ROBERT—Do you have any comment on the key findings? It says that in comparing the exposed group—so the deseal-reseals—with Amberley personnel, there was no significant difference in mortality or cancer. But comparing the exposed group with the Richmond personnel showed an increased cancer incidence. Any idea why you would get such a difference using the two control groups?

Dr Gardner—This is one of the things that has been raised before. Again, it is a hypothesis. It may be a latitude effect—in other words, an Amberley effect, which is higher sunlight, higher median temperatures and all those kinds of issues, including in relation, for example, to melanoma and other non-melanotic skin cancers and possibly even the lip cancer.

Mr ROBERT—I suppose the bottom line is we probably know less than what we actually do know.

Dr Gardner—I think it is getting better slowly. Something the committee might consider in its report suggests that the next review in 2011 not just be an update of what is existing but that there be some significant attempt to find whether there is missing data, whether there are people who have been excluded, whether some people have had the F-111 exposure but are in fact in the control groups and some of those issues which the committee has raised frequently. Until now, this has just been a statistical updating exercise. There would be an opportunity in 2011.

CHAIR—I can understand the attraction of that, but you may glean from my question about how much money we are spending on research I am thinking of people who 30 years after being in the work environment are sitting here waiting for yet another review and another report. I suspect the time is fast approaching for decisions rather than surveys. But we shall see.

Mr ROBERT—I would like to place some questions to Veterans' Affairs. Last time we met, I asked some questions with respect to total compensation paid, how many claims versus how many successful against the various acts and so on. Can we get an update on that now? I am sure you have the numbers to hand.

Mr Farrelly—No. I have not. We did not bring an update. But we will run one and take it on notice.

Mr ROBERT—Can we get an update on exactly how many claims there have been, how many were successful, how many were not successful and how many claims were successful and not successful against the various acts? Last time I think you spoke, you said about 80 per cent of claims had been settled versus 60 per cent, which was your average. It would be good to know what the total paid has been. What is the total Commonwealth liability that has actually been paid out in claims?

Mr Douglas—We are, of course, continuing to receive claims. In a small number of instances, the claimants have asked us to not determine the claim until the outcome of the committee's activity is finished.

Mr ROBERT—If you can provide those numbers, that would be tremendously useful. That would simply give us an update on exactly how many people. Likewise, can you outline from the claims point of view which claims have been successful or otherwise for the four programs compared to the pick and patch people?

Mr Douglas—I can give you a partial update, Mr Robert. In total, we have now had 634 claimants, of which 71 were under the VEA only, 116 were for the SRCA only and 447 were under both the VEA and the SRCA. That gives a total of 563 claimants under the SRCA with a total of 3,804 conditions, and 518 claimants under the VEA with a total of 3,720 conditions. During 2009, we have had seven claims under the VEA and 19 claims under the SRCA, although many of those claimants have claimed previously for other conditions.

CHAIR—You will be able to check and confer with the secretariat so that we have up-to-date figures on that?

Mr Douglas—Yes.

CHAIR—At one of the previous hearings, a point was made that there was an allowance for people who worked inside the aircraft doing the refueling.

Group Capt. Lawson—I cannot claim to be an expert in this area but there were several allowances that were available to people working in confined spaces or a hazardous chemical environment. I think they have all been wrapped up—I think the current catch-all allowance for that is the arduous conditions allowance. I have a couple of notes here based on earlier material, which I will pass on to you. The confined spaces allowance, or what is now called the arduous conditions allowance, is paid on occurrence to compensate members for disabilities incurred in the performance of their duties. That includes confined spaces but might also include just an unusually offensive environment—working in a stooped or cramped position without adequate ventilation, using hazardous chemicals that require the use of personal protective equipment or working in hot conditions, where there are temperatures that are elevated. I think the cut-off is about 46 degrees Celsius due to artificial means. That is the allowance now. That replaced a number of other allowances. There was one called the deseal-reseal allowance, which I think is one that has been drawn to your attention before.

CHAIR—Until recently, I thought there was only one allowance. I had taken that from previous hearings. It appears as though there were two names. I just want to be sure whether I am talking about two separate allowances or one allowance that was referred to by two different names.

Group Capt. Lawson—No. The deseal-reseal allowance was withdrawn in 1990 and was subsumed into the arduous conditions allowance. So the arduous conditions allowance has superseded all confined spaces allowances and deseal-reseal allowances that preceded it.

CHAIR—Prior to that, it would have been possible for somebody to receive both at the same time?

Group Capt. Lawson—I cannot answer that confidently.

CHAIR—The operation of the medical support rather than compensation was approved and accepted into the ex gratia payments system. Those people whose claims were accepted for ex gratia payment in either tier 1, 2 or 3 were afforded certain additional or easier access to the benefits under section 7.2 of SRCA. Can someone from Veterans' Affairs run me through what benefit accrues to a person by virtue of that provision?

Mr Farrelly—The benefit is essentially a standard of proof issue as opposed to an extra benefit. So it facilitates access. Basically, what it means is that if you have one of the specified diseases that has been diagnosed and there is no reason to think that anything other than deseal-reseal caused it, it will simply be accepted without any further testing.

CHAIR—What diseases does that include?

Mr Farrelly—The diseases are the same as covered by the health care scheme with the exception of alcohol. I will give the committee a reference. It is in the first submission. It is essentially the same set of diseases as covered by the health care scheme. I could provide the

committee with copies of the determinations under both 7.2 and section 31(1) of the predecessor act just to close that loop.

CHAIR—That would be appreciated.

Mr Farrelly—And the conditions are the same for both.

CHAIR—Given that it rests on having a disease which is identifiable, the dilemma which you will be very familiar with in this inquiry has been that there is a significant amount of evidence, and certainly plenty of anecdotal cases, of people suffering symptoms that are recorded and I think largely accepted. The symptoms do not lend themselves in turn to identification with a disease. Confronted with that dilemma, how does the current system address people in that situation?

Mr Farrelly—The current system does not. So if there is not a disease that can be diagnosed, it remains a symptom.

CHAIR—Is there any example or precedent that you are aware of where symptoms rather than diseases have been acknowledged for those involved in war service or defence service or service in uniform?

Mr Farrelly—There is none that I am aware of.

Mr Collins—There is none that I am aware of either. However, often in these cases there might be a diagnosis of some psychiatric overlay which lends itself to a diagnosis irrespective of the fact that we are talking about physical symptoms that you would be referring to in the first place. But in terms of just straight symptoms, I am certainly not aware of any precedent.

Mrs MARKUS—I want to ask a couple of questions. They relate probably to this dilemma about proof and the statement of principles. Could, for the record, someone from the department just clarify what level of evidence would be required for the Repatriation Commission to make or amend the statement of principles? Obviously there is not one with regard to this. But I think for the record it is important for that to be clarified.

Mr Farrelly—The Repatriation Commission would not make or amend a SOP. I do not want to get technical again.

Mrs MARKUS—No. I understand.

Mr Farrelly—But it would issue a determination in relation to a specific class of people, a specific disease and specific factors that cause that disease. At the moment the commission would need to establish to its satisfaction that the causal factors were statistically significant. The standard confidence level would be 95 per cent. It would need to be based on medical scientific evidence. The commission would not ordinarily need to do that. It would not do it because the RMA is there to do it as an independent authority.

Mrs MARKUS—I understand. So the statistical significance is critical? That is what you are saying?

Mr Farrelly—That is right. The commission and the RMA would need medical scientific evidence of causation between a set of exposures and factors and the disease. These days, that is on the basis of health studies and medical studies and medical advice.

Mr ROBERT—I want to ask a supplementary question. I return to the third study of mortality and cancer. Indeed, that 95 per cent mark has been reached, as Dr Gardner so ably pointed out, and is reported on page 19. Apparently, we are two cancers short of statistical significance.

Mr Farrelly—That is not my area.

Dr Gardner—Maybe I could answer Mrs Markus's question in relation to the level of evidence. Yesterday morning Professor Frank Bowling alluded to this in relation to his work when he talked about levels of evidence, starting at level 5, which is expert opinion and, therefore, a low level of evidence, down to level 1, which is multiple peer reviewed controlled trials, multiple locations globally published and accepted gospel. In the middle, he said that his current work would be at level 3, which is not normally publishable. You would normally have to have level 2 or better to be published in the major journals. The Repatriation Medical Authority uses that kind of medico-scientific best evidence from their global research to basically determine whether there is enough evidence to support A equals B and, if so, state what factors are consistently shown.

One of the tools they can and do use is what is known as the Cochrane Collaboration. It is a UK based clearing house, basically, for studies which may by themselves be too small. If they have been appropriately done, they can be aggregated together in a technique called meta analysis, from which they come up with much bigger, stronger, more robust study results. So they use that kind of evidence to come up with their statements of principles. As you know, the desal-resealers and their support groups were hopeful that the SHOAMP study would come up with clear, unambiguous results that would enable the RMA to develop a statement of principles covering their exposures and their problems. Unfortunately, when they looked at the evidence, they said, 'We can't do that. But, by the way, all the conditions which have been identified, with a couple of minor exceptions, are already covered individually under the statement of principles.' But, even so today, that is how they go about their process.

CHAIR—If they are already covered under the statement of principles, why do we get people from the community affected saying that they had been accepted into the ex gratia payments system? It gets them easier access to support for health problems under section 7.2 of the SRCA yet they cannot succeed in their claim at that point.

Dr Gardner—The reason for that, sir, is that the ex gratia payment was based on people having suffered 'exposure'. It was not related to health outcomes. That is the reason. So you can actually get in having had high exposures but having no compensable illness.

CHAIR—My dilemma is that in fact there is no connection at all with health exposure in truth for the ex gratia payment. You can be perfectly healthy and claim no ill effects whatsoever. As long as you are there for a certain period of time, you can even walk away with \$40,000.

Dr Gardner—That is correct.

CHAIR—But you can suffer a range of symptoms and qualify for ex gratia consideration. Whether it is tier 1, 2 or 3 does not really matter. You can suffer a range of symptoms, but there is then a further hurdle in front of you before you get your medical care provided. I am trying to get my mind around what that obstacle is and what options there are for minimising it.

Mr Farrelly—The obstacle, if I can call it that—

CHAIR—The test. Let me take the pejorative term out of it. The test that is applied.

Mr Farrelly—The test is simply that the list of conditions and diseases that satisfy 7.2 is limited. So people can have a range of symptoms or other diseases that are not on that list, have the type of service that will attract a tier 1 or 2 payment and perhaps understandably, but in the end wrongly, expect that that facilitates access to compensation for those things that are not on the list.

CHAIR—If it is a symptom that has been widely reported in the various surveys that have been done of the cohort that we are looking at, why is it that we have run into this obstacle—it is an obstacle; it is not just a test—that says that whilst that symptom is widely experienced amongst this cohort, we cannot identify an illness or a disease which then becomes subject to medical support?

Mr Farrelly—The departments, in their joint submission last time, indicated that they were prepared to work on that obstacle and see if there was not a way where clusters of symptoms could not be looked at and included.

CHAIR—So five or six months on, have you had any more success with that than we have?

Mr Farrelly—Not yet.

CHAIR—Do you have any suggestions on how it might be addressed? One suggestion is that we do not worry about that at all. We go to section 180A and have determinations made. Another suggestion is that you just legislate to establish a payment for a group of people in much the same way that we were talking before about.

Mr Farrelly—I think the problem with 180A from that perspective is what diseases you would list. To my mind, they would be the same diseases and conditions that are listed for the purposes of 7.2. You come up with the same problem under the VEA as you do with SRCA; that is, it operates for compensation purposes on the basis of disease.

CHAIR—Just so we are clear, with compensation, are we talking money or are we talking health care?

Mr Farrelly—We are talking fundamentally the gateway into the program of compensation for particular diseases—disability pensions and so on.

Mr Douglas—If you have been financially compensated for a disease, you get access to health care for that disease.

Mr ROBERT—I also hear what you are saying. Going back to your previous comment, sir, you said that the gate was all about the 95 per cent mark, which the third study has reached, but it is two cancers off statistical significance.

Mr Douglas—I think the point that Dr Gardner was also making is that that is not so much a piece of fresh research but updating the existing data. The RMA, in the point we have been making, is bound by looking at medico-scientific research and, therefore, at a range of other material available to it about exposure and causes, which I think is the point Dr Gardner was making.

Mr ROBERT—Granted. But the Americans have the same problem. Whilst I have no evidence, I suggest they probably used expatriate workers from the southern part of their country to go and do the work. I suggest they are now suffering egregiously, but they do not live in the United States of America. Therefore, it is not a common problem and they are not sitting here as we are. We probably quite rightly did not do that. We used airmen. Here we are. So there is not going to be another study out there because no-one else has faced this unique situation of shoving airmen into confined spaces over long periods of time where the environment, chemicals, heat, conditions, avgas and previous fuels used in aviation, all of them together, have resulted in a 44 per cent increase in cancers alone, granted we are two short of statistical significance. So whilst I understand, sir, what you are saying and I understand where the RMA is coming from, for the life of me I just cannot see where the RMA or you are going to find a like body that is the same or even remotely similar to this to actually achieve your end state. So it seems that we are going around in somewhat of a circle.

Mr Farrelly—I guess that is true. But, from our perspective, there simply needs to be evidence under the law.

Mr ROBERT—I understand that. Hence the chair's response to say, 'Well, there are a couple of options. There is the option of waiting until we get further data and further corroborating evidence from overseas.' The fact is that it is not going to happen because no-one else is facing this unique situation. Therefore, it would appear that we may be faced with what was faced with the Vietnam veterans' children—that there needs to be a political impost to say, 'Unless we do something differently, we are never going to break out of this circle.' Even if we wait another three years until 2011 and hope for two more cancers, which sounds dreadful in itself, and even if we get statistical significance—I am coming to really hate that phrase, out of interest—what you are saying is that this study by itself does not meet the parameters that the RMA needs to make a statement of principles. So we are still trapped in this little circle and we cannot get out of it. Or am I looking at this completely wrongly?

Mr Farrelly—Well, you are asking me, firstly, to comment on political solutions.

Mr ROBERT—I am asking you to comment where I have it wrong. In my brief summary, am I completely off track, or is that the situation we are in?

Mr Douglas—I think there are elements of that. Dr Gardner is more of a medical expert than me. He may wish to comment more. It seems to me that there is a challenge for us here. We have to operate off particular evidence. One of the challenges here is while the group may have elevated incidences of particular conditions, what we do not have is necessarily a clear body of

evidence that establishes a connection between the exposure and that particular incidence as opposed to other factors that may have contributed to it, such as where they worked, what other work they did and what other forms of participation in aircraft servicing they did. That is the narrowness of looking at this cohort.

Mr ROBERT—It seems like the Air Force is very keen to get an outcome. My view is that they are doing everything they can to facilitate it. They have certainly acknowledged their duty of care. Certainly the Deputy Chief attends every meeting and is showing that Air Force is completely committed to the process. But it looks like they cannot find a way out of the circle either.

Air Vice Marshal Brown—I think your summary of the situation is quite correct, really. If we just leave it inside the internal framework that we have at the moment, we are not going to get a solution to this.

Mr ROBERT—Chair, I am all for ideas and I am not hearing them.

CHAIR—I think we have agreed on the core dilemma, though.

Mrs MARKUS—I want to ask another question that adds probably an additional layer of challenge. I am sure the Department of Veterans' Affairs representatives here will be well aware of this issue, and that is the challenge of documentation and records. It has been highlighted today and I am sure in a number of other hearings that they are not adequate for claims. So we need all the right ducks lined in a row and all the issues needed to be addressed. We have already highlighted the statement of principles and having sufficient statistical evidence. How would you propose that people prove their case given that the documentation may not be there that they have actually been involved? I understand in assessments to date the department has taken statutory declarations. Could you talk to us a bit about what you have taken and any other ideas you have about how we could move forward into the future around these challenges?

Mr Douglas—I think in our previous submissions we have given you a long list of material we took into consideration when processing claims against the *ex gratia* scheme. In terms of assessing compensation, we are of course heavily dependent upon Defence records as our primary source. But in essence because of the beneficial nature of the test that is applied, we would spread our net as widely as we possibly could to find information which would act in support of a claim without being prescriptive. So in some cases there have been statutory declarations coming from colleagues and other forms of evidence. It remains a challenge. I think the thing we can say, of course, is that as time has passed by, we now have much better access to records. Defence itself is keeping much better records. The second factor is if we reduce the amount of time between the incident and the claim being lodged, of course there is much fresher evidence as well. But I think we have been pretty broad in our contemplation of evidence to support a claim.

Mrs MARKUS—Could you provide any information about the numbers, particularly with relation to this group of people—the deseal-resealers—who have had their claims accepted and have provided statutory declarations and those who may not have been accepted?

Mr Douglas—I do not know that we have that level of detail on compensation. We would need to go back and look at every individual file. I do not think we would be able to finish that in the time the committee would want.

Mr Telford—And it may not also just turn on the statutory declaration either. That has to be one more piece of the evidence.

Mrs MARKUS—That is fine.

CHAIR—On the point, though, it is the case that in the absence of some documentary evidence or other material to the contrary, statutory declarations have been regarded as acceptable.

Mr Collins—They would be accepted. That is correct. I think Sean said a little earlier that we are going to get together all of the information about all the claims under the different acts and the outcome of those particular claims. That might assist, but it does not give you all the information you want.

Mrs MARKUS—That is okay.

CHAIR—I should just also point out that, contrary to the schedule, we took a decision that we thought if we kept going, by 1.30 pm we could wind the whole thing up rather than break for lunch and come back. So we will proceed on that basis. I think it is still doable. I want to go back to the earlier discussion Mr Robert was having about the possibility of the incidence of cancer being statistically significant. Let us assume for a moment that the incidence of cancer in the studies was determined to be statistically significant. Presumably for a qualifying person that would give them access to the section 7.2 provisions. That would then enable them to have treatment of the cancer met as part of their support.

Mr Farrelly—And compensation.

CHAIR—And potentially some degree of compensation in monetary terms?

Mr Farrelly—That is right. So if a new condition or disease or cancer becomes statistically significant, it would go on the list of diseases.

CHAIR—It then relies, as it were, on each illness and each symptom being able to be identified in that way, effectively?

Mr Farrelly—That is right.

CHAIR—I go back, then, to the suggestion—it arose again today—that one way out of that dilemma is to use section 180A. The advice you gave us was that you could not see the benefit that that would provide and that the same connection with the disease would be required. Are you sure that is the case?

Mr Farrelly—Pretty sure. If I am incorrect, I will correct myself. But the diseases that need to be specified in a 180A determination still need evidence. So you need to go through the same

sort of process of establishing that there is medical scientific evidence that the disease should be listed. So the first starting point would be that the same diseases as 7.2. The second issue with 180A is that it is not merely a matter of incidence but of causation as well. So that is a further difficulty in using 180A as it is cast today. There is another problem with 180A as it is cast today, and that is that in order for the commission to even move to the step of considering evidence and how it might be listed, the RMA needs to declare that it will not make or amend a SOP. So it actually needs to say, 'We don't intend to act.' Now, to the commission's mind, the RMA has not made such a declaration. It does use the SHOAMP results. It does take them into account in the pool of materials it considers. So it cannot be said that there is information in front of the commission that the RMA does not have and is not applying.

Mr ROBERT—However, if the RMA is saying there needs to be corroborating evidence of a level 2 standard, I think Dr Gardner said, which does not exist and is highly likely never to exist, surely by simple default that says, 'We're not going to do it', as in the RMA will not do it.

Mr Douglas—Then the challenge would be for the commission to say that causation exists where the RMA says it does not.

Mr ROBERT—Granted. But the RMA is looking at a weight of evidence that requires corroboration and a whole range of things. So its evidence is quite high whereas the evidence we have got here would seem to suggest that a 44 per cent increase with 40 cancers, granted two off statistical significance. That would suggest that, yes, there is a real problem. The problem is the RMA will not include that because of the parameters of the report and there is no corroborating evidence. So we are between a rock and a hard place here, are we not? You say, 'Sorry, we're waiting for the RMA', and the RMA is either (a) not going to say anything or (b) will come back and say there is not enough evidence. You can forget the issue for you. It is not like that. But for Veterans' Affairs to say, 'Well, RMA said no but we're going to use the same body of evidence or the same level of evidence as the RMA does', does that get us nowhere, out of interest?

Mr Farrelly—I have tried to avoid getting into a discussion about statistical significance and causation because I am not an expert. I am not really qualified to do it. Statistics is about making the best possible judgement in the context of not being able to be certain. You rely on the robustness of the statistical tests and the professional advice you get from professional researchers. It is not for me in my position, say, to give the numbers a bit of a nudge in one direction.

Mr ROBERT—Well, let us step back one. The only time that 180A was used, on my understanding, is regarding the administrative piece of legislation in the Vietnam vets case. Is that correct? Am I right?

Mr Farrelly—Sorry?

Mr ROBERT—The only time that 180A was used was when we went to set up an administrative scheme to deal with the children of Vietnam vets?

Mr Farrelly—No. Not for children.

Mr Douglas—There is a clear difference. The 180A determination was used to create a class of veterans to get access to compensation that arose as a result of exposure to Agent Orange. That was a separate administrative scheme determined by the government which provided for health care for children of Vietnam veterans affected by Agent Orange exposure with those four conditions.

Mr ROBERT—So if we deal with the Agent Orange exposure, am I right to assume from what you have said that the RMA said no? Therefore, Veterans' Affairs then moved on to look at the evidence and say, 'Well, yes, we believe it exists?' Or is Dr Gardner's concession correct that it indeed was a political fix?

Mr Farrelly—I think Dr Gardner, in that reference, was referring to the children.

Mr ROBERT—Fair enough.

Mr Farrelly—This is separate. I will just run through the chronology of them. In early 1994, the US National Academy of Sciences released a report into the health effects of herbicides. In mid-1994, the commission appointed professors McLennan and Smith to look at those findings and advise the commission on the applicability to Australian personnel. The professors reported in August 1994 and advised the commission that a number of leukaemias should be added to the list of diseases that add sufficient evidence to an association with herbicide exposure. Around that time, in September, the RMA came into effect. Some months afterwards, the RMA then issued SOPs that did not take into account the professors' advice. It is at that point that the commission made determinations in mid-1995 in relation to four leukaemias. Those determinations set out the veterans to whom the determination was to apply the particular factor and subfactors and the disease.

Mr ROBERT—So, in that respect, you relied on the report from the professors who were analysing the data from the US Academy of Science. Did the data from the US Academy of Sciences meet all these rigorous conditions you are looking for?

Mr Farrelly—Well, let us say that all this was 15 years ago. The RMA now has 15 years of experience. It has a worldwide reputation for the quality of its work and its professionalism. It is an independent authority. So I do not think that the two sets of standards are necessarily comparable, although they have always been high.

Mr ROBERT—The challenge, of course, was that Vietnam veterans had exposure to Agent Orange. US soldiers were affected. Australian soldiers were affected. Soldiers from the South Vietnamese army may well have been. So there was certainly international corroborating evidence. In this case, we are the only nation, really, that is facing the issue here with deseal-reseal.

Mr Farrelly—Well, I really could not comment on that. The information I have is that the professors looked at the US data and said, 'Well, should it be applied to Australian soldiers.' There was not necessarily an independent study run to corroborate those results. But I have not seen or read the professors' report so I really should not say too much more than that.

Mr ROBERT—So are you saying that there was actually no study at all upon the Australian Vietnam veteran soldiers? The professors simply relied on the American experience?

Mr Farrelly—Look, I have not read the professors' report so I should not comment. So I cannot say. We can take it on notice and get back to you, if you like, but I have not read the report.

Mr ROBERT—I just find it interesting. If that was the case—I am making no contention otherwise—that indeed the professors just looked at the US Academy of Sciences data and the data and research on Americans without looking at Australians, the RMA put in SOPs that did not include these particular cancers. Veterans' Affairs or indeed the commission then added them independently. Here now we have with the deseal-reseal our own range of findings that are specific to Australian servicemen yet we seem to not find a way through. The RMA is yet to make a ruling whether they are accepted or not. You cannot do anything under 180A until the RMA makes a ruling. They have shown no inclination to without further medical advice.

Mr Farrelly—I think they are separate cases, different cases.

Mr ROBERT—Granted.

CHAIR—We have previously been provided with evidence on the list of conditions that have been accepted under the SHOAMP health care scheme. I am just refreshing my memory going through the list now. It takes me back to this question under section 7.2 of SRCA, where the problems may rest. This list of conditions is reasonably extensive. It covers skin rashes and associated systemic conditions; neurological conditions, of which there are quite a number; mental disorders and personality changes, of which there are quite a number; malignant neoplasms; liver diseases; gastrointestinal problems; and neurological disorders. From your handling of the cases, you would be familiar with the cases that have been rejected as well as accepted, presumably. A lot of focus has been placed on cancer. That is partly because of the work being done and the recent release of the third study. Is cancer the principal illness that is not presently covered?

Mr Farrelly—I do not have any data with us about the number of the diseases on the 7.2 list that have been accepted and their relative incidence.

Dr Gardner—Malignant neoplasms means cancer.

CHAIR—Yes. I thought that. Malignant neoplasms covers all cancers?

Dr Gardner—Yes. In fact, the background to that list arose from the early days of the interim health care scheme, where a group of doctors, of which I was one, looked at the list of conditions claimed and looked at the literature in the occupational medicine to say, 'Is there any evidence that would support looking at these cases further?' In those days, the test was whether it could conceivably be linked. You might notice from that list, from memory, that cardiovascular is not there. In the earliest version, cardiovascular was there because there were links in some of the literature, but it was not supported by the SHOAMP study. So this list was refined from an earlier version based on the outcome of the SHOAMP study.

CHAIR—So are you able to tell me? You are saying that cancer is accepted. For somebody in any one of the tiers who has an ex gratia payment or has qualified—forget the payment issue; they just qualify under the system and they have cancer—

Dr Gardner—They will get treatment.

CHAIR—that will be accepted?

Dr Gardner—No argument.

Mr Farrelly—And through 7.2. liability would be accepted for the disease.

CHAIR—So, if all forms of malignant cancer are accepted, what is the significance of the ongoing studies, a third of which we have only recently received?

Dr Gardner—Well, with respect, the ongoing study is almost peripheral to this. I do not believe it makes one skerrick of difference whether it is 0.99 or 1.1 in the confidence limits. The reality is right now, and has been for many years, that, if you have malignant neoplasms, that is accepted. Is there rigid, absolute evidence? The answer is no. But in good faith and based on the exposures reported and the external literature and the complaints submitted, our committee—and it was reviewed subsequently—said, ‘This is reasonable.’ It was really level 5 or maybe level 4 expert evidence of multiple people looking at the literature and coming up with opinion. So it was interim work. It was refined over time. It predated the SHOAMP study.

CHAIR—We know a significant argument has been bounced around through this inquiry and well before this inquiry was set up about eligibility to access the ex gratia payment tiers. But now that I am looking at this list, it seems to me that if you are accepted into that ex gratia system, there is a fairly wide range of conditions that will be accepted and medical costs met.

Mr Farrelly—And compensation paid.

CHAIR—And compensation paid.

Mr Farrelly—That is true. Under the SRCA, it is a wide-ranging list but by no means a universal list. It does not cover symptoms.

CHAIR—No. It does not cover symptoms. But yesterday when we were looking at the symptoms that were identified in Professor Bowling’s work, a lot of those symptoms had some relationship to diseases. You could not draw a direct link, but nonetheless there was some relationship. When I look at this list of neurological conditions—multiple sclerosis, Parkinson’s, peripheral neuropathy, spinal and muscular atrophy, erectile dysfunction, neurogenic bladder and a few others—to the layperson that seems a reasonably exhaustive list of neurological conditions that have some relationship to the concerns and the symptoms that we have spoken about that the F-111 repair workers had contracted.

Dr Gardner—I can answer that. The initial work was looking at the symptoms as reported. Our committee condensed them into what kinds of medical conditions they fit under. So that is a net version starting off with symptoms and ending up with diseases with names. You will

remember that Professor Bowling commented yesterday that if you know the name, then you can act.

CHAIR—So give me some examples of symptoms that this does not catch. There is a list of symptoms that we know have manifested themselves in the people who worked in the F-111s. What symptoms does this list of conditions miss?

Mr Farrelly—Tiredness.

Dr Gardner—Memory loss.

CHAIR—Memory loss is listed. For example, with mental disorders and personality changes, it lists depression, sleep disorders with a neurological basis, bipolar, affective disorders, vertigo, memory loss, anxiety, panic disorders, impaired cognition, alcohol and drug dependence.

Dr Gardner—This list was meant to be inclusive.

CHAIR—I appreciate that. I am trying to get a handle on this. There is a separate and significant debate about who should be eligible to gain access to the ex gratia scheme. Put that question of eligibility aside. Having gained access to the scheme, that means that you are accepted for compensation and for treatment if you have one of these problems. Is that correct?

Mr Telford—I need to clarify something here, Chair. The conditions which we were talking about and which are in that brochure relate to those conditions for the SHOAMP health care scheme. So that just gives you health care and nothing else. It does not relate to those conditions which are compensable necessarily.

CHAIR—I will come back to that because I am not sure I comprehend the significance of what you have said. But I want to make sure on the first point in terms of health care that we are talking here about the scheme that will apply to somebody. You mentioned applications you are still receiving. If people apply for consideration under the ex gratia scheme and are accepted in any one of the tiers and they manifest with memory loss—they have diagnosed memory loss—as I understand it, they would have their medical costs met and they would have access to compensation potentially.

Mr Farrelly—I think that is right if it is diagnosed under an ICD10 disease code. Some cases I have seen are individuals presenting with symptoms, say, of tiredness, lethargy, periodic rashes et cetera, thus broadly described, and there is no medical diagnosis that is possible. There could be headaches. So I get all these things from time to time. Sometimes they arrive together. I have these things. I am not feeling well. But no disease diagnosis can be made. That is the sort of symptomatology.

CHAIR—You mentioned rashes. That was one that was in my mind and it was one that was mentioned as a symptom that presents in Professor Bowling's work. I look at this list and it has a category of skin rashes and associated systemic conditions. It lists two conditions—dysplastic nevus, eczema and dermatitis. Eczema and dermatitis, I would have thought, were, even for a layperson, fairly easily identifiable and easily diagnosed. Which sort of rashes would someone present with that would not entitle them to some medical costs?

Mr Farrelly—They could be rashes that appear from time to time and are reported to have appeared from time to time but are not chronic. So they are not an eczema condition.

Mr Collins—Mr Chairman, I think for intermittent rashes it is the ability to get the patient and the doctor together at the same time the rash is there in order to be able to diagnose it. Eczema and dermatitis are fairly longstanding conditions and would be easily diagnosed.

CHAIR—But not permanent. You could have eczema that presents and goes away.

Mr Collins—That is true. I think in a general sense a skin specialist will have the opportunity to diagnose that as opposed to something that only might come for a couple of days once every now and then. It is just difficult getting a definitive diagnosis sometimes.

CHAIR—So the argument, to go back to a big ticket item, over cancer, which we concentrate a lot on and have spent a bit of money researching as well, will be accepted if you are in the scheme, if your service on the F-111s is recognised for the purposes of the ex gratia payment scheme?

Mr Farrelly—Malignant neoplasms.

CHAIR—Malignant cancers, yes. And not to be flippant, but I suspect that if it is not malignant, the level of concern is a bit different?

Mr Farrelly—True.

CHAIR—I know this is a bit irregular, but this is going to be the last hearing. We are getting very close to time. Because I posed a couple of questions, the core one being what sort of symptoms people might present with that fail to meet this test, if they wish, I am going to invite any of the other witnesses who have appeared before us today to comment if they wish.

Mr Douglas—I think there is one other observation we should make, Chair, about access to the health care scheme and the long list of conditions. The government did require that the health scheme was only open to those who had lodged compensation claims by 20 September 2005. So if people had identified those conditions subsequent to that date and not lodged a claim, they are not able to access at the moment the health care scheme.

CHAIR—Yes. That date is an administrative determination, is it not?

Mr Douglas—Yes.

CHAIR—That is easily fixed. That is the least of my headaches, that one. Are there any other questions from members of the committee? This is a bit irregular, but I am happy to pose the question to any of the witnesses who have appeared before us that I have just presented to Defence and the Veterans' Affairs officers about, in particular, the symptoms people present with and how they might not be caught by the conditions that are presently approved.

Mr Fraser—One of the really clear problems that many of our members face is doctor shopping by the department or sending us to their medico-legal experts, who come up with

contrary findings to specialists that people may have been seeing for a number of years and who have given a clear diagnosis. The department will take a 15-minute consultation from a medico-legal expert over the diagnosis of a treating specialist seen over a number of years. I have a number of claims on the list that are currently before the VRB for reconsideration. There is absolutely no doubt that I was a desealer. I suffer from these conditions. Their medico-legal experts have determined that no condition exists on a few of them. One of the conditions was accepted under the 1971 act, so clearly it was, 'Oh, well, we did it to you but we don't care. You're not getting anything.' So there are a number of issues around how the department approaches and states acceptance. But there is also this difficulty of getting through the medico-legal nightmare.

CHAIR—So that I am clear, what we are talking about is having effectively a dispute on the medical assessments as to whether or not one of the recognised conditions exists rather than a dispute that this symptom is an example of that illness. Have I made myself clear in that distinction?

Mr Fraser—Yes. I think so, yes.

CHAIR—To put it another way, there is a symptom which one doctor recognises constitutes condition X that is recognised but another doctor says, 'No. Condition X does not apply in this person's case.'

Mr Fraser—Yes.

Mrs Henry—Having said that, we were all told to write our symptoms, not our diseases, in the applications. Repeatedly with meetings at Amberley, DVA representatives said, 'Write down your symptoms in your applications for compensation under the VEA and SRCA.' So the symptoms were written down. Rashes is an example. A lot of people have a psoriasis type condition or even a porphyria type condition. They are not named on the list, or porphyria is not. Dermatitis and eczema are; psoriasis is not. Therefore, psoriasis is rejected because it is not on that list, even though rashes are on that list. It is a very fine line of word play.

CHAIR—Can I ask whether the doctors advisory committee still exists? Perhaps Dr Gardner can assist us.

Dr Gardner—The short answer is yes, it does exist. However, it has not met for a period of probably 2½ to three years. But it has never been formally dissolved and would be available to be reconstituted at short notice.

CHAIR—Thank you. Mr Fraser or Mrs Henry, is there anything else that you want to add?

Mrs Henry—At this stage, no.

CHAIR—I want to provide an opportunity to any of the representatives from Defence or Veterans' Affairs to make any final concluding remarks. It has just been suggested that the Deputy Chief might get dropped in the hot seat for that. If there are any final comments that you wish to make, they would be welcome.

Air Vice Marshal Brown—Mr Chairman, you have been through a fairly long process. The complexity of this task I think everybody understands. The original scheme or the original board of inquiry only looked at a very narrow window, which is the deseal-reseal people. From an Air Force point of view, there are other Air Force personnel involved in similar work in terms of fuel tank maintenance. I think one of the primary things that we would like to get out of this inquiry is that those people get access to health care and appropriate compensation.

CHAIR—I appreciate that. In concluding this hearing, I genuinely thank everybody who has participated. It has run longer than we all thought, or at least some of us thought. Maybe there are people wiser than us who knew it was going to go this far or take this long. But it has certainly gone on longer than we thought. Anyone who has been involved at all in this issue or has even been a casual observer at the inquiries would comprehend why that is so. It is important and the committee is taking its responsibilities very seriously in respect of this. I want to again thank all those who have provided information. I especially want to thank the people who worked with the F-111s, many of whom provided us with submissions. For some it was not an easy thing for them to record the tale of their life and, for some, the tale of their deceased family members. That is never easy for any of us, but a number of people were good enough to set their personal circumstances before the committee.

I am particularly grateful to those who appeared before us in Brisbane. I also want to particularly and especially thank the departments. This is not in any respect an exercise in trying to point fingers or lay blame. This is an exercise in trying to get things right for all the people who worked, most of them in uniform, in the defence of our nation. We each owe them our best endeavours in this.

I have been very grateful for the level of support that the departments have been willing to provide to the committee. From the evidence we have taken, they have been willing to go away and do more homework and research for us. They have also been willing to provide information out of committee session to assist us. We would not have any chance, quite frankly, of coming up with sensible outcomes were it not for that level of cooperation. So I think that needs to be recorded and acknowledged. I thank all those that have helped us in that endeavour.

Hopefully in the not-too-distant future the committee will be in a position to review and report, and the report will be presented to parliament. The process has been open and transparent from the committee's perspective from day one. Our report will be a public document for all to see and people can make their own evaluations in due course about that. I declare this hearing closed. Thanks very much, everyone.

Resolved (on motion by **Mr Robert**):

That, pursuant to the power conferred by paragraph 16 of the committee's resolution of appointment, this subcommittee authorises publication of the evidence given before it at public hearing this day.

Subcommittee adjourned at 1.38 pm