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COMMUNITY AFFAIRS LEGISLATION COMMITTEE

**Reference: Australian Radiation Protection and Nuclear Safety
Bill 1998 and associated bills**

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SENATE
COMMUNITY AFFAIRS LEGISLATION COMMITTEE
Monday, 30 November 1998

Members: Senator Knowles (*Chair*), Senator Bartlett (*Deputy Chair*), Senators Denman, Eggleston, Evans and Lightfoot

Substitute members: Senators Forshaw and Stott Despoja

Participating members: Senators Brown, Colston, Harradine, Lees, Margetts and Woodley

Senators in attendance: Senators Denman, Eggleston, Forshaw, Knowles, Margetts and Stott Despoja

Terms of reference for the inquiry:

Australian Radiation Protection and Nuclear Safety Bill 1998

Australian Radiation Protection and Nuclear Safety (Licence Charges) Bill 1998

Australian Radiation Protection and Nuclear Safety (Consequential Amendments) Bill 1998

WITNESSES

O'LOUGHLIN, Mr Larry, Acting National Liaison Officer, Australian Conservation Foundation, and member, Campaign for a Nuclear Free Future	1
GREEN, Dr Jim	6
McSORLEY, Ms Jean	6
SCHREIBER, Mr Kevin William, Mayor, Sutherland Shire Council	14
SMITH, Dr Garry John, Principal Environmental Scientist, Sutherland Shire Council	14
McDONELL, Mr Kenneth James, Councillor, Sutherland Shire Council	19
RANKIN, Ms Genevieve, Councillor, Sutherland Shire Council	19
CAMERON, Dr Ron, Director, Safety, Australian Nuclear Science and Technology Organisation	25
MURRAY, Mr Allan, Senior Officer, Government and Public Affairs, Australian Nuclear Science and Technology Organisation	25

CABLE, Dr John, Director, Australian Radiation Laboratory	29
LOY, Dr John, Department of Health and Aged Care; and Acting Chief Executive Officer, Australian Radiation Protection and Nuclear Safety Agency	29
MACNAB, Mr Donald Ian, Acting Director, Nuclear Safety Bureau; and representing Australian Radiation Protection and Nuclear Safety Agency	29

Committee met at 9.02 a.m.**O'LOUGHLIN, Mr Larry, Acting National Liaison Officer, Australian Conservation Foundation, and member, Campaign for a Nuclear Free Future**

CHAIR—Welcome. I declare open the meeting. The committee has before it your submission. Do you wish to make any alterations to that submission?

Mr O'Loughlin—I have a cleaner copy which fixes up a few typos. We misplaced the headings; they were the wrong size. There are no changes of fact, but the submission looks neater.

CHAIR—Thank you. You are reminded that the evidence given to the committee is protected by parliamentary privilege. However, I also remind you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. I invite you to make a short opening statement, at the conclusion of which I will invite committee members to ask questions.

Mr O'Loughlin—The Campaign for a Nuclear Free Future and the Australian Conservation Foundation have received this bill and have welcomed it as a way of dealing with regulating the nuclear industry, something which has been required for some time. However, we are concerned that the bill will not achieve what it sets out to do—namely, to protect the health and safety of people and to protect the environment from the harmful effects of radiation. The bill overall gives the impression that it will do something about the industry, but in the actual implementation of regulation, as proposed, it will not deliver. It will not be enforceable and it will not be monitored. It will also not be open to public scrutiny.

We are also concerned that the bill will in some way allow a free path to the development of the nuclear industry in ways which we do not believe should be developed but which, if they were to be developed, should be subject to a public debate or go back through to the parliament. The current bill does not allow that.

We have concerns with the bill in three main areas: the scope of the bill, the nuclear codes and the administrative procedures of the bill. The bill will regulate the nuclear industry and, as it currently stands, will look at everything from X-ray machines to nuclear reactors and nuclear reprocessing. This is far too wide a scope for one single set of regulations. There needs to be quite clear delineation as to what is going to be regulated and how it will be regulated.

The bill should be amended to distinguish clearly between the appropriate structure required for a nuclear installation, such as a nuclear research reactor, and prescribed facilities which deal with relatively small quantities of radiation—for example, customs and X-ray radiation facilities. The bill could also provide the regulatory framework for a very wide range of activities, such as reprocessing and enrichment, and even weapons development and nuclear power—taking into account that the government has technically ruled these things out. However, if these things have been ruled out, the bill should be amended to reflect this.

The government is currently proposing a number of pieces of legislation which affect nuclear matters. The problem is that each of them needs to be looked at in regard to the other. This legislation should be able to stand by itself in relation to nuclear activities and not rely on future legislation, such as the Environment Protection and Biodiversity Conservation Bill.

One of the things this legislation seems to do is to put the power to license a facility, such as a research reactor or a low-level waste dump, in the hands of a CEO of an as yet to be established authority. The bill should be amended to allow the CEO to consider licensing nuclear installations only after there has been a public debate on the need for an installation

and only after a full environmental impact assessment has been completed. The CEO should not be able to issue a licence for a nuclear installation without conducting a public licensing process and having reference to parliament.

The Commonwealth should also take full responsibility for nuclear issues. The bill should be amended to give the Commonwealth a capacity to license all nuclear installations and uranium mining operations, whether owned privately or by a Commonwealth entity. The provisions that allow for unregulated nuclear activity on the grounds of national security are unacceptable. The bill should be amended to remove these provisions.

On the matter of nuclear codes, standards and guidelines, the bill proposes to repeal the provisions of the Environment Protection (Nuclear Codes) Act—if it does not repeal the whole act—and take aspects of the ANSTO Act 1987 and put them into the new ARPANSA. The codes are currently under review and are inadequately scrutinised, as it is. However, they do go to the parliament; 39 codes have been developed by the Nuclear Safety Bureau and these have gone to the parliament. Under the bill, this will not be the case.

It is important that all codes that are developed do have the scrutiny of parliament, and they should be open to public scrutiny. In many states in Australia, it is difficult even to change your front fence without getting some sort of approval and the change being advertised. It should be the case that nuclear codes which relate to a whole range of uses of radiation should also be open to scrutiny.

The bill should also be amended to allow a mechanism for an ongoing review of the codes in order to ensure that they continue over time to reflect best practice. The bill should also be amended so that, where it is a state government responsibility to enact and ensure compliance with any standards, codes and guidelines, the Commonwealth will be provided with regular reports on the operations of the standards, codes and guidelines, and on compliance with them.

The bill should also be amended so that the Commonwealth has some capacity to act if there are serious breaches or non-compliance with the standards, codes and guidelines. As it currently stands, it is all about advising codes and nothing about making sure that they take place. There is the impression of safety but there is none.

The administrative procedures of the act—I am not sure that ‘administrative procedures’ is the proper wording for it—are quite weak in some areas. Most of the detail of the legislation, it seems, is going to be left to regulations, and these regulations are something which we have not really seen, although copies have been floating about. It would seem legislation should be amended so that there is more detail in the bill proper and it provides proper back-up to the regulations.

I am sure senators are aware of the problems with regulations—one of which is that they cannot be debated once they are proposed. It is a ‘yes’ or ‘no’ case, and it can lead to all sorts of situations. It would be better if the Senate had proper debate of that. In any case, if there are regulations being proposed, there should be some capacity for public input again. The nuclear industry in Australia, as it is, relies on public confidence that it is operating correctly and safely. This will not occur if it is operating under a regulation which is drawn up by a minister and then left on the table of the Senate to be rejected or accepted.

The act should also allow for the Commonwealth to be prosecuted for breaches of the act. It is an act which provides for Commonwealth entities, and yet Commonwealth entities will not suffer at all if they do not comply with the act. It would seem to be sensible that the Commonwealth does have the capacity to be prosecutor for breaches of the act. There should

be increased capacity for ongoing public scrutiny of the application of the codes, standards and regulations and for public participation in their development.

There should also be—and this is an important point—a capacity for public scrutiny of the licensing of nuclear installations. It should be like any sort of development application that we would face in the suburbs. Anybody wanting to build a new nuclear research reactor, or a waste dump with a low level, medium or high level, should be required to face some sort of public scrutiny—for instance, an advertisement in the paper so that objections can be lodged or whatever. Leaving it to the CEO of ARPANSA is entirely inadequate.

ARPANSA will have great difficulty in presenting frank and fearless advice to the government, as there are limits to its independence from the government. The act says that the CEO may be directed by the minister to do certain things. The bill should be amended to create an independent and publicly accountable authority.

The bill should also be amended to ensure that all new licensing of facilities by the CEO of ARPANSA, and all existing licensed facilities, are listed in the annual report. All breaches of licences and special directions, et cetera, should be included in quarterly and annual reports. The bill should be amended so that it is a function of the CEO to immediately report to one or both houses of parliament if there is a serious breach at any nuclear installation. Nuclear installation is one of the large ones which we think should be clearly outlined in the bill.

The bill should be amended to ensure public notification of reviews of licence and regular reporting provisions. There needs to be provision for immediate public reporting of any the accidental release or malfunction.

The bill does not create a statutory authority of ARPANSA. It creates a CEO, or establishes one who is already there, who may be directed by the minister. The bill should be amended to create ARPANSA as an independent statutory authority. The bill does not provide adequate mechanisms to ensure that staff and membership of the committees and council are suitably independent from the industry that they are regulating. Again, the bill should be amended not only to establish a register of interests but also to apply a register of interests so that, if there is a conflict of interest, people may absent themselves from discussions.

The bill should also be amended so that the current reporting requirements of the Nuclear Safety Bureau be expanded to provide more information to include at least details of safety assessment criteria used for safety audit reports and reporting of corrective action. That will do me for the time being.

CHAIR—Thank you, Mr O'Loughlin. Are there any questions from senators?

Senator FORSHAW—You have detailed quite a list of areas where you believe the bill should be amended. Have you had a look at how the bill may be amended through particular wording or deletions? Do you proffer any technical amendments that you might be able to supply to us?

Mr O'Loughlin—I have this list here which I am happy to submit to you, though I left a few out.

Senator FORSHAW—I realise that it is the job of parliament ultimately, but there have been concerns raised by some groups—and no doubt your own—that the provision in the bill about, for example, a representative of the public or of the community, does not go far enough and that there should be specific positions allocated for a range of groups. We know that local governments are included now. That is why I was wondering whether you had any details.

What sort of process do you see the public input being? You mention particularly a decision to build a new reactor—and you said a ‘public inquiry’. I take it that you do not regard an EIS as being sufficient in that regard.

Mr O’Loughlin—An EIS in itself is probably not sufficient, but an EIS might not occur. With the proposed Environment Protection and Biodiversity Conservation Bill, it is specified that the minister may call for an EIS on anything, but it is only a ‘may’. It seems that since this legislation is proposing to deal with the nuclear industry specifically, and to regulate it, it should undertake doing some of that. Therefore it should include in this bill a public licensing process. If the minister for the environment in a separate piece of legislation decides to operate in such a way as to call an EIS, that would be welcome. In any case this legislation should have that specific thing in there that there is a public process. It would in some ways be similar to an EIS, but it might be a little different. It would presumably not happen very often.

Senator FORSHAW—At least in one sense a public inquiry has a particular meaning and is a different process from what normally transpires under an EIS. That is one of the arguments that is going on about the decision with respect to the new reactor. At the moment, as I understand the way the people operate, the CEO has the ultimate authority subject to ministerial direction but will be required to take into account a range of factors before making that decision. You could broaden that process and say that the CEO could not, for instance, issue a licence for a particular activity without first having some form of public inquiry. I am just trying to ascertain how that public inquiry would be conducted. Do you have any other thoughts about it?

If you want to move to that step, you have to be a bit more specific than just saying, ‘We will have a public inquiry or public input.’ That could mean, for instance, what a lot of people complain about at the moment—that is, they say that ANSTO puts some ad in the paper, has a meeting, and that is it.

Mr O’Loughlin—It would seem to me that a proposal to establish a nuclear installation would be much more specific than an EIS might be and that it would affect a specific community in such a way as they would want to be much more reassured, perhaps, than in the case of an EIS.

The problem with radiation is that it does last a long time and sometimes you do not know it is out until it is out there. It is something which actually raises more concern than many other issues. You could even call it not an environmental issue but a public health and safety issue, and therefore many more people are concerned. If you call something an environmental impact assessment, people say, ‘Oh, well, that is that.’

This is bigger than that, so I think we should actually give it more weight and pick up on the problems which are in the environmental impact assessment process by giving a little more independence to the people who are making the assessment and also by giving a little more weight to the recommendations of the people making the assessment. The problem with the environmental impact assessment is that we have had 20 years experience of them and a lot of improvement could be made.

Senator FORSHAW—Would you, for instance, put limitations on the people who may be able to be members of the safety committee and the advisory council and so on?

Mr O’Loughlin—I do not know if I would necessarily put limitations on them. I think you need to have that balance between people who have the knowledge and represent the industry, in one sense, and people who are able to make decisions free from constraints of employment,

et cetera. It might be best to have a well run register of interests and people absenting themselves from decisions if there is a conflict.

Senator FORSHAW—Comment has been made that the current Nuclear Safety Bureau is made up of too many people who are ex-ANSTO.

Mr O'Loughlin—Fifty per cent ANSTO, yes.

Senator FORSHAW—You raised two particular issues. One was with regard to the regulations—and certainly that issue has been raised throughout some of the submissions that I have seen—that there is concern that too much of the ultimate meat of this will be in the regulations. What do you think is not in the proposed bill at the moment that should be but, rather, is intended to be in the regulations?

Mr O'Loughlin—I think there are some things which should be. I do not know what will be in the regulations that will come out. It might be that the regulations specify the sorts of things which the CEO should do in leading up to the licensing of an installation. I do not think they should be in regulations; however, they should be in the act. Some parts of the function of the CEO should be expanded to apply things such as best practice and to ensure that there is public scrutiny of various aspects—improve the reporting requirements. Senator, you have asked me something which I do not have a list of, but I think I could provide them.

Senator FORSHAW—I think there is a draft set of regulations around somewhere. Maybe you could have a look at that and get back to us very quickly.

Mr O'Loughlin—When would you want that—2 o'clock?

Senator FORSHAW—It would need to be later today. You mentioned best practice. That is an issue that has been raised as well. It has been suggested that the authorities should operate according to world's best practice. People then say, 'That is a moot point. What is world's best practice? Is it US radiation dose levels?'

Mr O'Loughlin—It is an interesting one, because the trend for all radiation standards is for them to go downwards over years. I do not think there are any that have gone up. It is generally accepted scientifically that you cannot say that there is actually a safe level of radiation, because it is a statistical thing and it could be that that little bit of radiation gives you cancer or has the effects on your grandchildren or whatever. It is difficult to actually say what is the best standard, but my view would be that the lowest is the best.

Senator FORSHAW—I have a final question. You highlighted the point that was made that the Commonwealth absolves itself of any liability, as it were. Section 4 of the act says: Nothing in this Act renders the Crown liable to be prosecuted for an offence.

I take it that you are suggesting that should not be in there?

Mr O'Loughlin—That is what I believe. I do not know whether this is a standard form of legislation or not, but it just adds to the impression that this legislation is not really meaning to do anything, if the entities at which it is aimed will not be liable to any prosecution.

Senator FORSHAW—It is pointed out—and is a well-known fact as well—that people are not able to insure themselves in the event of some nuclear accident or radiation problem and so they can well be left without anybody being liable, as it were, if damages—

Mr O'Loughlin—Perhaps that is the way we can amend the act—to make the Commonwealth liable for any damages that are caused by nuclear installations. It would be better if we did not have any damage at all.

Senator FORSHAW—Yes. I will not argue with that.

Senator MARGETTS—What is your view of the opportunity, or lack thereof, for consultation with the public on regulations?

Mr O'Loughlin—It is actually quite important in this case because the act, as it was described to us, is skeletal; it is the bare bones of legislation. We need to see the regulations and discuss them because they are going to provide the meat to the bones of the legislation. I am not sure of a vegetarian metaphor. We really do need to have some sort of look at the regulations because they are so important. I am not sure how this happens. I do not even think the senators themselves get a good chance to look at regulations because they just get put on the table and, if you do not disallow them, they go through and have the force of law until such time as they are disallowed.

It would seem that there are too many regulations in this legislation. If it is going to be important that the regulations actually describe the whole meaning of the act, then we should have a chance to have a say in them and strengthen them as much as we can before they get to the stage where it is a 'yes' or 'no' from senators.

Senator MARGETTS—What kind of time would you envisage will be necessary for proper consultation to have taken place?

Mr O'Loughlin—The legislation has theoretically sat on the table since April. It is December tomorrow, so that makes it eight months. Since the regulations are quite substantial and quite complex, I would say at least eight months would be nice.

Senator MARGETTS—You have outlined some particular areas of concern with the regulations. Are you suggesting that some of those regulations should have been in the legislation?

Mr O'Loughlin—There are many gaps in the legislation which are to be filled by regulations. I am sorry, I do not really know the regulations—we have only looked at the act itself. But there are some things which should not be left to regulations, such as the way in which things are licensed, the reporting requirements, the way the codes will be set and how they will be implemented, and what happens with breaches and non-compliance with standards and so on. So there are a number of areas. I had an invitation from Senator Forshaw to get back quickly with some comments so I will do that.

Senator MARGETTS—What is your understanding and what are your concerns in relation to the staffing of ARPANSA?

Mr O'Loughlin—ARPANSA will only get such staff as are given to it by the Secretary to the Department of Health and Aged Care. It would seem to be more appropriate that the body is staffed independently. There is only an office of a CEO established under the bill. That is the first problem. The second problem is to ensure that the staff are not merely people who come over from the existing agencies which they are supposed to regulate, so it will be important to have some sort of independence there. And I am not convinced that the staff will be able to operate freely, because it seems that there are some provisions of the act which apply strictly to them, perhaps proposed gaol terms, if they are too vigilant in their operations, et cetera. I think that this is probably a restriction on the activities of ARPANSA staff.

Senator MARGETTS—I would like to ask questions about the levels of radiation. One submission we have received indicates that the International Commission on Radiological Protection says that the limit for the public should be one millisievert and for a worker 20 millisieverts per annum. This bill looks like it allows for a maximum dose of 250 millisieverts over a five-year period for a worker. Do you have any comments on the levels of allowable

radiation in this bill and do they, in fact, measure up to what your belief is of international best practice?

Mr O'Loughlin—No, I think the bill is not really applying international best practice in radiation levels. There are a number of problems with this. One is the way in which the levels will be set. This will not be about public scrutiny or an opportunity for people to bring evidence from overseas or other places in Australia and apply that. Often, that sort of public participation can actually make legislation and regulation codes, standards and practices better than they originally were. So that is one thing.

Also, the legislation proposed will allow the CEO to allow staff to receive more than the maximum allowable dose under certain circumstances. This would seem to be inappropriate. I would have thought it would open the CEO to all sorts of accusations, writs, whatever, and is a dangerous thing to allow.

The other thing which I am quite concerned about with the legislation is that, although it talks about levels of radiation, and will do so through the codes and standards, et cetera, there does not seem to be any coordinated Commonwealth action to establish a register to work out the lifetime doses that people receive. So people can work at somewhere like the proposed new research reactor at Lucas Heights or a radioisotope facility and receive their maximum dosage for a lifetime and then go off and work at Roxby Downs and receive another dose. There is no register which can keep track of that, and that would seem to be something which needs to occur. So the legislation looks at some things but then does not look at this as a holistic picture and at what actually happens.

Senator MARGETTS—One of the comments that has been made to my office by a number of community groups is that the legislation ostensibly is about creating a new oversight body but it appears, from looking and reading between the lines, that it is actually enabling legislation for a whole range of new facilities. You have mentioned that. What is the range of the facilities that you think might be possible under this legislation or with slight variations to this legislation?

Mr O'Loughlin—The legislation seems to draw a clause from the International Atomic Energy Agency which lists six main areas of activity. I think I do have them, but I cannot find them now.

Senator MARGETTS—I think I have them. Are they fuel fabrication plant, nuclear reactor, research reactor, fuel storage facility, enrichment facility and reprocessing?

Mr O'Loughlin—They are the ones. The government has ruled out some of these. Senator McGauran in the previous Howard government ruled out that the government would be considering reprocessing. If it has been ruled out, I am surprised that it is actually in this legislation. It would seem to me that, to maintain consistency between statements, that particular clause and any other which the government has ruled out should be taken out. I am not sure of any others.

It is a concern. Is this bill actually opening the door to allow this? Has the government made a decision that it does want to keep this on the books? If this legislation, which will enable it, went through, all that would be required would be for the CEO of ARPANSA, whoever that may be, to issue a licence in whatever form that may be. At this stage it could be anything. It could be an application form: 'we will fax it through to you, just fill it in and send it back; you should be able to get it by the end of the week'.

I think the legislation should be amended to remove those things because it gives the impression, even if it is not the reality, that these are things which the government is considering.

Senator MARGETTS—Finally, in a nutshell, are any of these six—including nuclear fuel fabrication plant, nuclear reactor research reactor, fuel storage facility, enrichment facility or reprocessing—likely? Is it your concern that any of these are likely in the near to medium future?

Mr O’Loughlin—The government has announced the decision to go ahead with a new research reactor and it has also said that it will locate it at Lucas Heights, having considered some other sites in cabinet. We do not know where the other sites were.

The fuel storage will have to occur because it seems that the international situation is changing. It will no longer be possible for Australia to dump its rubbish internationally. There is less reprocessing occurring overseas anyway and countries which do reprocessing have to do it for their own purposes and will not be able to do boutique jobs for places like Australia. So we will have to store fuel and probably be involved in some sort of reprocessing of it before it goes into storage.

There will also be waste problems associated with it. There are a number of things which might occur. I would not have thought that there would be nuclear power reactors developed, but who is to say? There may be some support in the government for it. We have not heard anything of that nature yet.

Senator MARGETTS—Thank you.

CHAIR—Thank you, Mr O’Loughlin, for your time that you have given to the Senate this morning.

Mr O’Loughlin—Thank you very much and thank you to the committee staff too. They have been very helpful.

[9.40 a.m.]

GREEN, Dr Jim

McSORLEY, Ms Jean

CHAIR—I welcome Ms McSorley and Dr Green, both of whom will be giving evidence to the committee via teleconference. Witnesses are reminded that the giving of evidence to the committee is protected by parliamentary privilege. However, the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. Do you have any comment to make on the capacity in which you appear before the committee?

Dr Green—My PhD is in science and technology studies, and I am particularly interested in the Lucas Heights reactor.

Ms McSorley—I work as an independent nuclear consultant for a number of environment groups.

CHAIR—Do you wish to make any alterations to your submissions?

Ms McSorley—I have one very small alteration to make to mine. At the top of page 2, where it says, ‘These exemptions are not recommended by the ICRT’, it should read, ‘This latter exemption on worker exposures is not recommended by the ICRT.’

CHAIR—Ms McSorley, I am sorry, but we are having difficulty hearing you clearly at this end. Was that amendment to be made to the first paragraph on page 2?

Ms McSorley—Yes; in the first line of the first paragraph.

CHAIR—Thank you. Are there any alterations to your submission, Dr Green?

Dr Green—No.

CHAIR—I now invite you to make a short opening statement, at the conclusion of which I will invite senators to ask you questions.

Senator MARGETTS—Having been on the other end of one of these teleconferences, I would add that this is one of the least technically satisfactory set-ups in Parliament House. The person at the other end has difficulty hearing us, too; so we are going to have to concentrate on talking right into the microphone, if possible.

CHAIR—Would you care to make your opening statement?

Ms McSorley—It is a very brief statement. Basically there are major problems, as we see it, with the regulations. The regulations must go out for public comment. They should not be passed as they stand. Secondly, whilst it is welcomed that a regulation and bills are now being put through to control nuclear activities for Commonwealth agencies, ARPANSA will not enjoy public confidence—nor, indeed, parliamentary confidence—if one-third of its processes are not made public.

In that respect in particular, I would like to refer to the licensing procedures for nuclear installations. In my submission I have suggested that certain activities be classed as nuclear installations to get around the problem of what is or is not exempt from public import, because it is recognised that ARPANSA does not want to have a public licensing process for every use of radiation in the country. However, it is important that some facilities are noted as nuclear installations, such as the radioisotope facility in Lucas Heights, and that any licensing process for that be a public process—firstly, so that people can see that the regulations are being adhered to and applied by ARPANSA and by the licensed operator; and, secondly, so that they can see if there are any breaches. I would like to leave my comments at that.

CHAIR—Thank you.

Dr Green—I will make a few very brief comments. One of my biggest concerns with the proposed legislation concerns exemptions on the grounds of national security, particularly as that relates to Lucas Heights. I am also concerned about the regulation, or lack thereof, of nuclear medicine and other medical uses of radiation. I am wondering if that can be covered under this legislation. The permissible dose limits are far too high—in particular, the maximum worker exposure of 50 x 5 millisieverts per annum in exceptional circumstances. Also, the legislation seems to do nothing about the fact that Lucas Heights is exempt from state and local council environment and health and safety laws. That is all.

CHAIR—Thank you, Dr Green. I now invite senators to ask you questions.

Senator STOTT DESPOJA—My first question relates to Dr Green's latter comments in relation to safe doses of radiation. I note in your submission that you believe there is no such thing as a safe dose, but I was wondering if you would outline your concerns with the notion of 50 x 5 millisieverts. Would you outline what cell damage it actually involves? How much radiation causes cell damage?

Dr Green—There is very nearly a consensus view within the nuclear industry and amongst radiobiologists and so on that there is no safe dose of radiation. There is a range of effects. We tend to focus on carcinogenesis, the causation of cancer, but it is also important to understand that there are many effects at a lower level. In particular, I have mentioned an article in *New Scientist* in my submission. I have briefly summarised it. There are all sorts of

potential effects, many of which we do not understand at all. We are really shooting blind with a lot of this science, because it is extraordinarily complex. In these sorts of circumstances, we have to be extremely cautious; and allowing a dose limit of 50 x 5 millisieverts over five consecutive years is far from being cautious.

Senator STOTT DESPOJA—You indicate that not all cell damage leads to cancer: is that correct?

Dr Green—That is correct.

Senator STOTT DESPOJA—Are you also concerned, as the previous witness from the ACF pointed out, that there does not seem to be a register to keep an eye on the levels of radiation that people are subjected to over a longer period of time and not just when they are in a particular period of employment?

Ms McSorley—My understanding is that at present the Australian Radiation Laboratory has set up a national register of nuclear workers. That would cover people who are working in Lucas Heights and people who are working in uranium mines. However, there are major questions as to how effective that register can be. It was only set up in 1996. After speaking to people at ARL and to people at the uranium mines, I know that basically a huge amount of data has been lost. It is very difficult to trace people within Australia, and we are really behind the eight ball in pursuing workers and looking at the long-term effects of radiation exposure on their health.

To follow on from your question about the issue that there is no safe dose of radiation, the National Radiological Protection Board of the United Kingdom in 1995—in probably the most comprehensive survey ever done on this issue—reconfirmed the ‘no threshold’ effect. After this hearing, I would be more than happy to email some of those details to the committee for your consideration. They are readily accessible and they can be sent down: that is our understanding.

Senator STOTT DESPOJA—Thank you.

Senator FORSHAW—Firstly, Jean, you mentioned your concern about the fact that a lot of what might be regarded as very important legislative detail will be contained in regulations and not necessarily in the act. Given that that may well be the case, what period of time should be available for public comment and consideration of those regulations before the government can proceed to have them endorsed by the parliament? Secondly, what issues that currently would be covered by the regulations should, in your view, be included in the main body of the legislation itself?

Ms McSorley—First of all, the regulations should go out for public comment for at least two months. The reason is patently clear: apart from the complexity of them, there is also the issue that Australia is coming up to its rather lengthy summer holidays, and parliament is going into recess, and therefore there needs to be more time than if this were a full sitting and people were around to avail themselves of the extra time. You need two months at least.

The other issue that I would like to raise is the power of the CEO and how the CEO might act, particularly in the case of exemptions to permissible radiation levels. This is the crux of the issue. People are, quite rightly, worried about the nuclear industry and its activities, because of the health impacts on workers and members of the public. As somebody who has dealt with a number of workers compensation cases from the nuclear industry in the United Kingdom, I am quite frightened by the exemptions that are simply posed in the regulations and by the fact that the CEO has powers to exempt certain activities and yet allow workers to be exposed

to increased sources of radiation over increased periods of time beyond the international recommendations. One of the things that we still have to resolve is how the public or workers can have input into those processes, if they happen at all—and, indeed, they should not really happen.

More importantly, as for the licensing procedures, if there is going to be a licence for a nuclear installation, the public—and that covers local and state governments—should have input into that process so that we can see the regulation and we can see exactly where the licensed operator or the licence applicant is going to apply the regulation. That licence should be left as a public document and, if there are any suspected or known breaches of it, that can be called before the CEO. It presently remains as a closed process. I do not think that in any other developed country in the world would you have such a closed process and so much power left in the hands of one person.

Senator FORSHAW—Thank you. Dr Green, you might also care to comment on the issues I have raised. I have read your written submission, and you make quite a number of detailed points and ask a range of questions that I think are pertinent for us to consider. In your opening comments, you mentioned the issue of an exemption on the grounds of defence and/or national security. Would you expand upon your concerns there? In one sense at least, it is not an unusual exemption that might be considered; but I would imagine that the danger that people are concerned about is how broadly the term ‘national security’ or ‘defence’ might be regarded. Would you please comment on that, as well.

Dr Green—Yes. I will answer that question with a question. I suggest that the committee get hold of the submission to the reactor EIS by Murray Scott, a former ANSTO employee. Have the committee members got that submission?

Senator FORSHAW—I have not got it at the moment. I read it over the weekend. I am not sure the telephone was working when we rang to get it; but we are trying to get it, if we can.

Dr Green—It is very important. It clarified a number of issues. Firstly, to give you a thumbnail sketch of the history of ANSTO, we have to remember that Philip Baxter was heavily involved in the push towards nuclear weapons in the fifties and sixties. Whether they were actually doing weapons related work at Lucas Heights is an open question; but the point is that a lot of these nuclear facilities had a dual use, and perception is everything.

For example, they had an enrichment program down there. It may or may not have been pursued in part because of the interest in weapons, but either way it is a very sensitive sort of facility to have in a suburban area. In fact, they kept that enrichment program secret for the first two or three years. The point is that we have still a lot of these weapons relevant facilities at Lucas Heights. There is the mothballed enrichment facility and the isotope processing facility which could be used to separate small amounts of plutonium. Perception is everything.

The concern that I have, and that Murray Scott has, is that some time in the future—in the unforeseeable future at the moment, but it could happen—we might be getting to a situation where Lucas Heights is involved in weapons related research or production, or is perceived to be involved in weapons related research production. That opens a can of worms in terms of national security, and all these sorts of issues. That has to be dealt with by this legislation, but it is also a very important issue in relation to the siting of this nuclear reactor.

Senator FORSHAW—Thank you. That is it for the moment.

Senator MARGETTS—These questions are mostly directed to Ms McSorley, but if Dr Green would like to chip in on anything, he should feel free. Jean, what do you believe is the importance of the differentiation between a significant ‘nuclear installation’ and the ‘prescribed radiation facility’ in the definition section of this bill?

Ms McSorley—Some activities at Lucas Heights and in many other facilities around the country would not be of public concern. They would not give rise to radiation exposure off site. They may give rise only to an insignificant exposure to workers. These are routine day-to-day operations such as the use of X-ray machines by customs officers or whatever. Naturally, one would not want to hold up these processes to public scrutiny because it is simply not worth it. They are not that relevant to the public. They are not that relevant to parliamentary input in nuclear activities.

However, it is very important with those installations which give rise to exposure to workers or off site exposures to the public, or give rise to nuclear waste creation. By that I do not mean just low-level waste. There are very large amounts of nuclear waste created by the radioisotope facility. In the case of the reactor it is spent nuclear fuel. These have major environmental and public and worker health implications, quite apart from the possible national interest implications that Dr Green has referred to.

Those installations should be separated out and, if they are separated out, they are the ones we can say should be publicly licensed. They should go through a public process. That would allow ARPANSA to get on with the routine day-to-day work of licensing and overseeing the smaller users, who, let us be honest, most people are not concerned about. Whilst there should be justifiable health concerns to make sure workers using them are protected, they are not of the same order of magnitude of concern as the larger nuclear installations.

Having spoken to the officials who put this bill together, they seem very keen not to hold up the smaller users by going through public processes. It has been suggested having the significant ones of these defined nuclear installations in order to basically facilitate the passing of this bill but also in order to make sure the public have confidence in the licensing procedures.

Senator MARGETTS—Is it important to have the existing installations listed by name in the bill, and, if so, why?

Ms McSorley—You can either name them or you can define them very clearly. Whilst the bill, for example, mentions a research reactor, and it would cover HIFAR, it does not mean the radioisotope facility at Lucas Heights. And a significant amount of radioactivity is processed through that plant. Indeed, it is the kind of material for the creation of isotopes. There is a significant amount of radioactive waste created there and it is one with intermediate level waste which cannot be disposed of with near surface disposal. It has to be stored long term and then go to a deep repository. This is very hazardous material. It is not named in a nuclear installation and will not be found in the bill.

But, as I understand it, in February ANSTO will be applying for a licence for the site, and I think it is fair to say that most people in Sutherland would want to see a separate licensing process for the isotope facility along with a licensing process for the HIFAR reactor. That is perfectly reasonable. After 40 years of not having proper regulatory protection, it is about time they were given that protection.

Senator MARGETTS—What are your views on the process that should be undertaken for review of the existing installation prior to licensing?

Ms McSorley—Obviously it is up to ANSTO, as the proponent for any application, to publicly notify that they are going to apply for a licence. I think that they then have to have a list of the regulations with, on one side, guarantees of how they are going to meet those regulations and, if the CEO of ARPANSA signs off on a licence, he should be able to demonstrate that he believes those guarantees will be applied and that if something goes wrong the breaches will be dealt with appropriately, the appropriate penalties will be put in place or remedial action will be taken.

But I think, most importantly, all of those documents have to be seen to be public. Guarantees have to be made that the regulations will be applied and that the licences are left as a public document. Then it can be seen that, if breaches occur, they are being dealt with. Anything less would simply not be good enough.

Senator MARGETTS—Will the licensing provisions of this bill be sufficient for the licensing of new prescribed radiation facilities, and in what ways would they need to be improved to provide for the community to be confident of the safety of the facilities? Whilst you are answering those questions, are there any other major new proposals that you have heard of that the committee should know about?

Ms McSorley—My understanding from reading the draft regulations and the bill is that, yes, facilities such as the radioisotope production facility at Lucas Heights will be classed as a prescribed radiation facility. Obviously that should be classed as a significant nuclear installation and dealt with under the licensing process that I outlined and I believe would be suitable. However, further down the track, there is the potential that, if spent nuclear fuel reprocessing contracts do not go ahead with overseas reprocessing plants, there could be reprocessing or conditioning of spent nuclear fuel here in Australia.

This is not far-fetched. In fact, ANSTO recognised this with a radioactive waste management plan in their 1996 document on the preliminary review. Since that plan the reprocessing plant at Dounreay has closed. In fact, the options for ANSTO to get the spent fuel from the cooling reactor may be closed already; we do not know. Certainly there is no guarantee that the spent fuel from the proposed reactor will necessarily be reprocessed overseas, and I think it would be quite frightening if reprocessing our spent fuel conditioning plants was not put under significant nuclear installations and was not subjected to the public licensing process.

As the bill stands at the moment a reprocessing plant could effectively come under a prescribed radiation facility and, in effect, the CEO of ARPANSA could sign off on that licence without there being any public input. I should also say that I understand those facilities would be open to environmental impact assessment but, if they do go ahead—and God forbid that there will be reprocessing in Australia—we would still want a licensing process that is not only public and open to parliamentary scrutiny but also one that can be properly enforced.

My experience with the nuclear industry, having lived with it for most of my life, is that a licence which is kept in the dark, a licence which is kept quiet, a licence where deals may be done between government agencies, sometimes is not worth the paper it is written on. The industry has to be open to public and parliamentary scrutiny.

Senator MARGETTS—Will the licensing provision be sufficient for the development of major nuclear installations as described in the bill?

Ms McSorley—I doubt that, overall. One of the problems we have with this whole process is that at the moment we are dealing with the bill and it presents it as something of a fait accompli. Of course, we know it was tried to be rushed through earlier this year, so at the moment we are under a lot of pressure to pass the bill and then deal with these issues under

the regulations. My concern is that the bill may be suitable for certain smaller scale uses of nuclear materials but, if you think about this, does this bill really cover everything from a X-ray machine to a spent fuel reprocessing plant or a sizeable research reactor? At the moment it does not, really.

The unfortunate thing is that the Senate is being asked to pass a bill that is a one size fits all, and that is probably inappropriate. At the very least, there should be provisos in the bill that, again, point to the regulations as well to make sure that, when the regulations go out for public comment, some of these more important matters can be dealt with properly.

Senator MARGETTS—There has been talk about the regulations. How long have you had access to looking at the draft regulations?

Ms McSorley—I was given some of them on Tuesday—that is the latest set of regulations. I say that because I saw an earlier set on Monday, but they were handed over on Tuesday. Again, I think it is quite inimical that these regulations are being kept in the dark. None of this whole process inspires public confidence, from how the bill has been put together, the way in which the ARPANSA task force has been formed, the way the interdepartmental committee has dealt with this, to the way the regulations have been dealt with.

Those responsible for this process should take that on board because, at the moment, people are being served with what looks like a very badly worded bill and very badly worded regulations. We are being asked to push this through. Yet, as everybody knows, the whole of the nuclear facilities in this country form, understandably, one of the most important issues to the public, and to parliament. I think the way this is being dealt with is really quite a shame and I do not think it speaks well for the ARPANSA task force that it has been done this way. At the very least they can mitigate some of the public anger by making sure the process is dealt with properly from now on in.

Senator MARGETTS—Will the licensing provision be sufficient for development of a nuclear fuel fabrication plant?

Ms McSorley—My understanding is that a fuel fabrication plant is in the bill—it is under nuclear installations. Whether or not that ever goes ahead, of course, is another issue. What will have to be looked at in context of this bill is not just the licensing process but whether or not separate legislation should be enacted for these other major nuclear installations when they go ahead. One of the ways to make sure that this is open to proper parliamentary scrutiny is that if a significant nuclear installation—like a fuel fabrication plant or a spent fuel reprocessing or conditioning plant—is applied for, parliament should pass that as a separate piece of legislation and then all of the issues surrounding that, such as national interest and safeguards issues, should be considered at the time. It is not good enough that it is just open to a licensing and/or an environmental impact assessment. These facilities have wider implications and should go back to parliament for special legislation.

Senator MARGETTS—Is it sufficient for a nuclear reactor or a research reactor?

Ms McSorley—At the moment we are caught in something of a bind. We already have a research reactor, and unless it shuts down overnight—and one suspects it will not—then the legislation should in theory be able to cover that. But, certainly, the proposals that are currently before the government for a significantly increased nuclear research reactor and for significantly increased isotope reduction facilities should not just go through under this bill. As was referred to earlier, that is why there should be named facilities in the bill to cover existing facilities, and special provision through legislation if more significant and larger facilities come up and are actually placed before parliament.

Senator MARGETTS—Would you like to comment on the potential for the licensing provisions in this bill for either fuel storage facilities, enrichment facilities or reprocessing facilities?

Ms McSorley—As I outlined earlier, and perhaps I did not state it clearly enough—it is in the submission I gave—these other significant facilities are not in the bill. Fuel storage off site, possibly next to the proposed national nuclear dump in South Australia, is not covered in the bill. The national nuclear dump itself, for low and short-lived intermediate level waste, is not covered. These are major facilities. They have major implications for the operation of ANSTO. They have major implications for the people who live in the areas these proposals are being aimed at. They have major implications for the environment. Certainly all those types of facilities should be named in the bill as significant nuclear installations.

Senator MARGETTS—Are you aware of any major commercial potential or push for Australia to be involved in any of these as a privatised or moneymaking process?

Ms McSorley—Over the years, there have been a number of people who just see Australia as nothing more than a very large desert with a few fringe dwellers on the edges of it. That is something I have said at a number of hearings before the Senate. The fact that there are overseas companies who have been speaking to ministers and public servants about the possible privatisation of the proposed national nuclear dump is one area of concern. The reason for the concern is that if, for example, the government went ahead and established a national nuclear dump and then decided to pass it over to a private operator, that operation would not come under this legislation. It would come under state legislation, and who knows at what level that might be if such a process was gone through with? So you could end up with a national nuclear dump—possibly a spent fuel store or a long-lived intermediate level waste store from waste—coming back from overseas reprocessing, being under private ownership, being subject to less than satisfactory state regulation, if such regulation existed at all, and certainly being out of the hands of the Commonwealth. And, of course, that is not allowed for in this bill.

Senator MARGETTS—So, basically, do you think the pressure for corporate business opportunities might outweigh public interest?

Ms McSorley—Well, let us hope that Australia does not make the same mistakes on this as has happened in other countries. Certainly, that is not an unknown force. We know from many different industries, and many examples of business enterprises, that private enterprise has one eye over the public interest. And one could almost argue that this bill should say that none of these facilities should ever be privatised. Perhaps that should be put in. That may offend certain parts of the business community, but I think, as the Commonwealth is creating these materials and it is meant to be in the national interest, one could argue that it also should stay under public and parliamentary control and none of it should pass to private hands.

Senator MARGETTS—Are there any other types of nuclear installations that should be included in this act, like spent fuel conditioning plants, nuclear waste disposal facilities or isotope facilities?

Ms McSorley—Certainly, and I have listed the four extra that I think should go into the bill as being nuclear installations. These include waste disposal facilities. Reprocessing plants are mentioned but spent fuel conditioning facilities should be mentioned because, if the spent fuel from Lucas Heights does not go overseas, it will have to be conditioned here. The other one, of course, is spent fuel storage or long-lived intermediate level waste storage, and the

isotope facilities at Lucas Heights should definitely all go under significant nuclear installations.

Senator MARGETTS—Obviously, we are asked to be reassured that, when regulations come to the parliament, we have the power to disallow. Of course, if you disallow regulation, it means that you are left with no regulation. What is a way of dealing with that? Should we be dealing with the bill outside the regulations or draft regulations at all?

Ms McSorley—It is something of a bad process that these two issues are being held separately. We were told by officials connected with this that the bill was deliberately left ‘skeletal’—that was the term used—and that the majority of powers in connection with the bill and ARPANSA had been put in the regulations. It is completely invidious that, after 40 years of having no regulations or powers over Commonwealth nuclear activities, suddenly parliament is presented with these and told, ‘You pass this bill; we will get to the regulations later. And we are not quite sure if you will be allowed to see them and there will not be any discussion.’ It is completely improper.

As I said earlier, I do not think it speaks well of ARPANSA in the way that this has been dealt with. It does not call for public confidence or even parliamentary confidence in what is happening. The very least they could do would be to put this bill off and have proper hearings about what the bill really implies. Unfortunately, I think that people are trying to push it through. If they do that without even having proper consultation on the regulations, they do so at their own risk. Those people who believe that they can push through this legislation, have bad legislation and not have it properly debated, and then expect people to blindly follow them, are quite mistaken. They are not dealing with the same public they were dealing with in the 1950s when they set up ANSTO. They are not dealing with a naive and uneducated public or local government. They are dealing with people who now know what the situation is and who expect to have input into it.

Senator MARGETTS—Jean, have you had any experience with consultative committees in relation to radiation health and safety? Do you have any concerns, or do you think that committees with community representation provide the safeguards that people are looking for?

Ms McSorley—Under this bill, one of the worries is that all of the appointments to the various committees will be decided between the CEO and the minister. I would certainly like to see public nomination for those positions on the committees, not just for the public representative who represents the general public, but also for a lot of people around the country, many of whom have quite an extensive knowledge and understanding of radiation and the nuclear industry.

I think it would be wrong if you had one isolated token member of the public meant to be representing 17 million people, and basically a group of nominated specialists who may not be able to articulate those views on the nuclear industry back to the public, or people with a vested interest either because of their previous experience with nuclear organisations or with, for example, the National Health and Medical Research Council or ARL. All of those positions on all the advisory committees should go to public nomination, and that would allow for input from scientists and academics and a whole range of people around the country who could have valid input into ARPANSA.

Dr Green—Let me quickly add to that. In respect of this ideology of scientific expertise, obviously you want scientists on these advisory bodies. The problem is that the scientists almost invariably come from the nuclear industry and offshoots such as the ARL. I am wondering whether it would be possible to write into the legislation that the scientific expertise

represented on these advisory councils should reflect the breadth of scientific opinion in the community.

Senator MARGETTS—I guess it was represented to us that the ARPANSA legislation is something warm and fuzzy that will be a protecting mechanism. If what you are saying is correct, you are saying it opens a tin of worms which ought to be much more, that what we are dealing with is a whole lot of potential nuclear facilities in the future that will not go through a separate legislative process. What is the greater risk? Is there a greater risk in not having this legislation for a while until we deal with these issues, or is there a greater risk going longer than a month or so—or even six months or eight months—without legislation, and dealing with the issues that we are involved with?

Ms McSorley—Having looked at the legislation and having spoken to a number of people connected with it, I do not feel protected. Certain aspects of nuclear activities in Australia are being protected and facilitated through this legislation. That is the main worry. This is about facilitating a whole range of activities. Let us not be naive about this. This is also about putting in place a veneer of responsibility and regulations in order to allow an expansion of Lucas Heights and in order to allow for things like the national nuclear dump to go ahead.

This is not about people feeling warm and fuzzy and thinking the public really deserves the best protection possible, because, if they believed that, they would hold off on this bill. They would hold off on the regulations and say, ‘Let us sit back and really think hard about what this legislation is meant to be doing. Let us think about what might be facilitated underneath it rather than what might be stopped through it.’

It is not a good piece of legislation. It is not a good process. Unfortunately there is not a good outlook for this and it will not enjoy public confidence. Really people are seeing through what this bill is about. It is about helping ANSTO with a whole range of activities which are highly questionable and which many members of the public do not want to see go ahead.

Senator MARGETTS—What has been your experience with the openness of the nuclear industry in Australia in relation to providing the information that the community needs in relation to their health and safety?

Dr Green—I have ongoing problems with the government and ANSTO in relation to getting answers to questions. In fact, I have sent well over 20 letters to both the government and ANSTO asking over 100 questions and it is very rare that I have got any answer whatsoever, let alone an adequate answer. Nothing has been done to resolve this problem. It is an absolute sham. If the committee can do something to fix that problem, that would be much appreciated.

Senator MARGETTS—We have had some expressions of concern about the independence of ARPANSA. What could be done so that you feel that there is that accountability of ARPANSA and the staff of ARPANSA?

Dr Green—There are all sorts of things you can do. As I was mentioning before, the committees and ARPANSA itself have to reflect the breadth of scientific opinion. There should be public international advertisements for the CEO of ARPANSA, whereas I understand someone has already been appointed as the founding CEO, which seems to me to be putting the cart before the horse. There are a couple of things you can do. I am sure there are plenty more.

Ms McSorley—I think one of the issues is the whole matter of public reporting annually at least for ANSTO and ARPANSA quarterly. But there is also no reason why discussion documents and minutes of the committees cannot be open to be requested as public documents.

I think that is absolutely crucial because, as Dr Green has said, we are not getting much honesty from ANSTO at the moment. I think over the last year they have been as bad as they have ever been. ANSTO itself seems to be getting increasingly secretive and increasingly hesitant to respond to any letters. That has not been my previous experience with them all the time. I have to say that. In my early days of living in Australia, they were quite open. Things are getting worse and that does not help public confidence.

ARPANSA can certainly help by making sure things such as the community charter that was meant to be between ARPANSA and the people will be applied properly. They can make sure that all of those documents can be accessed by the public on request, and that they report properly to parliament.

CHAIR—I thank you both for giving the Senate your time today. Thank you very much.

Dr Green—I would like to just make one more brief comment.

CHAIR—Yes, you certainly may.

Dr Green—Obviously the reactor and isotope processing facility at Lucas Heights need to be thoroughly regulated. I just want to take that one step further. There is a big problem in Australia with overuse of nuclear medicine. I know this is getting beyond the charter of ARPANSA, because you are dealing with doctors who are not Commonwealth employees, but it is a crucial issue. Nuclear medicine is killing more people than the reactor and the isotope processing facility and everything else at Lucas Heights. There is a small but finite risk with every diagnostic nuclear medicine procedure. I am just wondering if the committee can deal with that in some way or another. One possibility would be that the Radiation Health and Safety Advisory Council would be required to conduct periodic reviews of the medical uses of radiation in Australia, taking into account issues such as UV use, iatrogenesis, et cetera. Also, in parenthesis, this should be dealt with as a national issue because the practice of nuclear medicine in Australia is so closely tied to Lucas Heights.

CHAIR—Senator Eggleston has a question for you.

Senator EGGLESTON—Dr Green, I just wondered how you could justify your comment that nuclear medicine is killing more people than other uses of nuclear material. Is that based on research or it is that just an opinion?

Dr Green—This is based on research from the Australian Radiation Laboratory and ANSTO. Their data dates from 1993, but if you do some simple extrapolations, taking into account the growth in use of nuclear medicine in the past five or six years, then it is likely that 144 people subjected to diagnostic nuclear medicine procedures last year are likely to die as a result of those nuclear medicine procedures.

If you take ANSTO's projections seriously for increase in the use of nuclear medicine, then it is likely that of the people subjected to nuclear medicine in the year 2007 almost 500 will die from those nuclear medicine procedures at some time in the future. It is very likely that these are larger figures than deaths relating from the Lucas Heights reactor or the isotope processing facility. I do not think you would have anyone arguing with that.

Senator EGGLESTON—Is it not true that most people who have had nuclear medicine procedures have got some kind of serious illness which is likely to cause death anyway? One wonders how it is that you are differentiating between natural or inevitable mortality from pathological process and the long-term side effects of radiation?

Dr Green—There are a number of issues there. I can certainly send you some of my detailed research into nuclear medicine. I guess the issue is that there is too little information on

nuclear medicine and costs and benefits. One of the quotable quotes from this debate about the Lucas Heights reactor is that from a gentleman called Dr Khafagi, who is on the ANSTO board and a prominent nuclear medicine specialist, writing in a 1992 journal article that data on patient outcomes for nuclear medicine are scarce. We are dealing with an issue where we are not sure what the benefits are, we are not sure what the costs are and we are not sure if it is worth the money—all these sorts of issues. It is right up in the air.

Senator EGGLESTON—I think you would have to agree that all of those statements are your opinions rather than based on any research and factual information.

Dr Green—I have completed a 150,000 word PhD thesis which you are welcome to a copy of.

Ms McSorley—I might just say here that, if you look at the population of people exposed to medical uses, then it is expected there would be some impact. This is one of the basic precepts of understanding radiation exposure. Within any given population, for a given exposure there will be an impact. What is being said here is that there should be an ongoing assessment of that impact, particularly as research has shown within Australia that there may well be an overuse of nuclear medicine. This is not unheard of.

This is a big debate that has been taking place not only within Australia but in the United Kingdom and the United States. While there is a lot of scrutiny of nuclear facilities, within many populations the largest man-made sort of exposure is actually nuclear medicine. That is having an impact. The thing that Dr Green is raising is certainly not beyond question. It has been researched by many medical parties and it is something that ARPANSA could possibly take on board through its advisory committee to make sure that the exposure through nuclear medicine is kept to a minimum and that doctors are aware of and consider the longer term health impact of exposure. In fact, even in the recommendations of the International Commission on Radiological Protection, it is assumed that there is always a benefit from medical exposure. They, therefore, do not even require the same safeguards as they do from nuclear plants.

Dr Green—The problem is also a conflict of interest. Doctors are aware that there is a small but finite risk with these procedures, but there is also a commercial interest for them to use diagnostic nuclear medical radioisotopes and so on. There is no regulation of this conflict of interest. It just happens to be the case that, in this period of history, nuclear medicine is very lucrative in Australia. That is largely responsible for the growth in use as well as the supply of heavily subsidised isotopes by ANSTO.

Senator EGGLESTON—Is it not also true that nuclear medicine helps identify things like fractures, for example, which do not show up on X-rays, and a whole lot of things that are difficult to detect by other testing procedures are detectable by use of radioisotopes? Again, your comment that the use of nuclear medicine is largely profit driven by doctors and by the people who produce radioisotopes is probably somewhat unfair, I would have thought.

Dr Green—I do not want to sound too cynical about nuclear medicine. It is certainly a useful technology but, when you are dealing with a technology which can also have fatal side effects, and which is being overused, you are dealing with death. You are dealing with a small profit and a small but finite number of deaths every year. It is something which obviously needs to be taken seriously. Also, nuclear medicine does compete quite fearfully with a range of alternative diagnostic technologies.

You will often hear ANSTO and the nuclear medicine profession saying that nuclear medicine and the other diagnostic modalities are complementary rather than competing. But

it is absolute nonsense. Again I have gone through the medical literature and all of the nuclear medicine journals are talking about the intense competition between nuclear medicine, computerised tomography, MRI and so on. We should certainly be looking in Australia towards replacing nuclear medicine with these alternative technologies to the extent that that is possible.

CHAIR—Thank you for joining us today.

[10.31 a.m.]

SCHREIBER, Mr Kevin William, Mayor, Sutherland Shire Council

SMITH, Dr Garry John, Principal Environmental Scientist, Sutherland Shire Council

CHAIR—Welcome. Do you have any comments to make on the capacity in which you appear?

Dr Smith—I am also a ministerial appointee to the current safety review committee for the Lucas Heights Science and Technology Centre.

CHAIR—Thank you. I understand there will be two councillors from your shire giving evidence in the next section. I remind witnesses that evidence given to the committee is protected by parliamentary privilege. I also remind you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. The committee has before it the council's submission. Do you wish to make any alterations to that submission?

Mr Schreiber—No. The submission contains what we believe are our concerns, with the short notice we had to put this forward to the committee. We thank the committee for allowing us to come and put our case. There are parts of the bill that we are concerned about. In principle, the bill is supported but we would like to see certain parts of it tightened.

CHAIR—I now invite you to make a brief opening statement at the conclusion of which I will invite senators to ask you questions.

Mr Schreiber—One of our major concerns with the bill is the openness of the environment issues—the whereabouts of the spent fuel and the long-term repository that could come into being at Lucas Heights or anywhere else in Australia. It is a concern to us that there is no DA—development application—requirement for the Crown to submit to the public or to the local government area, council or state. As you know, we have had Lucas Heights there for some 40 years and we do not know what the outcome of the submission on the EIS of Lucas Heights and of the replacement reactor will be. Our concern is that it could be left there.

We have a residential area all around there and we do not believe it is an area for a long-term repository, which has always been one of our concerns. We have been told that it is now not going offshore to Dounreay. We are waiting for more evidence to show us where the spent fuel will be going. We do not want Lucas Heights or anywhere else turned into a repository. This is why one of our major concerns is that there has been no consultation with local or state government.

The other issue is the public viability of the licensing process. Again, we would like to see the licensing process open so that ANSTO is under the Crown and they are not responsible to local government and to the state. If a local person or a public person has a contract to deal in nuclear waste and so forth, and is totally responsible for that, what happens if there is a major spill or accident at Lucas Heights? Where does responsibility for that lie? The Crown does not accept responsibility. I believe they should accept responsibility, and that should come back to the public so there is some form of compensation to the local government areas.

Another major concern is the ability of the CEO to implement expectations at short notice without any public consultation. They do not come out to the public and say, 'This is what we are going to do.' They just go ahead and do it, which does not give us the chance to have any objections to it or to speak to it on behalf of the public within our area.

We have a shire of 206,000 people and, in the area where Lucas Heights is, it could affect 1½ million to two million people from the southern Sydney region of councils, which have concerns about the long-term life of Lucas Heights.

Dr Smith—I will just go to a couple of details in the terms of reference for the committee. We have appended our submission and the background opinion from Tim Robertson, barrister, which fill out some of the points that the mayor has been making. We also have some potential amendments to the proposed bill, which may be of interest to the committee. We can offer those if necessary.

I noticed the issue of allowable levels of radiation was an interest for the committee. We have a number of consultant opinions that indicate that, internationally, one might look more to something like 0.03 millisieverts per annum site constraint for this site, which is about 30-fold lower. We were prepared to offer expert opinion on that issue of detail.

With respect to the crown immunity issue, there are two key issues here. One is the inability or failure at this stage of the federal government to sign conventions which would, as it were, admit liability and then set a liability limit rather than councils and the public having to go through a common law type litigation. Secondly, with the issue of standing to bring cases, if there is a breach of the act, that, at the moment, stands with the CEO, as we understand it. We feel that councils and the public should have standing to address issues of breaches of the act. They go to those issues of crown immunity.

I have two last points. With respect to the waste disposal and storage issues that the mayor touched on, even at local government level now, we are moving to require developments to have some sort of waste plan substantiated and documented—as in commitments and disposal solutions—and readily provable and justifiable before a development consent is issued. At the moment, the federal government's facilities do not really have that requirement and there is a real limbo in this area of waste disposal. Obviously, in the area of nuclear waste, it is particularly important and critical.

Finally, there is some overlap with this bill and the Environment Protection Bill, which is currently before the parliament, in that nuclear issues are considered in both. We still feel very unprotected. We have felt very unprotected under the EPIP Act, with respect to the ability for significant developments to develop without providing justifiable solutions to waste. Under the proposed new bill—the Environment Protection Bill—we will still feel unprotected. This issue of federal facilities impacting on local communities has virtually no usable planning law associated with it. It is usually a national interest question. It is a real vacuum.

Our real concern is that under the Environment Protection Bill—I think it follows through with the current bill—the issue of significance is not clearly defined. Whether a nuclear facility—or activity in this case—is significant is more for the public to prove than for the proponent to prove that it is not significant. We feel this vacuum in federal law will persist through these two bills and will lead to a lot of uncertainty, a potential lack of confidence, and possibly a conflict in the future because the definitions just are not clear.

Senator FORSHAW—Firstly, if you do have some draft amendments, I would appreciate it if they could be provided to the committee as soon as possible. I have seen certain suggestions from various groups but, if the council has some, that would be of great assistance.

Secondly, Mayor, you raised the issue of the difficulties the council has with having any real say in what may or may not be developed at the Lucas Heights site and you referred particularly to no DA requirement. I am not sure that the Commonwealth government is about to hand over to Sutherland Shire Council an ultimate say on what it can do on its own land in terms of what it can build or not build. Could you explain how the situation differs from other major activities or installations that have been contemplated to be built in the shire? I am thinking particularly of some petrochemical type of plants on the Kurnell peninsula or major waste repository developments in the nearby area and so on. What role does the council have in that regard?

Mr Schreiber—For instance, if Caltex at Kurnell go ahead with any extension of their premises, they have to put in a DA application and they have to meet rigorous standards of environment protection. We have recently had an application before council for a co-generation plant to go in at the Caltex refinery to take the water out of Botany Bay, chlorinate it, heat it and put it back in. We managed to get that overturned by going to the state government. They listened to the council and the support for turning that around and using the grey water from the sewage treatment works when that is upgraded. The co-generation people had to put in a DA to council to get this. It went to an inquiry and we managed to get it overturned and get it the way it was. If Caltex, a major employer, have to do this—and it is a petrochemical—why do not Lucas Heights have to report to the council what they are doing there so that we can have an input into what is going on for the safety of our people?

Senator FORSHAW—The point is that you have an input but there is still a process whereby the council's ultimate decision can be overturned or you can take it to court.

Mr Schreiber—We did take it to court. We took it the minister in New South Wales, Craig Knowles. He listened to us and he had the intestinal fortitude to overturn the submission and go with the council.

Senator FORSHAW—So building in the requirement does not, at the end of the day, remove totally the Commonwealth's ultimate say. It just builds in a process.

Mr Schreiber—Yes.

Senator FORSHAW—Okay. The other issue I wanted to raise was that you mentioned the council's concern about the possible long-term repository at Lucas Heights. I am aware of this, as you know I am aware, and we are going to hear from some other members of the council shortly about the whole process of whether or not there should be a new reactor at Lucas Heights. Do you see anything in this legislation that tips the balance either way on that issue? Certainly, a concern was expressed to me that, if this legislation is enacted, it may harden up the ultimate case for the building of the reactor or make it somewhat easier or whatever. I am concerned to ensure that, if this legislation does go through the parliament, the provisions of this bill will not in turn either lead to some short circuiting of the process for the decision to build the reactor or have an impact either way on it. Do you understand what I am trying to get at here?

Mr Schreiber—I think I understand where you are coming from, Senator. We have a concern that, with this bill, we have not got enough say about the long-term repository which could happen at Lucas Heights. If we take the issue of the replacement reactor out of the equation at the moment and just talk on the ARPANSA bill, I believe it should be tightened up again so that council have some say in what is going to happen with the storage of spent fuel at Lucas Heights.

Our feeling is that it should be there for no longer than five to seven years. I believe Lucas Heights believe it should be there for 10 years. This starts to get to a medium- to long-term repository. I believe it should be minimised down to as short a time as possible and that we see some form of documentation stating that the spent fuel from the replacement reactor will then be going overseas or will be reprocessed somewhere, but not at Lucas Heights and preferably not in Australia.

Dr Smith—To complement what the mayor is saying, there is a perspective from my role on the safety review committee as well which might be of interest on that question. The safety review committee, as you know, is an oversight committee for all activities at the Lucas Heights science and technology centre and meets roughly quarterly. It is clear, as the mayor has indicated, that the council supports the concept of this particular bill and the formation of ARPANSA because it will essentially take control, or licensing procedures, out of the hands of the operator and more into somewhat of an independent body. There have been clear demarcation disputes between ANSTO and even the Nuclear Safety Bureau—they are well documented and I have seen them through the safety review committee process. So that concept of the bill is very important.

But I think the committee should not underestimate that the only real tool that the public has in most of these federal issues which are impacting on local communities is the tool of public visibility. There is an issue here, because the safety review committee is actually going to be dissolved under the current proposal and, as we understand it, the council will report to the CEO of ARPANSA rather than, as currently occurs, the safety review committee reporting to the minister. So, in some respects, the ability for the community to scrutinise issues and then for the minister to be accountable is definitely diluted—and that is a part of Tim Robertson's opinion. So there are some aspects to the details being built in here which are probably retrograde steps, although the principle is good in its own right.

Senator FORSHAW—Perhaps you could comment on this issue—it is one Senator Margetts raised earlier with the previous witness. The proposed bill at the moment talks about nuclear installations and prescribed radiation facilities, and it then lists installations as:

- (a) a nuclear fuel fabrication plant;
- (b) a nuclear reactor . . . ;
- (c) a research reactor;
- (d) a nuclear power plant;
- (e) a fuel storage facility;
- (f) an enrichment plant;
- (g) a reprocessing facility.

What has me a little concerned is that including all of those specific facilities under the definition means that in the future, if there was a decision to stick a reprocessing facility at Lucas Heights, notwithstanding what the government says, it is automatically included under the act, presuming that it is passed. But I am not so sure that the alternative operates—and I might need some legal advice on this—if you only specify in the act what we have currently—whether or not, by omission, it includes them anyway. This has been raised by some witnesses, that once you mention these facilities in this act the lights start flashing and people are going to get very concerned, or are getting concerned, that it is a backdoor method of interim approval, if you like.

Dr Smith—And that raises this issue of both designation of facilities—what is significant—and also the effectiveness of this act and of ARPANSA to actually prosecute the real issues and real facts.

Senator FORSHAW—Particularly if there is no public process.

Dr Smith—That is right, absolutely—and that is the point we are making. On the issue of designation, we clearly feel there has to be clear designation, so that anything that is even remotely significant should get scrutiny, or get a look; and possibly that should go to the issue of actually naming facilities and sites in the regulations, for example. Secondly, as far as the level of scrutiny goes, as I have indicated, we certainly have a concern that there is somewhat less visibility going to occur under the current bill rather than more, even though the principle of taking aside regulation and making it more independent is supported.

Senator FORSHAW—There are two other issues. Firstly, there is now a provision in the bill for a representative of local government. Does that apply to each of the bodies that are established?

Dr Smith—That is more at subcommittee level.

Senator FORSHAW—What is your view about how sufficient the bill is for the purposes of ensuring representation from local government, community groups and environmental interests?

Dr Smith—Again, using the safety review committee as the current process, I think what is proposed is better than nothing but it is not as good as the current situation.

Senator FORSHAW—What would you like to see?

Dr Smith—I would like to see the current structure that is proposed but with more access for that local representative or the council, for example, to then escalate to higher levels of accountability other than, say, through the CEO—through the CEO for process but then to government for accountability, because that is the whole issue. We cannot get any action in a myriad of regulations and so on, so we would like to see something added with respect to that.

There are two possibilities. One has already been mentioned. The public licensing process is very important. There should be justification and accountability in licensing in a fully public process. We have copies from the United States of the Nuclear Regulatory Commission's *Title 10* on public licensing processes, which is a very well established procedure and works extremely well. They are on the Internet. It is best practice overseas.

Senator FORSHAW—What does it involve—some public hearings or submissions?

Dr Smith—If necessary. They are at different levels. You can start at a lower level and then move up to hearings and even adjudication on key issues if necessary. We feel that model should be used for a public licensing process in Australia. That is the first issue. The other issue, which Robertson goes to, is perhaps a joint parliamentary committee scrutiny of the CEO at some level. At the moment the safety review committee reports to the minister and there is an annual report tabled every year in parliament on an oversight of safety, for example, at Lucas Heights.

Senator FORSHAW—There is a quarterly report of the Nuclear Safety Bureau as well.

Dr Smith—Yes, that is right, and then the annual report is actually tabled in parliament. That will all go. If the federal government is going to throw this thing over to a CEO in ARPANSA, which we feel has its own limitations, some higher level of accountability by way

of a joint parliamentary committee oversight once a year or whatever would be appropriate referral for accountability.

Senator FORSHAW—The number of committees we have in this place! But I take your point.

CHAIR—Senator, we are running short of time.

Senator FORSHAW—There is one other issue, mayor. Does the council support a public inquiry being held into the decision to build a new reactor at Lucas Heights?

Mr Schreiber—At the moment I would not be able to answer that question. That issue is coming before council in the next few days, and the answer will depend upon the assessment that comes out of council. When that decision is made that will then be the stance that council will have.

Senator FORSHAW—Thank you.

Senator MARGETTS—What has been the experience so far of the council in relation to advisory committees, and has there been a problem in relation in secrecy on those committees?

Mr Schreiber—I have not had any problems with secrecy from ANSTO, but I think getting the information we require all the time is a problem. We get bogged down in situations because they speak a language a little different from what you or I would speak and it is difficult to understand. This is why we are very fortunate to have Dr Smith, who can understand some of the different jargon used and come back to council. In all, ANSTO have tried to work with us, but at times we have had problems with secrecy, in finding out what is going on. Again, I come back to the fact that my council has always had a concern about the waste, and it just keeps coming back to what is going to happen with the spent fuel.

Senator MARGETTS—Can I pick up on an issue that was brought to my attention. We were told that the council were given copies of the draft regulations, and I had councillors contacting me saying that they could not get a copy of the draft regulations. Why wouldn't the councillors have been able to get copies of the draft regulations earlier?

Mr Schreiber—I cannot answer that one. It was only as late as last Friday that the council got a copy. I cannot see where it has been held up at our end when we only received a copy on Friday and that copy would have been made available to all councillors as soon as we got it, because of the concern.

Senator MARGETTS—ARPANSA, the government representatives, said that the council had access to the draft regulations at least a few days before.

Mr Schreiber—No, certainly we did not, because if we had then it would have gone straight through to Dr Smith and that would have then gone through to all councillors.

Senator MARGETTS—Do you have any issues with the independence of ARPANSA in relation to staffing?

Dr Smith—Again, Tim Robertson's opinion documents some of this. Yes, we do, in that the CEO is statutory and somewhat independent but the staffers are not. That is going to be a difficulty. As I said, on the safety review committee there have been what you could describe as demarcation disputes between departmental officers and proponents in these matters. We feel there is a difficulty there that it is not totally independent—that it is partly independent, if you like.

Also, the accountability of the CEO is going to be extremely important. He is obviously a pivotal character and has a lot of discretion for exemptions at relatively short notice. That is

why we recommend something like joint parliamentary committees for accountability and some higher level of scrutiny accountability to parliament which then we as local citizens can access.

Senator MARGETTS—There was some pressure for this bill to go through in June. Have you got access to more information that concerns you now than you had available in June?

Dr Smith—For my part I can say yes, in that we have now got the regulations. There were a lot of promises, frankly, that the detail would be satisfied in the regulations. However, as the mayor has indicated, the regulations are very scant on issues of environment protection as opposed specifically to public health protection, and in a number of other matters. As the mayor has indicated, we have concerns with the detail and some of that has only just become evident.

We have had to scramble a bit even to get updated copies of the bill. It has not been a good public exhibition process by any means. As we said in submissions elsewhere, we do want this body to have public confidence. It is in our interest for it to do so.

Senator MARGETTS—Therefore, is it preferable from a public interest point of view for the bill to go through quickly or that the bill go through with those issues met?

Mr Schreiber—It is important that we get the bill through so that we have reliability and we have some controls. At the moment we do not seem to have enough controls. This is why I said that in principle we support the ARPANSA legislation, but we would like to see it tightened up in areas so that we can make sure that we have control of what is happening, not only at Lucas Heights but at any other place in Australia where we have these nuclear facilities or storage.

Senator MARGETTS—So even if this bill ushers in a whole lot of other potential facilities, you are happy that the bill goes through without dealing with a potential—

Mr Schreiber—At the moment we do not have very much control of what is happening at all out there. At least this gives us some sort of control and some sort of guide as to what we can do and where we are going. If we had more public consultation, then we could start to tighten it up in the places that it should be tightened up.

Senator MARGETTS—Sorry, who is ‘we’?

Mr Schreiber—We, as in local government, or we as the public representatives. We are going to have more consultation with the ARPANSA legislation or with the Senate, making sure this bill is right, because it is not only Sutherland shire that can be affected by it; it is other places in Australia. We have to start to work from somewhere and we have to start from point A and then work our way through.

Senator STOTT DESPOJA—Just picking up on that point of regulations and the lack of public consultation, are you concerned about not only what the regulations leave out—and you have identified some of those issues, particularly environmental ones—but also the fact that there seems to be this increasing reliance on delegated legislation? Are you concerned that there are a lot of things that are in regulation and have only been made available most recently when, in fact, perhaps some of it should be more fitting in the bill?

Dr Smith—Yes, that is a real concern. Once things are entrenched in federal legislation, they are hard to change. The bill does have significant shortcomings and the fact that these things will not be addressed in the Environment Protection Bill either—a sort of sister bill in some respects—is of concern. While you can cover the level of exposure and the type of radioactivity in a regulation, the principles of the bill have to be sound, particularly in the case

of a regulator which requires public confidence. As I said, our genuine concern is that there will be too much dispute over the type of bill if they do not get it right.

It seems to me that there are key things that could be changed in the bill relatively quickly and the bill could still go through, and perhaps that is an issue for the Senate. We do not want the bill to drag on. We feel that it is a step forward, but there are a number of things in it that could have immediate attention and could be changed much for the better.

Senator STOTT DESPOJA—Can I draw on your scientific knowledge? You mentioned earlier that you were a geneticist or had done some genetics. I am just wondering what you consider—and I know you mentioned this briefly earlier, but it is not elaborated on in here—an allowable dose, if any, of radiation? When do you believe radiation causes cell damage?

Dr Smith—If I can put it broadly, the ICRP rulings—the international consensus on doses and exposures—give some significant guidance. The rulings are based on current research. There is always a lag because current research takes a while to get substantiated and proved, but they are quite good guidelines. I must say that ANSTO tried to stick to those.

The issue in our minds in some respects though is the precautionary approach or the ability to get down to minimum dose levels. This is one of our difficulties with federal legislation as it affects local communities. In state planning law now there are penalties or incentives to continue to minimise pollution or exposures in a significant component of local planning or environment protection. At the federal level there is virtually none of that. Most of it is at a level set at which you can perform and then you perform at it. If you go over it, even under the current proposal, the penalties are not, frankly, very great either. So the federal local impacts are very poor.

We would like to see some sort of load base licensing incentive through ARPANSA to actually encourage the industry to come down and down rather than just set a level of one millisievert, or whatever it is, and stay there. It is almost as much a matter of process, or the lack of process in the current bill, to encourage minimisation compared with what the actual level should be.

Senator STOTT DESPOJA—And on the other hand, you are talking about perhaps boosting penalties on that?

Dr Smith—There should be some. There is virtually nothing in there to really encourage as much minimisation as possible. The difficulty in the current context is that this industry runs at a loss. So unless you have a lot of money to throw at environment protection, you cannot then minimise down. You cannot justify spending more money if you can get away with a certain level. So there is no real incentive anywhere in the bill to actually minimise pollution such as we see it, but only incentive to set a certain level which is acceptable and allowable.

On the issue of radiation impacts on the cell, that is a big issue and perhaps we will not go into that. But there are multiple potential levels of impact.

Senator STOTT DESPOJA—Does the council, for example, have a maximum permissible risk level?

Dr Smith—As I have indicated, the current proposal for the site constraint is about one millisievert. Our consultants have indicated—and we can provide you with these consultants' reports from overseas—0.1 is probably more consistent; probably 0.03 is achievable. Currently, industry is saying that it can reach 0.03, but it does not have to do so. Why not? Radiation is directly damaging and it should be minimised.

Senator FORSHAW—I just have one final question. Did the council have a briefing from the Department of Health and Family Services or anyone else or the government with regard to this legislation?

Mr Schreiber—No. We only had it from our barrister, Tim Robertson.

CHAIR—Thank you very much for joining us this morning.

[11.04 a.m.]

McDONELL, Mr Kenneth James, Councillor, Sutherland Shire Council

RANKIN, Ms Genevieve, Councillor, Sutherland Shire Council

CHAIR—Welcome. I thank you for joining us. Councillors Rankin and McDonell, do you wish to provide evidence to the committee as individuals not officially representing Sutherland Shire Council, or as witnesses officially representing the shire?

Ms Rankin—I am officially representing the shire. I am the ward councillor for the Lucas Heights area. I think we are representing officially.

CHAIR—It is just that we have had the mayor presenting the position of the Sutherland Shire Council. I am a bit confused whether you are representing the Sutherland Shire Council or whether you are an individual representing a view.

Ms Rankin—I am here as the elected councillor for the Lucas Heights area and Councillor McDonell represents the Engadine area which is just over the valley from the reactor. Our official capacity on the Sutherland Shire Council is to represent the interests of those residents. We do support fully the council position; we have come down here as part of a council delegation. However, I, personally—and I am sure Councillor McDonell as well—wanted to make the committee aware of some of the immediate concerns of individuals within our wards.

CHAIR—Does that reflect your position, Councillor McDonell?

Mr McDonell—Yes, I support the council's submission, but there are some aspects to this legislation that I want to draw out.

CHAIR—Fine. Witnesses are reminded that the giving of evidence to the committee is protected by parliamentary privilege. However, I also remind witnesses that the giving of false or misleading evidence may constitute a contempt of the Senate. I invite you to make a short opening statement. I do apologise, but we are very pressed for time, so if you could allow some time for senators to ask you questions that would be very much appreciated.

Ms Rankin—I have put a short one-page summary before you of some of the points that I am going to make. It has been put together rather quickly. We only knew on Friday that we were coming down today, but we are very pleased to have the opportunity to be here.

Over the last 20 years, I have been working with people in the Sutherland shire who have concerns about the lack of regulation in the nuclear industry in Australia. They have found over that period that there is no relevant legislation that they can turn to that sets an appropriate standard in Australia. We talked earlier about expertise of people and panels and all of that sort of stuff.

In the Sutherland shire community, there is a tremendous amount of expertise on this issue. Most of the residents involved in studying the issue have worked there longer than ANSTO staff. As you can imagine, staff come and go from the establishment. We have had highly qualified people in our community that have researched this issue for many years. However, we often find that that community expertise and community wisdom is ignored in processes

such as the ARPANSA legislation. It is really great that there is that opportunity to have a voice for the community now in this process.

As I say, this is why the community supports the need for legislation. They have in fact been campaigning for many years. We have had many reports go to the Senate and to previous inquiries calling for legislation in this area. However, there is extreme concern in the community about this particular legislation and about the way it has been put forward. In fact, I believe it was the community campaign and the concerns and the letters that went off that helped us have this hearing here today.

The proposed legislation does not, as has been said by some other people, provide a framework for regulating the industry in an up-to-date way at all. From our perspective, it simply legitimises the current status quo and certainly does not represent world best practice in nuclear regulation.

I had a chance on the plane coming down here today to have a look at both the ARPANSA and ANSTO submissions to today's hearing. It is very clear from the statements there that there is no real intention to move forward from current practices. ANSTO has a statement somewhere saying that they could continue the way they have had such success in regulating HIFAR. I can assure you that the community does not believe that that model for regulation has been a success. In fact, the citizens of Sydney do not understand why, as an advanced country, we cannot have the same protection accepted as standard practice in other developed countries

The community has made requests to successive governments for 20 years, and in the past, ANSTO has said, 'We do not need regulations; we are happy to voluntarily abide by all the relevant codes and standards.' But now we find the nuclear bureaucracies have finally realised a need internationally to have licensing procedures. If, for example, they want to build a new reactor next year, they will need to have some kind of licensing procedure. Now we find this is urgent; it all has to be rushed through the parliament before anyone has a chance to make sure that the protection is going to be there for the community.

We are disappointed that the legislation actually appears to be imposing world's worst standards in the regulation of nuclear matters and we do beg you, Senators, to ensure that appropriate amendments are placed in the bill. In relation to the question that Senator Margetts was asking earlier, it is not the point of view of the community that any bill will do. The reality is that we want a bill that will protect the community. We do see what this one does but we do not see why, with goodwill, you could not have amendments go through with agreement on all sides.

The council's barrister, Tim Robertson, says that, in short, despite its professed concern for promoting a uniform international regime of protection for the victim of nuclear incidents, the Australian government has failed to show leadership by implementing such a regime in Australia despite the fact that it is commonplace in other technologically advanced democracies. He says that, compared with the protective regimes adopted by other nations, Australia's position on nuclear risk is primitive and pitiless. I think that having this legislation just allows the status quo to be stamped without really reviewing that the situation is very poor.

There are four key areas where I think we could have amendments that would be very helpful. Firstly, there is the event of public liability, as the mayor and Dr Smith have said. I would like to draw to your attention Mr Tony Wood, who is not by any means an antinuclear person. He is the ex-head of engineering and reactors at ANSTO. He has put in a submission

to the current draft EIS process in which he has said that the Commonwealth should give a guarantee that, in the event of an accident causing harm to the public from its facility, it would accept 'absolute and exclusive responsibility'. He goes on to explain the international conventions mandate that an operator of a nuclear installation becomes liable for all nuclear damage from a plant even if the operator of the installation is entirely blameless or can show that the accident was the fault of another party. This basic tenet of absolute liability has been included in all the conventions because of the extreme difficulty of proving operator negligence, which is what you need if you want to bring a common law case. You have to prove operator negligence.

Under the current proposal for the new reactor, citizens would have to go through a common law process. If there was an accident at Lucas Heights where property or persons were damaged, they would have to go through a common law process. It is just not up to international standards.

What we are asking is: why? We have had comments from ANSTO, which I am sure will be repeated here this morning, that there is almost no risk of an accident and we have had other experts from all over the world saying that the risks of an accident have been very much understated. We do not know that. What we are asking the Commonwealth is: why, if there is such a little chance of having damage to the community, are they not willing to accept absolute liability?

I notice Dr Loy, in his submission here today, dismisses this whole call in the community. This is not just a sentence from me; this is a big campaign in the community. Because they cannot insure against a nuclear accident, they want to know that they have Commonwealth protection. We have Dr Loy, in one sentence, saying that is the job of the operator, not the job of ARPANSA. What we are asking here is: why cannot the proposed ARPANSA legislation simply require a nuclear installation operator to give the absolute guarantee of legal liability which is accepted in the international conventions by other countries?

The second main point is the cumulative radiation impacts. I think we have had a lot of discussions about that this morning. Those bits of paper you were just given are to show that we have a very large site. There is one little dot on that site that is the current nuclear reactor. There will be another dot if the new reactor is built. As well as that, we have a huge site. We have the production of radioisotopes, we have the storage of nuclear waste, we have Little Forest burial ground which contains plutonium and we have a proposed new reactor and a proposed decommissioning reactor.

In relation to the radioactive emissions to air and water from the site, it is the intention of ARPANSA, according to discussions I have had with Don Macnab, to set emission levels for each of these separately. So you would go to the reactor, or you would go to the isotope production, and say, as Dr Smith was saying, 'Well, you can have 0.3 or whatever we come up with.' The current EIS for a new reactor does not talk about any cumulative impacts at all; it just discusses what will be added on with the new reactor. This would not be allowed under the United States law: if you were doing an EIS, if you were licensing facilities, you would have to take into account the total amount of radiation that would come off the site. I can tell you that, for residents surrounding the plant, it does not matter whether the dangerous gases, such as radioactive iodine, reach them from the reactor or from the production of isotopes; it is the same danger to their health.

Radioactive iodine is very dangerous to thyroid. There are reports from local doctors of very high incidence of thyroid disease in the Menai district. You can see from that particular graph

the huge amounts of iodine-131 that come off that site and the tiny bits that come off major reprocessing plants overseas, like Sellafield, Dounreay and Hinkley—the ones we have all heard of as posing a danger to the community. Yet when you look at something like iodine-131, which goes straight to the thyroid, we have a huge overproduction of that off that site. It is very bad practice—a very dirty plant, in world terms. On the subject of the iodine emissions, we believe they are 10 times the amount. The US EPA recommends 0.3 millisieverts per year. Our standard that we are allowing off that site at the moment is 10 times worse than what you would get if you were in a similar community in America. This is not news. We have had submissions—

CHAIR—Could I just remind you of the time.

Ms Rankin—Thank you. We have had submissions on this since at least 1991 from other scientists, from overseas, from people like Ian Furzer at the chemical engineering faculty at Sydney University, who now has a submission to the EIS. All we get from ANSTO in response to this are farcical comparisons to background radiation. It is clearly not good enough. You have to add background radiation, under international standards, to what is coming out of the plant to know what people are receiving. The other issue in relation to the site is, as has been said before, that this bill will allow for reprocessing and conditioning of spent fuel rods at Lucas Heights, even though it is the stated government policy for that not to happen.

The other issue that has not been talked about much this morning is the transportation of nuclear waste. This bill also repeals the previous acts or the codes that dealt with the transportation and it seems, from our point of view, to put nothing in their place. This is a very serious issue for councils and communities all over Australia. Last year, in the United States, the government's own peer review team at 2M Hill said that there were 14,000 hazardous material shipments and, of that number, 242 resulted in equipment, personnel and radioactive materials contamination. Now we are going to have a bill go through that does not even deal with the transportation of nuclear waste.

The third key area is the public process to justify the expansion. I think that has been very well dealt with here this morning. This is not seen to be a transparent process. If you just have the CEO—

CHAIR—I am terribly worried that we are not going to give senators some time for questions.

Ms Rankin—Okay. The point there is that we cannot have confidence in a licensing procedure that is going to be conducted behind closed doors with no comment.

On the other issue that has come up, about the independence of the regulator, perhaps you might want to ask questions about that. I will just summarise it this way: there is no confidence in the community that we have an independent process that has taken place here. The reality is that we have seen the cosy arrangements over the years. It used to be that all the staff at the Nuclear Safety Bureau were on leave from ANSTO. When that was brought to public attention, they stopped that arrangement where they had that kind of interchange. Currently, at the Nuclear Safety Bureau, half its staff are ex-ANSTO employees.

Here we have a situation as well where the chief executive, as you can see by that card that he was distributing in our community last week, has been appointed without any public process. There are lots of independent people overseas that could be headhunted or we could have a public process for the appointment of this person without having to just get it from within the club within Australia. The key concern of the community is that things will not be acted on because it is still all in-house, exactly the same as it has been.

Mr McDonell—I support the ARPANSA legislation. I think it is a step in the right direction to provide some regulation in an industry where radioactivity is produced. I am concerned that we must get legislation which has world's best practice, particularly at a time when the government is considering building a new nuclear reactor at Lucas Heights.

It does seem to me, though, that there is some apparent haste in having this legislation finalised because of the timing of the EIS process for the new reactor. I have come to this conclusion because of this site authorisation flow chart, which I think has been circulated to senators. That site authorisation flow chart came, I understand, from the International Atomic Energy Agency in its peer review of the draft EIS. I am not going to go through that at all but I would just point out that there are a number of areas there where ARPANSA is already mentioned. It is not even in existence yet, so I have some real grave concerns about that process that is outlined in that flow chart.

We are talking about an industry that will continue to have potential consequences for many generations to come. A resident has put to me that nuclear technology is a very unforgiving technology and the results of accidents can endure for generations, and that is the sort of concern we have.

The wider community looks to the parliament to put in place a regulatory framework which it can be confident provides safe practices and protection in the event of an accident. To do this the community needs to have some ownership of the process. That has already been talked about by other people, so I am not going to go into that any further, except to say that I support the call for public participation in a licensing process. Another point I would make is that ARPANSA should not be placed in a position where, because of the lack of a provision for public participation it could be looked on just as part of the nuclear club, because if that happens then the effectiveness of ARPANSA in the community would be lost.

I will make one other quick point about the safety review committee disappearing—which Dr Garry Smith referred to. I have a lot of concern about the fact that the committee will disappear. We have had representation on that committee now for many years. It was only through our representation on that committee that we became aware of the problems that exist at ANSTO right now with the spent fuel rods that are supposedly stored in dry storage.

We have been told for many, many years that those spent fuel rods in dry storage would be okay if they were left alone at Lucas Heights. However, we found out through the committee that some of those spent fuel rods had water inside the stainless steel containers in which they were stored that caused corrosion to the aluminium around the uranium, et cetera. There is a whole incident there that has been fairly well documented.

The point I make is that the safety review committee, as imperfect as it is, will disappear. It is imperfect as far I am concerned because there is secrecy about it. We are allowed to see minutes and Dr Garry Smith is allowed to brief council on proceedings, but reports that go to that committee from ANSTO are confidential. We are not allowed to see them. I do not think that is appropriate for this type of industry.

I want to make a comment about the regulations. The council's submission does refer to regulations. I have not seen the regulations before. I picked up a copy of them this morning. I support the call for those regulations to be made public before the legislation comes into place. My reason for saying that is that I have been told that the regulations can be changed at any time, but if ARPANSA exists on the basis of regulations and the regulations are recalled to be changed, does that mean that ARPANSA then goes out of existence? That defeats the whole purpose of having that regulator in place.

I have a couple of quick questions to committee members that I have been asked to put by some people in the community. I am sorry I have not got them in writing for you but they were only given to me last night. One is: does ARPANSA prevent reprocessing and conditioning at Lucas Heights? That question has already been raised earlier, I think. The second question is: can the regulator also be an independent arbiter of the impact of damage it might have allowed to occur? An example is health research showing links between low dose ionising radiation and genetic damage to immune systems, et cetera.

A final question I would like to ask is: will ANSTO need a licence to solidify the moly waste that exists in the plant which produces the medical radioisotopes at this point in time? The concerns about that have been covered by the submission that has been put to the EIS process by Murray Scott. I think the senators would be able to get hold of that if they wanted to have a look at it. That is a fairly important point. Thank you.

Senator FORSHAW—It has been mentioned that the facility is exempt from the operation of state and local government laws and ordinances. Do you see a place for the state government to be represented on the nuclear safety committee? Are they represented on the safety review committee at the moment?

Mr McDonell—Not that I understand.

Ms Rankin—It is just the council. I understand it has been a longstanding arrangement, even before Dr Smith's time at the council.

I think a licensing process that does not have any public comment is not going to have any credibility with the community. The New South Wales legislation, at least as the mayor referred to it before, in relation to development applications has a minimal requirement for advertising and assessment of a proposal. We have a site here at Lucas Heights that in 40 years of operating—and there is a major expansion of the radioisotope production—has never been subjected to an EIS before. Now we are having an EIS just on one little spot. There are no other countries in the world that would allow one spot to have an environmental impact while you ignore the rest of it.

From my discussions with Don Macnab, there is also no other radioisotope production facility which produces all that dirty radiation I showed you on the graph that is so close to a community. They cannot point to one anywhere in the world where you are letting out all these emissions on top of suburban communities.

Mr McDonell—My own view is that there should be state representation on the safety committee. My reason for saying that is that it is a very important issue of off-site emergencies. We have a community that is concerned about their safety in the case of an incident or an accident at Lucas Heights. They get conflicting statements given to them about who is responsible for off-site emergencies. The Chief Executive Officer of ANSTO has said publicly, and I have heard her say it, that it is the council that is responsible for off-site emergency procedures. I can assure you it is not. I am told that it is the responsibility of the state government.

Consequently, this is a matter, for the sake of the peace of mind of the community that lives around that reactor, that should be clarified. It should be made quite clear who is responsible for what. The mothers in that area do not know what procedures should be adopted in the case of an accident with their children attending nearby schools. I can assure you they are very distressed about that. They have gone to the schools and made inquiries and they get this confusing message back. It is a very good idea that the state government should be somehow

involved in safety committees so that we can get emergency procedures in place and people made aware of them.

Senator FORSHAW—I was really interested in getting the draft amendments. We have those now. You have obviously seen those and support them, no doubt?

Mr McDonell—Yes.

Senator FORSHAW—That covers the issues that I wanted to raise.

CHAIR—Thank you, Senator.

Senator MARGETTS—What was that answer? You support—

Mr McDonell—I support the amendments that the council has suggested.

Senator MARGETTS—Right, sorry.

Ms Rankin—Can we clarify that? Are you referring there to the amendments that have been recommended by Tim Robertson, the council's barrister, or—

Senator FORSHAW—As I understand, this is a document that was tabled by the mayor. It is Tim Robertson's document.

Ms Rankin—There is general support for that but we were not clear, even with these amendments, whether they need to go a little bit further in terms of public participation, but there is a procedure there for that. There is general support. There seems a need, also, to cover the emission rates from the site as a whole, which may be done in regulations. We just hope it is not done by the industry entirely.

Senator FORSHAW—Just on the question of regulation: is two months a sufficient period to achieve it? Ms McSorley mentioned that earlier?

Ms Rankin—If you do not count the Christmas period, if there were actually two months to discuss them properly—say January and February up until March or something—it would be. There is a feeling now that we have got ANSTO, a government body which has gone to the government and provided inadequate legislation, and it has made sure the community does not see it. Even since it was tabled in June, there has not been a lot of clarity about whether people can comment or what the regulations are. Probably two or three months is reasonable.

We have three months advertising for local roads projects in our area and here we have an EIS being done where you are allowed only 12 weeks for the biggest science facility in Australia. Yes, it is hard to say that two months are adequate, but anything is better than nothing.

Senator STOTT DESPOJA—This is just the same question that I have asked of others. You mentioned the cumulative radiation impacts: do you have a view as to what is a permissible dose of radiation? What is an acceptable allowable level?

Mr McDonell—None.

Ms Rankin—None. The community would like to see none. There is actually a submission to the current EIS by Professor Furzer, from the Sydney University chemical engineering department, who says that even given the current practices there are techniques available whereby you would hold the gases for 12 days and keep them. By the time they are released the radioactivity is very minimal or the gases have cooled to a large extent. It is not too much to ask that our kids not be exposed to radiation in the middle of suburban Sydney. The school on the perimeter fence there is 2.9 kilometres from the current reactor. We do not believe any of those children or parents should be exposed.

If you had an independent regulator, there might be some balance between the communities saying, 'We don't want any,' and the regulator, and the operator, saying that he can get it down—as Dr Smith was saying—to 0.03, or what is reasonable. But to just say that you are going to have the same old status quo and you are going to have up to one millisievert, which is the maximum that anyone can get in the world, is just very bad practice. It is outrageous.

Senator STOTT DESPOJA—Thank you for that.

Senator MARGETTS—In May of this year I was advised that there had been copious consultation on this issue. In June I was told similarly, and now we are finding out that regulations have only just lobbed on your table. What do you think is reasonable? Would you prefer the legislation to wait until reasonable consultation? You have said you are in favour of ARPANSA's tight legislation. Would you prefer the legislation to be slowed until that consultation has taken place, or would you be happy that the legislation goes through and somehow we do the consultation later? Are you confident of the process?

Mr McDonell—I believe the regulations should be dealt with first and they should be public. I have not seen the regulations, but if the regulations were going to be the framework for the establishment of ARPANSA—which I understand was to be the major case—and if the set-up of a committee, for example, were going to be in the regulations, it seems to me that if we are going to set up a regulator in the nuclear industry we have to get it right. Again, I stress that I do not understand because I do not know what is going to be in the bill by way of an amendment. As a resident said to me, nuclear technology is a very unforgiving technology and if we are going to set up a regulator, we have to get it right in the first place. The community has to have complete confidence in that legislation to protect them and their children and future generations. So we have to get it right.

If you do not get the community behind you in this, then forever there are going to be suggestions that we have an imperfect regulation process. Without seeing the regulations, if the regulations were set up by ARPANSA, then the regulations should be made public and there should be public comment on them. Then we should go to legislation. It has been put to me that regulations can be changed without altering legislation. I would not like to see a situation where, in order to get it right, we have to remove the regulations and stop the ARPANSA organisation from operating because of that process.

Senator MARGETTS—The problem is that, if you do not stop ARPANSA from operating, and just take it away, you leave the gap.

Mr McDonell—That is right.

Ms Rankin—I would just like to reinforce that, too. I was speaking to the health minister's office earlier last week. The attitude seemed to be that they were providing us with a good framework, and that the guts of it is all in the regulations that we are not allowed to see. As far as I am concerned, every issue that we have raised here this morning—from the bits of regulations that we have had leaked and from the little bits of amendments we have seen—has not been dealt with in either the regulations or the legislation yet.

I might add that this has not been an overnight job for ANSTO, ARPANSA and the health department. The reactor review report came out in 1993 saying we would need to have a regulatory body before there was a new reactor. Here we are in 1998 and we get presented with this slipshod material that does not even meet the grade in terms of international conventions and we, as the community that is going to be most affected by it, cannot even have a look at it.

I would totally support Councillor McDonnell's suggestion that everything has to be publicly available before the Senate should even think about having this legislation passed. In fact, I believe our community would be extremely disappointed. They are looking to the Senate at the moment to try and give them a line of protection, and they see the executive arm of government just trampling something through that is going to be to that community's detriment in the long run.

CHAIR—Thank you for your attendance today.

[11.37 a.m.]

CAMERON, Dr Ron, Director, Safety, Australian Nuclear Science and Technology Organisation

MURRAY, Mr Allan, Senior Officer, Government and Public Affairs, Australian Nuclear Science and Technology Organisation

CHAIR—Welcome. Witnesses are reminded that the giving of evidence is protected by parliamentary privilege. I also remind you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. The committee has before it your submission. Do you wish to make any alterations to that submission?

Dr Cameron—No, we do not.

CHAIR—You will not be required to answer questions on the advice that you may give to government, or to express a personal opinion on matters of policy. Would you care to make an opening statement, at the conclusion of which I will invite senators to ask you questions?

Dr Cameron—Thank you. ANSTO has provided a submission to the committee that covers the issues that we wish to raise. I would just like to make some points with a view to highlighting some of the issues which we regard as important. Firstly, ANSTO strongly supports the establishment of ARPANSA as providing a comprehensive regulatory process for the Commonwealth. The proposed ARPANSA bill, and the regulations pursuant to it, are consistent with international regulatory best practice and with guidelines produced by the International Atomic Energy Agency. I should say that these guidelines have been developed after many years of experience and with input from all the member states of the International Atomic Energy Agency.

The latest IAEA safety series document, which provides guidance on the establishment of a regulatory agency, supersedes the code referred to in section 2.1 of our submission. Because this has come out recently, I would like to table that document to the committee. The document is called 'Legal and governmental infrastructure for nuclear radiation and radioactive waste and transport safety'.

The second point I wish to mention is that ARPANSA will regulate all radiation and nuclear activities in the Commonwealth agencies for both ionising and non-ionising radiation. This will encompass not only ANSTO but also Defence, CSIRO, the Australian Institute of Marine Science and the Australian Geological Survey Organisation.

ARPANSA will license facilities and sources ranging from isotope production right down to dental X-ray machines. In addition, ARPANSA's role of promulgating harmonisation of radiation practices means that the same regulations and licensing procedures will apply to the activities in states and territories encompassing hospitals, industry, universities and private users of radiation. This will, in our opinion, undoubtedly provide for comprehensive uniform

regulation across Australia, which is in the interests of public and occupational safety for all Australians. It would also, we believe, set an example for a number of countries in our region.

Internationally, it is recognised that the control of radiation sources, which are mainly used in industry or medicine, is a major issue for any regulatory agency, since the majority of injuries and accidents that have occurred worldwide have been with individual sources of radiation or with radiation equipment. Indeed, of the radiation accidents that have occurred since 1944, some 75 per cent involved radiation devices, 20 per cent radioisotopes and five per cent facilities capable of criticality.

Most injuries have resulted from mishandling of industrial sealed sources and from inadvertent exposure to X-rays. Hence, the establishment of uniform and best practices processes for control of sources is a key component of the functions of ARPANSA, and one which we strongly support. I believe the other issues are taken up in our submission; I am happy to answer any questions on them.

Mr Murray—I have nothing further to add.

Senator STOTT DESPOJA—Thank you for the opening remarks. Do you have a view regarding the appointment of the CEO? We have heard a number of criticisms today and we have also had written criticisms that the appointment has been made and that people's idea of due process has not necessarily been observed. Do you have any comment on that?

Dr Cameron—I understand that the CEO appointment has not been made, but I think it is an issue that you should take up with the ARPANSA delegates. We believe that a public advertising process was undertaken for that position.

Senator STOTT DESPOJA—Thank you. I have a question that I have asked other people who have given submissions today in relation to acceptable doses of radioactivity. I note that you have acceptable levels of radiation and you also refer to '1 mSv'. Do you have a comment in relation to the notion that the CEO will have powers to allow radiation exposures in excess of recommended limits?

Dr Cameron—There are a number of issues which you have raised there. I will take them in turn. Firstly, we believe that the internationally accepted safe level of radiation is one millisievert exposure to a member of the public and 20 millisieverts occupational exposure. Those are agreed internationally safe levels of exposure to radiation. Nevertheless, I think the ICRP principles which we follow say that it is necessary, regardless of those limits, to work towards achieving doses which are as low as reasonably achievable. That ALARA process is very much one which the organisation is committed to and is the reason why we continue to look for ways to lower exposures due to our activities.

The ICRP also sets those general limits that I referred to as one millisievert exposure to the public and 20 millisieverts to occupational exposure averaged over five years—that is, no more than 100 millisieverts in a five-year period, with a maximum in any one year not to exceed 50 millisieverts. Those are the internationally accepted standards. Those are standards which we, as an organisation, have followed. We believe those are standards which will be included in the bill and the regulations.

Mr Murray—To add something to that, all of the international authorities that provide recommendations on radiation protection emphasise that it is a system of radiation protection. It is not just a number that people should focus on. The one millisievert is the public dose limit from regulated practices. The 20 millisieverts per annum averaged over a five-year period is an occupational dose limit. Part of the system of radiation protection involves this 'as low as

reasonably achievable'. This is where people get confused with a dose constraint which might be set by an operator in agreement with the regulator—that the dose constraint should be a fraction of that limit, to take account of other sources of exposure that a member of the public could be exposed to. In ANSTO's case, we have a working dose constraint of about one-third of the public dose limit—0.3 millisieverts is our dose constraint—from all operations at the ANSTO site. That means that a member of the public could be exposed to another one-third of a millisievert from some other regulated practice within Sutherland shire. So it is a whole system that people should be looking at, not just the fact that the standard is this dose limit.

Senator STOTT DESPOJA—Perhaps you might care to comment on the submission we have just had from Councillor Rankin in relation to the notion of cumulative radiation impacts. Do you have a comment on the notion that, instead of testing individual sites, a cumulative impact should be included in regulations or in the bill?

Dr Cameron—The purpose of the one millisievert public dose limit is to include all regulated practices that a person might be exposed to. So it takes that into account. That is why, for any individual practice, the operator may agree with the regulator that a lower dose constraint should be applied to make sure that, if there are other exposures, the cumulative impact remains below one millisievert per year.

Senator STOTT DESPOJA—So you believe that the concerns of that councillor and others are taken care of?

Dr Cameron—I think it is the purpose of the regulator to make sure that they deal with all activities that could expose people to exposure and not just the one operation.

Senator STOTT DESPOJA—Finally, would you care to comment on whether you think there have been sufficient levels of public consultation in the drafting of this bill and the regulations?

Dr Cameron—I do not think we should comment. As far as I understand, the bill has been available for some eight months. The regulations have not been available for as long as that. I think the process of public consultation is not something that we, as an operator, are involved in.

Senator MARGETTS—What role have ANSTO played in providing input to the drawing up of either the bill or the regulations?

Dr Cameron—ANSTO has been asked at various points to provide comments on the bill and regulations. This is a process that is run through TGA as part of an ARPANSA consultation group.

Senator MARGETTS—When did that process start?

Dr Cameron—I am not quite sure.

Mr Murray—It was earlier this year that the Therapeutic Goods Administration, which had carriage of the ARPANSA bill, called together all stakeholders in the bill. They included ANSTO, Department of Defence, CSIRO and DIST. The Department of Primary Industries and Energy was involved because of the national radioactive waste repository issue, as well as organisations such as the Australian Communications Authority. All of those stakeholders were informed of the progress of the bill and had an opportunity to comment on the development of that.

Senator MARGETTS—Would you be able to give me the actual date?

Dr Cameron—No. I think that is a question you should put to the ARPANSA group. They ran the process so they obviously would have the answer.

Senator MARGETTS—No, I am just asking you when you were first brought into it.

Mr Murray—It would have been earlier this year. I cannot remember—a February time scale.

Senator MARGETTS—So ANSTO were consulted at a much earlier date than community groups who have been involved in this issue for some time, but the regulations are, in fact, regulations for an independent authority to regulate ANSTO and ANSTO type of activities.

Dr Cameron—No, the authority is not to regulate ANSTO; the authority is to regulate all Commonwealth practices in nuclear and radiation issues. All the stakeholders were consulted through that consultative group and—

Senator MARGETTS—You said ‘all’ but we have just heard today that the Sutherland Shire Council, who are a vitally important part of this, after a lot of effort only got draft regulations on Friday. So when you say ‘all’ I think you need to qualify that, don’t you?

Dr Cameron—Okay—

CHAIR—That is beyond ANSTO’s—

Senator MARGETTS—But they were actually making a statement about all stakeholders. If they are going to make a statement—

Dr Cameron—Okay, I should say the Commonwealth agencies that will be affected by this were invited to make comment.

Senator MARGETTS—Okay. So we have a process which obviously has some people in, some people out. How might ANSTO be involved over time with the staffing of ARPANSA?

Dr Cameron—I think these issues are not the responsibility of ANSTO and it is not our role to have any influence in staffing issues for ARPANSA.

CHAIR—I will rule that question out of order.

Senator MARGETTS—What is the time constraint as far as ANSTO is concerned? What is at stake if this legislation does not go through now?

Dr Cameron—We believe there is an existing process for regulation and authorisation of activities. ANSTO strongly supports the establishment of ARPANSA because it brings together the various elements of that. But, clearly, the existing process is in effect and will continue to have an effect and be the process we use until the new agency is formed.

Senator MARGETTS—But what is the urgency for the bill to go through now rather than, say, in three or four months time?

Dr Cameron—We believe that our support for the bill has been consistent over many years, so we have supported it being promulgated as soon as possible. There is no overriding reason why it has to happen this month, as opposed to next month. But our view would be that it should be as soon as possible because it is comprehensive legislation. It is important to unify the different elements of the regulatory process and it is in accord with international best practice; therefore, we would support it happening as soon as possible.

Senator MARGETTS—How close are you to the signing of a tendering document for a replacement reactor?

Dr Cameron—I am not sure that that is an issue to do with the ARPANSA, Madam Chair.

Senator MARGETTS—But I think I am entitled to—

CHAIR—It has not got anything to do with the bill.

Senator MARGETTS—Yes. However, the bill enables the signing of this tendering document: is that not correct?

Dr Cameron—No.

CHAIR—No.

Senator MARGETTS—Can you sign the tendering document without this bill being legislated?

Dr Cameron—We have to have an approval process through the regulatory agency which exists at the time.

Senator MARGETTS—Have you seen a copy of this?

Dr Cameron—Yes.

Senator MARGETTS—So you would say that this is an incorrect diagram?

Dr Cameron—No. When the diagram was put together it was on the assumption that the bill would have been passed in June and July; that is why the documents were written in that way and that is why there are many references in our EIS to ARPANSA, because we assumed it would be up from 1 July 1998. Therefore, it was not unreasonable for us to write it into our process because we were under the assumption that 1 July 1998 would have been the date by which it would have been formed. If ARPANSA is not in effect at the time, then we have to seek that authorisation through the existing Nuclear Safety Bureau.

Senator MARGETTS—If you signed the tendering document under the existing Nuclear Safety Bureau, would that have to change if ARPANSA legislation came in later?

Dr Cameron—That really is a matter for ARPANSA. But we have said in our submission that one thing we would seek to encourage through the legislation is consistency of process—that is, there should be consistency in the processes used by the various agencies, whether or not they are acting singly or as part of a new agency called ARPANSA.

Senator FORSHAW—Following on from Senator Margetts's question, it has been put forward here this morning by at least a couple of the witnesses that it would be better, and maybe more publicly acceptable, if the regulations were laid on the table for a couple of months and people had a chance to review those and consult, and then presumably have it all put through as a package. In the light of Senator Margetts's question, would that cause your organisation any difficulty?

Dr Cameron—No, we believe it is preferable to have the bill passed so that the regulatory agency would be ARPANSA and that would be the one we would deal with in the future. If ARPANSA is not in effect on the date we require, then there are existing authorisation processes that we would have to follow.

Senator FORSHAW—You talked about the internationally acceptable limits of radiation dosage exposure and, in answer to a question a moment ago, you used the term 'international best practice'. I think you see them as one and the same—or maybe it was a slip of the tongue. We have been lectured for months by Mr Reith and others about world's best practice on the waterfront. That may or may not necessarily be what internationally acceptable levels are. What is world's best practice in so far as issues such as radiation exposure and the process for licensing are concerned? Is what is contained here equivalent to world's best practice?

Dr Cameron—I think you have raised two issues. One is the practice with regard to exposures and the second is the practice with regard to licensing agencies. The practice with

regard to exposures is that there are a number of international bodies who meet together to look at all the evidence. These are eminent scientific bodies including the International Commission on Radiological Protection and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). Those are the two pre-eminent bodies in the world in the area of radiation exposure. They make recommendations. The recommendations are then taken up by national governments and put into practice.

The recommendations are also promulgated by the International Atomic Energy Agency. For radiation protection their recommendations are, as Mr Murray said earlier, for a system of radiation protection. I think the focus on the single number does not really give proper credence to the system that has to be put in place. Their system basically says that there has to be justification of the practice. There has to be optimisation of the radiation protection and then there has to be a satisfaction of dose limits. For an organisation to conduct a practice, and the licensing authority will have to go through this with them, they have to go through all three issues. They have to show that not only are they conforming to a dose limit but also they are putting in place processes to lower doses to as low as reasonably achievable. It is that system, and the implementation of that system, that constitutes best practice in radiation protection.

Senator FORSHAW—Yes, that might be all well and good, and I would not argue with part of what you said. One has to look at the system. But the facts are that, at the end of the day, people or organisations set these numeric limits. Invariably they are upper limits and, when we talk about world's best practice across industry at large, what we mean by that is the best achievable result. In this case that would be the lowest level of exposure. On the waterfront, Mr Reith would suggest it is the highest level of crane movements per hour, irrespective of what the system may be and how efficient it may be and the differences from country to country.

Can you tell me how we would assess the arguments that are put by, for instance, Councillor Rankin and Dr Jim Green and others that point to other countries and say the system is working better there because they have lower levels regularly achieved? What is world's best practice here? Why cannot we meet it if we cannot?

Dr Cameron—I go back to the point that world's best practice in this document that I tabled earlier is the latest recommendation of the International Atomic Energy Agency for a licensing authority and how it should work. Likewise the documents which the IAEA have tabled on the international basic safety standards set out what they regard as international best practice to do with radiation exposure.

Those systems are systems which we have adopted. In fact, we adopted the radiation protection in 1990 when the recommendations were first made and before it was included in legislation in Australia. I think it is important to realise that those are dose limits and that there is another process of showing that radiation protection leads to exposures which are as low as are reasonably achievable. I think it is important for a licensing authority to be able to test the operator to make sure that what they are doing does lead to exposures which are as low as reasonably achievable.

Senator FORSHAW—What sort of testing is undertaken to check the level of radiation exposure throughout the community in the Sutherland shire to see whether or not it is meeting these requirements; and, secondly, what other types of radiation exposure would the citizens be subject to other than from Lucas Heights—if we are talking about this cumulative exposure level of one millisievert?

Dr Cameron—There are two issues. The first issue is about the sort of auditing and monitoring. Clearly, that is the role that a regulatory agency would undertake.

Senator FORSHAW—I live about five kilometres from the reactor, so I would like to know what is happening.

Dr Cameron—Yes, I understand that. Clearly, it is a requirement currently on the operator to make publicly available all the discharges from the site—those discharges are measured at the point of discharge, which is the individual stack—and also to make publicly available the estimated doses that could possibly be received by anyone who lives in the local area. We publish those annual doses each year. We publish them under the assumption that, firstly, a person is resident at our site boundary for 365 days a year; and, secondly, as a function of distance from the site.

That process is audited and monitored by the Nuclear Safety Bureau for discharges to do with HIFAR, the reactor, and by the Australian Radiation Laboratory for other discharges from the site. They do that by auditing the process, by repeating the counting that we do, by taking samples and by verifying for themselves that the readings that we are getting are correct.

Your other question was about what other sources people are exposed to. The maximum exposure from routine releases at ANSTO would be less than .01 millisieverts, which is only one per cent of the public dose limit. People are exposed to approximately two millisieverts of naturally occurring radiation from the air around us, the food we eat and the soils. In addition, people are exposed to exposures from medical applications of radiation, most of those from the use of X-rays. You are probably aware that, if you have a CAT scan of your head, that is approximately three to five millisieverts. So there are various medical exposures.

Senator FORSHAW—There is no other installation within the shire or nearby that is producing possible radiation exposures other than what is naturally occurring?

Dr Cameron—No.

Senator FORSHAW—I regularly read the Nuclear Safety Bureau reports and have commented in the Senate before—and I would like ARPANSA to take this on notice when they come into operation—that, for the average person in the community, and I consider myself to be one of those, the reports are almost impossible to understand. If this information is published, it might help if it is in a form that is at least user friendly and understandable to people, because you talk about the system but in the end I get a report which is just a whole bunch of numbers.

Dr Cameron—I think that is a reasonable request.

CHAIR—May I thank both of you for attending today.

[12.04 p.m.]

CABLE, Dr John, Director, Australian Radiation Laboratory

LOY, Dr John, Department of Health and Aged Care; and Acting Chief Executive Officer, Australian Radiation Protection and Nuclear Safety Agency

MACNAB, Mr Donald Ian, Acting Director, Nuclear Safety Bureau; and representing Australian Radiation Protection and Nuclear Safety Agency

CHAIR—Welcome. Witnesses are reminded that the giving of evidence to the committee is protected by parliamentary privilege. I also remind you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. You will not be required

to answer questions on the advice that you may have given to government in the formulation of policy, or to express a personal opinion on matters of policy.

The committee has before it the ARPANSA task force submission. Do you wish to make any alterations to that submission?

Dr Loy—No, Senator.

CHAIR—I invite you to make a short statement, at the conclusion of which I will invite senators to ask you questions.

Dr Loy—Thank you. I would like to make a brief opening statement. I think it has been distributed to you but I will whiz through it as quickly as I can. Before going into detail about the legislation it is worth reflecting on the simply stated object of the ARPANSA bill, which is:

. . . to protect the health and safety of people, and to protect the environment, from the harmful effects of radiation.

This makes it clear that ARPANSA is to be essentially a public and occupational health body. It is not an advocate for the applications of radiation or nuclear facilities, nor should it be an opponent per se, but where government and the community decide that such applications are warranted, its role is to see to the object set out in the bill.

ARPANSA as a regulator is the focus of this inquiry but it is important to remember that the legislation provides for wider functions. These include: providing advice to government and the community; undertaking research; providing services related to radiation protection and nuclear safety; and promoting uniformity between the Commonwealth and the states and territories.

It should also be remembered that the framework established under the legislation also deals with non-ionising radiation, notably UV in the range of applied electromagnetic radiations. ARPANSA will be a new organisation but it will be constructed principally out of two existing bodies—the Australian Radiation Laboratory, represented by Dr Cable on my left, and the Nuclear Safety Bureau, represented by Mr Macnab on my right. The corporate strategy for this new organisation will be to build on the scientific excellence existing in the two predecessors and to spin off that excellence into the best advice for government and the community into regulation consistent with world best practice and into scientific services.

As of today, apart from the role of the Nuclear Safety Bureau, the Commonwealth's use of radiation is not regulated by an arms-length expert body. Thus, the Commonwealth does not apply to itself the strict regime that is applied to the private sector through state legislation. This is not to say that Commonwealth use of radiation is not safe, but it is not best practice to be seen to leave management of radiation protection solely to the users.

The existing Nuclear Safety Bureau has the legislated role to 'monitor and review' the safety of nuclear plant operated by ANSTO. With goodwill, this has become de facto regulation of the ANSTO nuclear reactors, but it is not founded on a firm legislative basis. There is no explicit requirement for licenses, sanctions are clumsy, and enforcement legally problematic. It certainly does not match the standards of comparable countries or international best practice.

Further, NSB does not cover all nuclear activities undertaken by ANSTO. Again, this does not at all mean that these are not safely carried out, but there is a lacuna in the law. The ARPANSA bill and regulations when enacted impose a strong regulatory regime on Commonwealth entities. It is full-blooded stuff. Commonwealth entities are forbidden to undertake nuclear activities and/or use radiation sources unless they have a licence issued by

the CEO of ARPANSA. They must comply with the conditions of licence established by the CEO and with many basic conditions set out in the bill and regulations. All of this is within a framework of quite substantial penalties being able to be imposed for breaches of the act.

This is a regulatory framework you would expect to see imposed on a commercial nuclear industry. The Commonwealth has not compromised on the basis that it is regulating itself. The CEO is clearly established as the independent decision maker, subject only to ultimate political control by the minister.

The range of possible radiation practices and nuclear activity is captured in the bill and regulations, and most radiation practices and nuclear activities are specified in the bill. Any waste management or storage facility is also captured—but through the regulations, as a somewhat complex definition is required to make sure they are captured.

It is worth spending a few moments to emphasis that radiation protection and nuclear safety are not simply numbers games in which the regulator picks a number and the operator shows that its facility does not expose people to higher doses than that number. The primary principle is ALARA: the operator must control the practices undertaken in such a way as the dose received by the public or a worker is as low as reasonably achievable.

This is not simply a pious hope but a well developed process that has resulted in ongoing reduction of radiation doses around the world. It is based on informed discussion between the regulator and the operator about what can be achieved. Under this legislation it will result in measurable outcomes being written by the CEO as conditions of licences.

Of course numbers play a role, with the overarching dose limits being those in international practice formally adopted by Australia through the NHMRC recommendations and standards. It is practice for the regulator to establish dose constraints with the operator. These dose constraints are applied to individual practices so that the total dose to persons from all practices regulated is less than the limit and to ensure best practice for protection and safety in line with what others are able to achieve. This system of radiation protection and nuclear safety, which is international best practice, is adopted by the bill and associated regulations.

Finally, I have some brief remarks to make about the council and committees established under the legislation. The council is intended as a high-level body which will be able to tackle emerging issues and significant matters of concern as well as being the body which gives the final blessing to most national codes, policies and standards.

Two more technical committees focusing on radiation health and nuclear safety will support it. The Radiation Health Committee, which is one of those, will play a particularly important role in promoting uniformity between the Commonwealth, states and territories as required by the bill. Provision is explicitly made for the appointment of people from the community to each of these bodies, including, in the case of the Nuclear Safety Committee, a person to represent an affected local government area.

These bodies will have roles to play in the regulatory functions of ARPANSA, especially in drawing up and approving codes, policies and standards. It can also be expected that they will add to the wider roles of ARPANSA that I referred to earlier. My colleagues and I look forward to responding to senators' questions.

CHAIR—Thank you, Dr Loy.

Senator MARGETTS—Is it correct that both Mr Macnab and Dr Cable are acting directors?

Mr Macnab—That is correct.

Senator MARGETTS—Why are you acting? Your organisations have existed for some time.

Mr Macnab—I am acting because it was anticipated that ARPANSA was going to be formed imminently, so I have been acting in the position for a number of years.

Dr Loy—I think Mr Macnab is a victim of the long process that has gone into where we are today. A decision was certainly made by the previous government that it would amalgamate the Nuclear Safety Bureau and the Australian Radiation Laboratory. When that decision was anticipated, Mr Macnab was made acting director rather than being formally appointed.

Senator MARGETTS—When was that decision made?

Mr Macnab—It was in December 1995.

Senator MARGETTS—What will be happening with the ARL as a result of this—in a nutshell?

Dr Cable—The current arrangement is that I am acting there pending the passage of the legislation to create ARPANSA. Initially, that started when Dr Logan indicated his intention to retire in July, and at that time the intention was that the legislation would commence on 1 July. My substantive position was in the Therapeutic Goods Administration, and so I have been down there since that time.

Senator MARGETTS—I did not need the personal history. Basically, does this mean you will be under the CEO when that occurs?

Dr Cable—Yes. Just the structure will be decided as a consequence of a planning day which we have scheduled for 7 December when we will look at the options as to how the new organisation will be structured such that the CEO takes over a direct role of responsibility for particular areas.

Senator MARGETTS—Do each of your organisations operate under the precautionary principle?

Dr Cable—If you could elaborate on the precautionary principle, I would say that we do, but I am not exactly sure what you mean.

Mr Macnab—If you are referring to the precautionary principle as the principle that any radiation is presumed to cause some harm, and that the higher the dose of radiation the higher the harm, we certainly do. For that reason we require ANSTO to satisfy the ALARA principle, the ALARA requirements, and we would like to see that demonstrated. So we do operate under the precautionary principle.

Senator MARGETTS—Would you agree with that?

Dr Cable—Yes.

Dr Loy—Yes. I need to mention that ARL is not a regulatory body in any sense; it is a scientific body. In terms of regulation, of course, it is the NSB that has that role at present.

Senator MARGETTS—Would not that precautionary principle come into conflict with the concept in the legislation of penalties for ARPANSA officers?

Dr Loy—I am not aware of any penalties, other than that there is a penalty provision if someone gives misleading evidence in seeking a warrant. I am not aware of other penalty provisions that would apply to—

Senator MARGETTS—Is there any specification of what misleading evidence might mean?

Dr Loy—No, I think it is a fairly standard provision, that where in legislation there is an arrangement for seeking a warrant to search a premises, if that is obtained by someone where the person seeking it or someone else gives misleading evidence, that is an offence. But that was not especially created for this legislation.

Senator MARGETTS—Yes, but one would wonder though, for a start, why an ARPANSA officer would require a warrant, if you were a regulatory body, and why there would be the necessity that there be a fear component built into the information on the warrant. Basically is that not going to be counter to the precautionary principle?

Dr Loy—I do not see that at all. As I said in the opening statement, the bill really constructs a quite strong regulatory framework that does express things in those legal terms and which, ultimately, would allow ARPANSA to seek a warrant to enter premises and so on. I do not imagine that will have to happen very often, but if that happens and a person goes to a magistrate seeking such a warrant and gives misleading evidence, then the law applies in the normal way. I do not really see that as an issue that relates to the precautionary principle.

Senator MARGETTS—So the regulatory body would have to go to a magistrate and there would be penalties involved if there was anything incorrect in the information?

Mr Macnab—I will just try to answer it from another direction. The ability to be able to take out a warrant is really not aimed at licensed organisations, because a condition of licence that is written into the bill is that representatives of the CEO are able to enter premises at any reasonable time. So the only time that you would need a warrant would be for an organisation that is not licensed.

Senator MARGETTS—And this is supposed to make us feel better?

Dr Loy—I would think seeking a warrant to enter premises would be obviously the last resort we would have to do. That would be a very serious thing. If somebody gave misleading evidence, to obtain a warrant, to a magistrate, the same law would apply as would apply if they were seeking a warrant for a telephone interception or any number of other things.

Senator MARGETTS—It does not say ‘deliberately misleading’.

Dr Loy—It is drafted in the standard way, as I understand, that all of these provisions are.

Senator MARGETTS—Okay. Who would be able to ask that this law is abided by? Could anybody in the community say, ‘Look, this was misleading information and I ask that that person be charged with this offence’?

Dr Loy—I do not know the answer to that question.

Senator MARGETTS—Okay. What is the situation in relation to liability of a nuclear facility? What liability exists under this legislation?

Dr Loy—I do not think this legislation affects liability. The legislation does not remove the liability for safe operation of radiation sources or nuclear facilities from the operators.

Senator MARGETTS—It has been alleged that the legal position of residents around Lucas Heights, in the event of a nuclear accident, is unlike that of any other advanced technological country in the world. That comes from attachment 5 to the Sutherland Shire submission and the draft EIS for the new reactor. Is it the case, and would residents have to sue ANSTO at common law to establish fault on their part?

Dr Loy—I do not think I am qualified to answer that question.

Senator MARGETTS—Here you have a situation where, potentially in the law, a person can be prosecuted for providing incorrect information trying to get a warrant to search a

premises—albeit, a non-licensed premise—and yet there is no specific liability written into the legislation. Someone would have to take a private lawsuit to sue ANSTO in relation to liability.

Dr Loy—All I can say is that the situation of liability of ANSTO, or any other Commonwealth operator of radiation sources and nuclear facilities, is not affected by this bill.

Senator MARGETTS—In the United States I believe there is an absolute liability for nuclear risk and there are compensation funds—that is, \$US500 million—for research reactors. Is there anything similar in Australia?

Dr Loy—I am not aware of anything, but this is not the subject of this bill.

Senator MARGETTS—That is right, so part of what we are asking is what is not in it and why it is not there.

Dr Loy—Because the government's intention was to create a regulatory framework, and an advice giving framework for radiation protection and nuclear safety, and not to deal with liability issues.

Senator MARGETTS—Your business cards have 'Chief Executive Officer' printed on them. Why was that and where were they printed?

Dr Loy—They were printed some little time ago. They have 'Department of Health and Family Services' on them, so they were printed before the change of name of the department. My intent was, since the agency is a departmental structure, simply to suggest that for the time being I was running it. That had no implication for the decision to appoint a CEO for the statutory position when it is created.

Senator MARGETTS—Expressions of concern have been made to this committee in relation to the independence of the staff of ARPANSA. What will be the process by which ARPANSA staff are selected? How will these positions be publicised and what sort of open process will there be in the selection and sourcing of ARPANSA staff?

Dr Loy—To begin with, for the position of CEO, there is a process under way. That was advertised some time ago. A research firm of consultants has been working on it and that process is continuing. In relation to the staff overall, the initial staff will be the existing staff of the NSB and the Australian Radiation Laboratory. In addition, we have put out a public advertisement for some new positions that are particularly related to the regulatory functions of the new agency.

Senator MARGETTS—Will there be departmental staff of any other sort involved with ARPANSA?

Dr Loy—No.

Senator MARGETTS—So there will not be any health and family services departmental staff involved?

Dr Loy—Only in so far as we will reach an agreement with the department for the provision of some of the corporate services, information technology services and that kind of thing. Rather than directly employ staff, we will use the departmental IT system and desktops, probably. We will probably use the departmental payroll and so forth, but otherwise there would not be other involvement of departmental staff.

Senator MARGETTS—Does this in fact make you an independent body? To whom will the staff have the ultimate loyalty?

Dr Loy—I think they will clearly work to the CEO. The CEO is the decision maker in the legislation. There is no capacity for the secretary of the department to direct the CEO or to substitute his or her decisions for those of the CEO. I acknowledge there will be some day-to-day awkwardness with that, in that the CEO will not be ultimately responsible for—

Senator MARGETTS—They are ultimately responsible to the minister, are they not?

Dr Loy—Yes. I think, though, in terms of a departmental structure, legally they would formally answer to the secretary of the department. As I said, in terms of the decision making of the agency, that belongs to the CEO. At the margins, there will be some awkwardness about employment of staff that we will have to iron out through delegations and arrangements with the secretary.

Senator MARGETTS—I have to apologise. I have to leave to deal with a bill right now.

CHAIR—Thank you, Senator.

Senator FORSHAW—Can I just clarify your position? Are you acting as the CEO of the ‘to be formed’ ARPANSA or have you been appointed as the initial CEO?

Dr Loy—The former. I am acting in a non-existent job which is why I tried to make it simple on the card.

Senator FORSHAW—So the process of appointing a chief executive officer is yet to be completed?

Dr Loy—Yes, that is correct.

Senator FORSHAW—That will be a decision endorsed by cabinet, I presume.

Dr Loy—I imagine so. Under the legislation, of course, the appointment is formally made by the Governor-General, so most of those appointments would be considered by cabinet.

Senator FORSHAW—Just as a matter of interest, what are your qualifications?

Dr Loy—For what? Is this a job interview?

Senator FORSHAW—No.

CHAIR—I do not think that is an appropriate question at the moment.

Dr Loy—I am happy to describe them.

Senator FORSHAW—It is appropriate.

CHAIR—Dr Loy is only in the acting position.

Senator FORSHAW—Yes, but it is relevant. He may well be acting in the position for some time after the bill is passed. I am just interested in the qualifications of each of the gentlemen appearing before us, given that they have some role and will no doubt have some role in ARPANSA.

Dr Loy—I was trained in physics and have a PhD in physics. A lot of my working life has been spent in the Australian Public Service, ranging through scientific agencies, the Department of the Prime Minister and Cabinet to the Department of Health and other names.

Senator FORSHAW—The doctor is a PhD.

Dr Loy—It is indeed.

Senator FORSHAW—Because you and I regularly discuss Medicare statistics.

Dr Loy—We do and I am afraid I do not have any private health insurance premium increase tables for you.

Senator FORSHAW—You may still have some for me. Dr Cable, what are your qualifications?

Dr Cable—I have a background in chemistry and a PhD in chemistry. I was a lecturer in chemistry and biochemistry before joining the Public Service as a senior chemist and then an administrator in a more recent role at the Therapeutic Goods Administration.

Senator FORSHAW—And Mr Macnab?

Mr Macnab—I have a degree in mathematics and physics and a masters degree in nuclear engineering. I have spent 25 years working in the field of nuclear safety and regulation both in Australia and overseas.

Senator FORSHAW—Have any of you worked for ANSTO before?

Dr Cable—No.

Mr Macnab—It is not quite clear to me whether I worked for ANSTO or not because the Nuclear Safety Bureau was set up in 1987 and ANSTO provided the staff to run that organisation.

Senator FORSHAW—There are two issues that I wanted to raise: firstly, in your opening statement, Dr Loy, you referred to the role of ARPANSA having this wider function of providing advice to government and the community. Could you comment on what is anticipated to be the way in which ARPANSA will provide advice to the community and will that be a continuation of what has occurred in the past, will it be similar to the NSB or do you envisage something more substantial?

Dr Loy—Certainly, in terms of informing the community about the licensing and regulation that ARPANSA undertakes, the mechanisms are the quarterly reports that are required under the bill and the annual report, so they would certainly be used. A good deal of what the agency will do also, particularly in some fields like non-ionising radiation, will be to produce publications and general advice about ultra-radiation, or RF frequency radiation or whatever, and the whole range of issues.

The Radiation Health and Safety Advisory Council, which is part of the structure under the bill, also has a role of bringing forward advice about new and emerging issues and about things that are of concern to the community. So I guess there would be a process whereby an issue might be identified by people bringing it forward. There would be some public debate and discussion about it. The Radiation Health and Safety Advisory Council would work on drawing together some advice and that would come forward through the CEO. I would envisage that there would be some publications outside the quarterly and annual report cycle. Certainly, all the existing information would be continued and expanded on.

Senator FORSHAW—It is also mentioned that one of your functions is to promote uniformity between the Commonwealth and the states and territories. I understand what this bill does in that respect at least, but it is argued that there is still a substantial inability for the state agencies or departments and local governments to have much say or an impact on what ultimately occurs on a Commonwealth site like Lucas Heights. In that sense, it is argued that there will not be much uniformity because of the exemptions and so on. Can you allay the fears of councils and what I anticipate would be the views of some state government ministers?

Dr Loy—ARPANSA will clearly be regulating the activities on Commonwealth sites and by Commonwealth entities against a framework of radiation protection codes, standards and guidance policies that will be drawn from the world and will also be the basis for national codes, standards and guidelines that we would promote the states to use in their jurisdictions.

Senator FORSHAW—Such as hospitals?

Dr Loy—Yes, hospitals, dental surgeries, radiologists and so on.

Senator FORSHAW—What I am getting at is that comments have been made in the past by state ministers—and we heard the Mayor of Sutherland Shire here this morning; I am not sure you were here—that when it comes to their usual powers that apply to industries, such as planning and environmental control, really they are non-existent because of the overriding constitutional power of—

Dr Loy—In relation to the Lucas Heights site?

Senator FORSHAW—Lucas Heights is the one major installation that everybody focuses on. Will there be any greater role for, say, local government or for state departments of planning and the environment to get involved even if they do not necessarily have any greater regulatory power or state laws? For instance, are any of the state laws or regulations going to be picked up by ARPANSA and included in their codes, or is it just going to be a continuation of what you have at the moment?

Dr Loy—We will certainly be consistent with state laws. Clearly, in relation to overall environmental assessment and planning issues, there would continue to be the application of the Environment Protection (Impact of Proposals) Act that is operating in the case of the proposed replacement reactor.

In terms of local and state government involvement directly in what ARPANSA does, the creation of the nuclear safety committee—which is the committee which will advise on codes, guidelines and policies in relation to nuclear installations—will include both a general community member and a member representing the local government area. That strikes me as likely to be Sutherland shire. It will include some members—

Senator FORSHAW—That is two out of 10, I might point out.

Dr Loy—from the radiation health committee, and the radiation health committee itself will include state radiation control officers. Two of those will be on the higher body, the Radiation Health and Safety Advisory Council. So I think we are pretty well meshed in between the agency, the states and the local government area.

Senator FORSHAW—I hope your optimism comes to fruition. You would be aware that a great deal of concern is about what appears to be the inability by organisations, local government and others, to really find out things until after the decisions have been made. The concern here is with the chief executive officer having fairly extensive power as to how much the public can be involved in understanding or being involved in the process before licences are issued or decisions are made.

I have one other question. Are you aware as to whether or not the government will be signing the international joint convention on the safety of spent fuel management and on the safety of radioactive waste management 1987, and where that process is up to?

Mr Macnab—I understand that the government has indicated its willingness to sign that. But, because the states also hold radioactive waste, it needs to be something that is a joint decision between Commonwealth and state jurisdictions. Until that can be sorted out, it will not be signed, I take it.

Senator FORSHAW—Do you have any idea as to where—

Mr Macnab—No, I do not know the answer to that question. But the Commonwealth has signed the nuclear safety convention.

Senator FORSHAW—Finally, Sutherland Shire Council have presented a series of proposed amendments to the legislation which were, I understand, drafted by their legal counsel. They actually are draft amendments to the first bill. Have you had an opportunity to consider those, or is that not really within your power? Is that something to be determined by someone else?

Dr Loy—The shire drew those to the attention of the government through the member for Hughes. It was accompanied by an advising from counsel, and I could provide you with some comments on the advising. But, in broad terms, clearly, part of the thrust of the suggestions of the council is to say, ‘The Commonwealth should run this.’ Part of the amendments are directed towards the Commonwealth taking over the field.

Senator FORSHAW—Yes, using the external affairs powers and—

Dr Loy—It is clearly a policy decision that the government has decided not to do that. I think the issue of waste storage was raised—whether that is covered by the bill. As I said in my opening comments, that is picked up by the regulations in order to make sure we have captured any kind of waste storage facility.

The third issue that is a substantive issue is the relationship between this legislation and the environment protection legislation. I guess there is a thrust that the environment protection legislation—or environment protection issues—should be explicitly picked up in this bill as well. I do not think that is needed or sensible as far as the environment legislation continues. At some point, and in some facilities or proposals, there will be an overlap in which both pieces of legislation will apply. Again, the decisions about the early stages of the proposal for a replacement reactor are a good example that the environment legislation is applying and, similarly, the ARPANSA legislation would apply.

Senator FORSHAW—How was the environment legislation applied: by virtue of the requirement to have an EIS?

Dr Loy—Yes.

Senator FORSHAW—That is the process, but what about actual adherence to the legislation on the side in the future? You say it will overlap, but is there any possibility that one might exclude the other and, therefore, the environmental protection requirements might be somewhat less than they may otherwise have been?

Dr Loy—I do not see any reason why that should be the case.

Senator FORSHAW—I am not sure. That is why I am asking. There is the old problem of whether two acts can work together. Sometimes it does not always happen that way; one may well exclude the operation of the other by a matter of statutory interpretation.

Dr Loy—No, I do not think they are exclusive. Clearly, there will be a decision following the environment proposals. The completion of the environmental impact statement will lead to a decision by the government. That decision will then be subject to the licensing of ARPANSA so the two things coexist. The first licensing decision will be closely related to the environmental impact decision.

Senator FORSHAW—But under the ARPANSA legislation, if the licence were issued and it was subsequently shown that maybe it should not have been issued, there is no liability back on the Commonwealth for that error by virtue of this act, section 4.

Dr Loy—Is that right?

Senator FORSHAW—It is a statement of fact.

CHAIR—The division bells are now calling us. May I thank the three of you for coming?

Mr Macnab—May I point out that the waste convention was signed by Australia on 13 November?

Senator FORSHAW—Thank you.

CHAIR—Thank you very much, gentlemen.

Committee adjourned at 12.42 p.m.