

REPORT OF PROCEEDINGS BEFORE

JOINT SELECT COMMITTEE INTO THE
TRANSPORTATION AND STORAGE OF
NUCLEAR WASTE

INQUIRY INTO THE TRANSPORTATION AND STORAGE OF
NUCLEAR WASTE

At Blue Mountains on Friday 26 September 2003

The Committee met at 10.00 a.m.

PRESENT

The Hon. P. T. Primrose (Chair)

Legislative Council
Mr. I. Cohen

Legislative Assembly
Ms D. V. Judge
Mr A. M. McGrane

Inquiry into the Transportation and Storage of Nuclear Waste

FRANK JOSEPH GAROFALOW, Manager, Environmental Management, Blue Mountains City Council, Katoomba, sworn and examined:

CHAIR: We have received a submission from the council. Would you like that submission to be included as part of your sworn evidence?

Mr GAROFALOW: Yes, I would.

CHAIR: Do you wish to briefly add to or elaborate upon it, or to make an introductory statement?

Mr GAROFALOW: Yes, I will quickly go over a few things. Thank you for allowing the Blue Mountains City Council the opportunity to express its views to the Joint Select Committee on the Transportation and Storage of Nuclear Waste. I will quickly read a summary of our written submission. Blue Mountains City Council is concerned about the potential impact of nuclear waste on our community, the economy and the environment. The council is opposed to any moves that would see an increased amount of nuclear waste created or transported through the Blue Mountains. Blue Mountains City Council first became a nuclear free zone in 1982, and it is a member of the Australian Local Government Nuclear Free Zones Secretariat. The environment of the Blue Mountains needs to be protected as it is World Heritage Area listed and a major part of the Sydney drinking water catchment.

With an issue as significant as the transport and storage of nuclear waste, Blue Mountains City Council strongly asserts that there needs to be a substantial level of local and regional consultation. The general community has not had the full risks and consequences of the proposal adequately explained. Information must be provided to the community on a clear basis which details the practical public safety and environmental protection implications of the proposal. A clear overview of waste categories, the physical forms of the waste, be it solid, liquid or airborne, and implications for a low-level repository and intermediate-level store should be prepared.

Nuclear materials, their processing and particularly their transport create an increased level of risk. That risk should be clearly quantified, adequately managed and transparently communicated to the community. The response measures that are in place to deal with any risk events and situations need to be specified. It appears that if there were to be a spill it would be left to the State Government and local councils to undertake the clean-up operations. The Commonwealth Government needs to put in place increased emergency response capability to fully address transport accident responses should there be a radioactive spill at any point on the proposed route.

There is a lack of information regarding the potential impact of an accident on the environment and health issues. Transport of nuclear waste further increases the risk of radioactive contamination. It is our understanding that the Federal Government has no obligation or intention to inform local governments, residents or emergency services of the plan to transport nuclear waste through their area. This raises serious concerns about the preparedness of the emergency services to respond in the event of an accident. The highway through the mountains has a well-established history of trucks overturning.

The fundamental issue is the right of communities and local councils representing them to have an absolute assurance that there will be no social, economic or environmental impacts arising from the transport of nuclear waste across their local area. Until these assurances can be given, councils and communities have expressed the wish to see the precautionary principle applied to this issue. We ask the Government to abide by the wishes of the local community and respect the Blue Mountains as a nuclear free zone.

Mr IAN COHEN: You said that the council has been declared a nuclear free zone since 1982. Can you explain to the Committee what that means in terms of local conditions

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and the power that the council seeks to have in terms of prohibiting the transport of nuclear materials through your shire boundaries?

Mr GAROFALOW: Because the transport of nuclear waste is not governed by local government, we recognise that we have no real power to stop the transport of nuclear waste. Our declaration is a symbolic gesture stating our opposition to the transport of nuclear waste and also to our concern about the proliferation of nuclear weapons and other nuclear material in the world.

Mr IAN COHEN: How do you explain your obvious allowance of nuclear medical isotopes to be transported through to your local hospitals and so on?

Mr GAROFALOW: Basically, our nuclear free zone does not apply to the medical use of nuclear materials. In fact, from what we have found, medical use only represents about 4 per cent of the nuclear material that would be transported. The majority of that is coming from other sources, and it is those other sources that we have concerns with.

Mr IAN COHEN: In your submission you mentioned that the highway through the mountains has a well-established history of trucks overturning. Do you have any figures on that at all?

Mr GAROFALOW: I do not have them in front of me but that could be easily acquired from the RTA or New South Wales Fire Brigades. Basically, it is very common, particularly in a few black spots along the highway. Shell corner is a good example, which is currently being upgraded, where trucks go over regularly.

Mr IAN COHEN: Do you consider that upgrading would be necessary or prudent before such movements occurred?

Mr GAROFALOW: Absolutely, yes.

Mr McGRANE: Does your council control the Bells Line of Road as well?

Mr GAROFALOW: No, that is the RTA. It is within the local government area, yes, but it is under RTA control.

Mr McGRANE: So you have two outlets to the west through your council area?

Mr GAROFALOW: That is right.

Ms JUDGE: In your submission you mentioned the potential social and economic impacts that could flow on from the potential transportation of materials through your municipal area. Can you outline them for me?

Mr GAROFALOW: There are two elements to it. One is the perception. Basically, this area relies heavily—the fundamental economy in the Blue Mountains is nature-based tourism. People come here for the natural values as well as for some of the values of the established gardens in the area. The perception that there is nuclear waste moving through this area could have an impact on overseas travellers, who make up an important element of our economy. But more important is the potential of a spill or an accident. If that were to occur it would have a devastating impact on the local environment, even if the issue was controlled appropriately. Just the illusion that there is a problem associated with nuclear waste in this area could hurt the economy of the local area.

Ms JUDGE: In dollar terms what is the input into your economy due to tourism in this area?

Mr GAROFALOW: I do not have those figures in front of me but it is very substantial. It is the number one industry in the Blue Mountains by a long way.

CHAIR: Can you talk a bit more about the psychological, economic and other impacts, as opposed to any health impacts, of a spill of low-level waste, even if it was cleaned up readily and easily? That is still a contested point but if it could be you are suggesting that there would still be big implications.

Mr GAROFALOW: I think that it would be difficult to convince everyone that it was cleaned up appropriately. So whether it was or was not, I think that the perception that there was an issue would remain, and I think that would have an impact, particularly in this area that relies heavily, as I said, on the image as world heritage, as natural. We have a community that is very strongly involved with the environmental movement. The core of what makes up our community is caring for the natural environment. So all those factors would put a taint on the image of the Blue Mountains as a clean, green place to be, as a world heritage city. I think that would impact both on regional tourism and on international tourism. People would be concerned about coming to an area where there was a potential to become contaminated from radiation. I think it would also impact on the social structure of the Blue Mountains in terms of the reasons people live here.

Ms JUDGE: Are you aware of any complaints or submissions in the community as a result of the transportation of medical and industrial isotopes that currently happens perhaps on a daily, weekly basis through this area? Have there been any recorded complaints?

Mr GAROFALOW: Not that I am aware of, no. However, as I said, I think the community and certainly the council views that differently. Again, it may only be a perception but it is a perception that could have a profound impact on the local community.

Ms JUDGE: I think that is a fairly important point because we just talked about the social, economic and psychological impacts of something much more substantial. It is interesting, is it not, that there have been no community—I am being the devil's advocate here—media reports or submissions put into your council, or complaints about that that could actually be happening as we speak?

Mr GAROFALOW: Not that I am aware of, that is right.

Ms JUDGE: Are you aware of any storage problems on industrial sites or medical facilities within this municipal area?

Mr GAROFALOW: Again, no, not that I am aware of.

Mr McGRANE: Has your council any preferred solution to the problem of the transportation and management of waste?

Mr GAROFALOW: We are not saying that these things should not happen. What we are saying is that we do not feel like we are informed and we do not feel like the community has been informed. We want to see exactly what the proposals are in detail and what the potential risks are. Those things have not, at least as far as we know, come our way for us to examine and make informed decisions. We are certainly not experts in nuclear science and we are not looking to change policies around those things, but we want to be informed so that we can make an informed decision. The number one issue is that the information does not seem to be there for us to make informed decisions.

Mr McGRANE: But you have not locked yourself into a situation where nuclear waste should stay where it is and be housed there?

Mr GAROFALOW: We are a nuclear-free zone and as such we do not want nuclear material travelling through this area but we have not locked ourselves in, in terms of the fact

that we recognise that there are uses, such as medical uses and other things, that may require nuclear technology and, therefore, those things need to be judged on their merits, but in order for that to occur we need to be fully informed.

Mr IAN COHEN: Can you describe exactly what you would see as council's role in the event of a truck accident, whatever it might contain, and have you had any communication from the Federal level in terms of the likely role of council and State instrumentalities dealing with any accident or spill?

Mr GAROFALOW: I will answer the second question first, which is no. There has been no communication as far as I am aware of what council's role would be. In answer to the first question, to use an oil spill as an example, if a truck carrying oil overturns on the highway, basically the lead agency is the New South Wales Fire Brigades. Invariably, they will bring in council because it has a wealth of resources. It would involve trucks, traffic control and sand to clean up, and basically we have a major role to play in accidents. New South Wales Fire Brigades would generally be the lead agency and they would almost immediately contact council to bring in extra resources, depending on the size of the accident—and one of this size would definitely require substantial resources from council. In addition, we co-ordinate the State emergency services in the local area, so with evacuations we would take a lead in organising that element of it.

Ms JUDGE: I assume your council is a member of the Local Government Association [LGA] nuclear-free zone association membership secretariat. What does that cover?

Mr GAROFALOW: Basically, we recognise that this issue is beyond local government's mandate. However, it puts forward to those responsible that this council has concerns about this area and they want to be kept informed and have their say. They want to make sure that the community of the Blue Mountains is able to have input into any decisions made in relation to this area.

Ms JUDGE: You see it more as an in-principle position rather than having any legal force of law. For example, if materials were to be brought through your area that could come under the umbrella term?

Mr GAROFALOW: That is right.

Ms JUDGE: Would your council be prepared to take action?

Mr GAROFALOW: You mean legal action?

Ms JUDGE: Yes.

Mr GAROFALOW: No.

Ms JUDGE: So it is just a mission statement?

Mr GAROFALOW: It is more than that. Basically, we are expressing the views of the community that we want to have a partnership and to be involved in any decisions that are made. We would like the nuclear-free zone to be more enforceable than it is, but we do not control that. We would like it to be as strong as it could be but, unfortunately, that is out of our hands.

Ms JUDGE: Will you bring this matter up at the LGA conference to be held in a few weeks' time?

Mr GAROFALOW: They are well aware of it. Basically, we are not alone in this view. I am sure you are well aware that there are plenty of councils that share the view.

Ms JUDGE: Has your council put a motion to the conference to that effect?

Mr GAROFALOW: We have spoken to them about it and basically we told them we were putting in a separate submission. I am sure you have received a submission that a whole lot of councils have signed on to, but we basically made the decision to put in our own.

Ms JUDGE: You have not put it in as a resolution of your council but as a late notice of motion to be heard at the forthcoming Local Government Association conference?

Mr GAROFALOW: Can you repeat that?

Ms JUDGE: When the LGA holds its annual conference it takes motions that can be considered as part of the conference but, sometimes, late submissions can be made. Sometimes the late submissions have not gone through the formal resolution of a formal council meeting. Has your council put in a formal submission to the LGA to be considered at the annual conference this year?

Mr GAROFALOW: I am not sure but I do not think we have, although the LGA has contacted us, so I would be surprised if they were not—

Ms JUDGE: Hunting around?

Mr GAROFALOW: That is right.

CHAIR: You referred earlier to advising the public about the transport of waste. I have explored this issue with a number of witnesses. For instance, I read earlier in the week about a proposal—and we do not know if it is true or not—to transport radioactive waste from Lucas Heights to Port Botany within the next couple of weeks. The dates, location, transport routes et cetera have not been made public for security reasons. To what extent should people be advised, from council's point of view, of the transport of waste, given security reasons, not only with respect to terrorists but people who wish to protest the transporting of waste? Should the local fire brigade, council and members of the public be advised by way of notices? To what extent should people be advised?

Mr GAROFALOW: I think that there are two steps. The first step is the decision to transport waste and everyone should be involved and have the right to have input into that decision. If the decision is made to transport waste, should everyone be informed that the transport is occurring? Probably not, for the reasons you have mentioned. However, we must ensure that in the quest for security we do not overlook the need to ensure that proper emergency procedures are in place.

If the local emergency services are not informed and are not prepared for the transport because of security reasons, other arrangements need to be made for emergency responses through the Commonwealth, if it is the Commonwealth Government that is doing it. We want to know ahead of time, before the transport happens. If they are planning to transport something in a year's time, we want to know now that there are systems in place to deal with an accident, if it occurs. We do not know that now. If we are assured of that and we are not going to be involved in the emergency response, we do not need to know about it. If we are a key element of that emergency response, we need to know about it so that we are prepared to deal with that response.

CHAIR: So provided that the relevant agencies are advised, you cannot see a need to advise either the council or the public?

Mr GAROFALOW: Again, up-front there is a need to ensure that proper consultation occurs and that the community's views are heard. If a decision is made, after considering those views, to transport, as long as there are proper security and emergency responses in place to deal with any accident, then no.

Mr IAN COHEN: You mentioned in your submission that the Federal Government is under no obligation to inform. Have you received any communication from the Federal Government or its agencies on this matter?

Mr GAROFALOW: No. We have contacted ANSTO and asked for their management plans, which they did not supply.

Mr IAN COHEN: Have they indicated to you an unwillingness to supply?

Mr GAROFALOW: The words were something along the lines that they were not really what we were after; the plans we were asking for were not going to give us the information we were seeking.

Mr IAN COHEN: Did they mention giving you the information?

Mr GAROFALOW: It was not clear and it appeared that they did not have the information we were seeking, which is all the stuff I have already mentioned about an up-front assurance that there was emergency response in place in the event of an accident.

Mr IAN COHEN: Perhaps the Committee could request a copy of that letter.

Mr GAROFALOW: It was done verbally. We did that by phone.

Mr IAN COHEN: You have no record of that?

Mr GAROFALOW: No.

Mr IAN COHEN: Has there been any other consultation with respect to the plans of the Federal Government, given that you would be a lead agency. Have you had any communication with the Federal Government in terms of the potential movement of these materials?

Mr GAROFALOW: No.

Mr IAN COHEN: Has there been any consideration about future plans, discussions and co-ordination with you as an agency?

Mr GAROFALOW: No, not that I am aware of, and I would like to think I would be aware of it if it had occurred.

Mr McGRANE: What about your Federal member?

Mr GAROFALOW: I have not heard anything, no.

Mr McGRANE: Have you asked him or her?

Mr GAROFALOW: No.

CHAIR: You have drawn the Committee's attention to the lack of indemnity for any damage or contamination due to an accident along the proposed route. Who do you believe should provide the indemnity and how should it operate?

Mr GAROFALOW: Basically, I think it should come from the operator or the Federal Government, so if there is a risk, that risk should not be borne by the community. Supposedly there is community good in terms of the activity going on, but if somebody's house is going to become radioactive or somebody will be put at risk, I definitely think it is the role of the Federal Government to ensure that that is indemnified.

Mr IAN COHEN: If there is a low-level radioactive spill when a truck overturns, not a major leak in the environment, but council is called out with geigercounters, and you cordon off the leak to remediate the area appropriately, who would pay for all that activity?

Mr GAROFALOW: Hopefully, it would be the Federal Government. I do not know who would pay for it.

Mr IAN COHEN: SES, State government agencies, local council, workers, possibly working around the clock for days, if not weeks. Have you had similar experiences with other accidents? Can you describe what happens when there is a spill of material, be it a private company or a government agency that creates the situation. You have had trucks overturn. What has happened to date and who foots the bill?

Mr GAROFALOW: Generally, council does for its contribution and the State Government wears its contribution as well.

Mr IAN COHEN: Is that a separate contribution or are you saying that if the State Government is involved, it would pay for the SES, et cetera, but local council would pay for its personnel and equipment on site to deal with the situation. Is that what usually happens?

Mr GAROFALOW: Yes.

Mr IAN COHEN: And presumably a similar situation would apply, regardless of the material or who the perpetrator is?

Mr GAROFALOW: The exception to that is the size of the emergency, for example, bushfires or the recent windstorm. The recent windstorm was declared a natural disaster and therefore the State Government funded, not all of council's costs but a substantial portion of those costs in relation to elements of the recent windstorm because it was declared a natural disaster. If this were declared a natural disaster, then council would be likely to have been allocated some funding, although it is never 100 per cent funding, but if it is not declared a natural disaster then council would wear the costs.

Ms JUDGE: What is your council's preferred position as to the best way to deal with the current radioactive waste problem? Should it be kept contained on the site, should it be transported somewhere else, sent overseas to one or two specific sites to be dealt with there? What is your preferred position?

Mr GAROFALOW: We do not have a preferred position because we are not informed. We do not know the options or the implications of those options. The core of our submission is that in order to make informed decisions we need to have the information and that information does not seem to be available to enable us to make an informed decision.

CHAIR: The Committee invited Mr Bartlett, the local Federal member, to attend today but he was unavailable to do so. However, we have received a submission from him. In his submission he said, "However, an accident with hazardous materials other than radiological isotopes or waste could have very significant consequences. For instance, the transportation of low-level nuclear waste is safer than the transportation of petrol or other substances. Can you give us any comments on that?"

Mr GAROFALOW: Again, I am not an expert in that area so I cannot comment one way or another on whether that is accurate. All I can say is that I do not know whether that is accurate because I have not received that information from any authority. We will seek some information to assure us of something along those lines.

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CHAIR: Council has not taken up protesting, for instance, the transportation of natural gas or petrol on its roads. But it has taken up the potential transportation of low-level nuclear waste.

Mr GAROFALOW: The difference here is the length of the problem, if there is a problem. Generally, nuclear waste has a long half life that could, potentially, result in a problem extending for many years. Again, this may be purely psychological and there may be no risk at all. But it is the fact that we have not been informed enough to make those judgments that is a concern.

Mr McGRANE: You have not referred to a spill and how it may affect your world heritage listing. Have you considered that?

Mr GAROFALOW: Again, that links back to the economy and so forth as well as the natural environment. This council is deeply committed to the protection of the natural environment well into the future, and any impact that could potentially damage that natural environment is a very big concern. Adding to that is the fact that this local area gets its economic base from the natural environment, and any impact—even if it is psychological—on the financial viability of the local economy is also of concern. Having this area listed as world heritage has been of great benefit to this council in terms of nature-based tourism. It would also be of great concern if a spill were to impact on the continuation of this area being world heritage listed.

Mr McGRANE: But you have not check that out.

Mr GAROFALOW: Whether or not they would withdraw world heritage listing?

Mr McGRANE: Yes.

Mr GAROFALOW: That is the least of the problems. The impact on the economy and the natural environment is much more fundamental. If it got to the point where world heritage listing was being withdrawn then we would all pack up and move out of town.

CHAIR: Thank you very much for taking the time to appear before us today.

(The witness withdrew.)

ROBERT JOHN DEBUS, Member for the Blue Mountains, and Minister for the Environment in the State of New South Wales, Shop 3, 107-109 Macquarie Road Springwood, sworn and affirmed:

CHAIR: We have received a submission from you. Is it your wish that the submission be included as part of your sworn evidence?

Mr DEBUS: That is so.

CHAIR: Do you wish to briefly add to or elaborate upon it, or make an opening statement?

Mr DEBUS: I could briefly address those issues and I assume that the Committee would like to ask questions. It is, of course, the case that in February this year the Premier announced that the Government would establish a joint select committee, and we are presently carrying out that undertaking with the Committee we now have before us. That Committee was established because of concerns that were raised by a number of members of Parliament within the State and, obviously, particularly those along any possible route for the transportation of nuclear waste between the Lucas Heights facility and somewhere in the west of the State. Those concerns expressed then have been much exacerbated, I must say, as a result of the Commonwealth's continued silence about the location of an intermediate-level store, and its plans for the transportation of 6,000 drums of low-level waste from the Australian Nuclear Science and Technology Organisation [ANSTO] facility to South Australia.

The Government has made its position on these matters very clear. First of all, we categorically oppose any nuclear waste storage facility in the State. As a Government, we have long held a concern about the construction of any new nuclear reactor. It is the view of the Government, that is to say the State Government, that the Commonwealth should release immediately its short list of potential nuclear waste storage facility sites, that it should provide clarification about whether any site in New South Wales is on that short list, that it should consult with affected local government and emergency services on any plans for transportation of drums of waste in this State, that it should provide details of any route for transportation and, above all, that it should allow open and transparent community debate on the whole question of the transportation and storage of wastes. I could talk, if you so wished, about what I understand to be Commonwealth plans for nuclear issues, but I imagine the Committee is well enough informed about those matters.

I want to draw attention, again, to the problem of Commonwealth secrecy about these issues generally. The Commonwealth Government has had many opportunities to allow free and open debate on these issues, but they have never been taken. If it were not for the existence of the Committee of which you are all members there would have been no opportunity for anybody who was not a senior Commonwealth official or Minister even to talk to the directors of ANSTO, for instance. It is clearly the case that throughout its entire history the nuclear industry has been absolutely shrouded in a culture of secrecy, and that is one of the reasons that it has always caused such high levels of public concern. Perhaps the nuclear industry is not quite as devoted to paternalistic secrecy as it was before events like Chernobyl, but nevertheless it is a characteristic of that industry that is reflected again in the way that it has been administered in Australia. I point out that there are particular reasons beyond those of culture why that secrecy has continued to affect us in New South Wales.

The 1987 ANSTO Act and the 1998 Australian Radiation Protection and Nuclear Safety Act [ARPANSA] provide for the almost complete immunity for the Commonwealth from any oversight at all over its nuclear activities. There is an almost total legislative exclusion from any of the activity carried out by ANSTO, its contractors or subcontractors anywhere in Australia, and that exclusion includes any action that might be taken under the New South Wales Radiation Control Act. I speak briefly about the transportation of waste throughout New South Wales, laying great emphasis on the fact that the New South Wales Government

nuclear waste policy is very clear in this respect. We believe that the communities all along the potential routes and, most particularly, in the Blue Mountains from my point of view, need to be consulted and their concerns addressed.

I acknowledge that, as a technical matter, the Environment Protection Authority [EPA] of New South Wales has made a submission in which it says that intermediate-level waste can be transported safely if it is carried out according to required international standards. The EPA statement makes a number of very broad recommendations about how that might be ensured, including the employment of some international experts to audit any process that might be proposed. However, that is technical advice from the EPA that does not in any way contradict the Government's firmly held position. That submission does, however, to our understanding, point out what should and should not be done. I could talk in more detail, but others will no doubt do so, about the more direct effects of transportation of nuclear waste through the Blue Mountains.

As is well enough known, the Blue Mountains is now a world heritage site of outstanding natural beauty. Its most significant industry is tourism with a strong emphasis on ecotourism. Obviously, we depend precisely on the reputation of the Blue Mountains being a clean and natural environment for the vital underpinning of that particular industry and we would search a long way before finding an activity that is more likely to compromise that reputation than people travelling up and down the Great Western Highway with trucks full of nuclear waste. The Fire Brigades and the Fire Brigades union have made submissions to the your inquiry. I draw attention particularly to the Fire Brigades' submission. I draw attention to those submissions. I understand that representatives of the Fire Brigade union of New South Wales will make a presentation to you.

The Fire Brigades management points out that it is inconceivable, in effect, that any transportation of waste could possibly take place without very specific changes to the present disposition of resources of the Fire Brigades and, indeed, without very substantial expenditure on equipment. All of which adds weight to the proposition that there is an absolute necessity for the community of this State and especially the community along any possible transportation route to be given proper and full information or an opportunity for transparent discussion and the opportunity for political response to such proposals. We absolutely need to understand how waste would be transported, if it were to be transported at all, and the Government's decision remains one of opposition to those matters.

Mr IAN COHEN: Do you have any information about where is the storage of what is effectively low level nuclear waste or high level nuclear waste material somewhere in New South Wales? You have complained about the Commonwealth Government not been forthcoming with information but from your perspective, from being involved and in charge of the SES and various emergency services and response services, can you give any indication of your Government's position on that question?

Mr DEBUS: My complaint about the lack of information is made in the first instance on behalf of my constituents as the member for the Blue Mountains and, in the second instance, on behalf of the people of New South Wales, possibly as the Minister for the Environment. As you are implying I was until recently responsible for emergency services. The relative lack of information is of special concern in everyday operations to emergency services. I believe that the submissions of the NSW Fire Brigade spell out that problem. If you are asking what I know about the Commonwealth proposals, I can only say I know what has been gleaned from public sources, and that is all I know. That is the only information that I have been given—in confidence or otherwise—about these matters.

But I do know that the Commonwealth has been going through a long process in which it has been seeking to make a decision about what it would do about nuclear waste storage, and that it has made one decision with respect to the establishment of a national site for the disposal of low-level waste, that is the place in South Australia, I believe, called Billa Kalina. But at the same time the Commonwealth Minister, Peter McGauran, has announced

that the intermediate level waste storage facility that the Commonwealth proposes will not be in South Australia.

So far as the storage of intermediate level of waste is concerned, the Commonwealth study has identified two areas of possibility: one was the site in South Australia and the other is the so-called Olary region to the south-west of Broken Hill. As it presently stands, that is the only possible site, to the south-west of Broken Hill, that can be understood as existing on the basis of reading the various Commonwealth Government documents is this area. The only logical conclusion you can draw is that since a number of other methods for waste transportation are ruled out by Commonwealth Minister Peter McGauran, that the waste would be transported to that area south-west of Broken Hill by road. We just need a map to work out how it is likely to go.

Mr IAN COHEN: What will the New South Wales Government do should the Commonwealth announce that the storage of low level nuclear waste would be somewhere out there in western New South Wales?

Mr DEBUS: First of all the Government has not decided what its detailed response will be to that. It is clear that its opposition has been well and truly announced and repeated on a number of occasions. I point out that the possibilities of legal action are extremely restricted. I know that some people believe that States should pass pieces of legislation, not dissimilar to that which is already on the books in New South Wales back from 1986, banning or in some way or otherwise resisting the establishment of such a facility. But my strong belief is that resistance to a facility of this sort has essentially to be of a political nature. There is no realistic likelihood that a State can pass a law which can overcome Commonwealth legislation under the terms of our Constitution. I think there is a bit of futility in pursuing that.

Mr IAN COHEN: For example, in August 1994 South Australia called for a judicial review. Is that futile?

Mr DEBUS: The judicial review is not the same thing as legislation so I cannot say that is futile. This committee is doing exactly the kind of thing that is appropriate in the face of the threat from the Commonwealth. I believe the most constructive thing that the New South Wales Government can do, especially when we do not yet have a Commonwealth announcement, is to set up this select committee which is meeting today.

Mr IAN COHEN: Do you agree that the Premiers of South Australia and Western Australia have reacted strongly to the issues with which they are being confronted by the Federal Government?

Mr DEBUS: I understand that they have said strong things, so have I.

Mr IAN COHEN: Has the Premier?

Mr DEBUS: The Premier has said he is opposed, and he is directly responsible for the establishment of this committee.

Ms JUDGE: With your depth of knowledge and experience in the various portfolios what is the best way to deal with existing, and future, low, intermediate and high level radioactive waste? For example, should it be contained where it is currently and dealt with and reprocessed there? Should it be sent overseas, to countries such as France, for reprocessing? Should it be broken down?

Mr DEBUS: That is a fair question but one that you will understand I hesitate to answer definitively. One of the reasons that the parliamentary select committee has been established is that people in the New South Wales Government, and not the least myself, felt that there were lots of issues that were essentially unresolved around the question that you

ask. The issues may in some instances be unresolvable. Somebody back in the 1950s made a Faustian bargain about nuclear reactors and their output, their waste products. We know that in a number of places around the world there are diabolically difficult problems being confronted in the area of reprocessing, waste and nuclear fuel generation. Some countries manage these things much better than others. It has got to be recognised that there is a spectrum of response, some of which is better and some of which is worse. There really have been serious accidents involving the transportation of nuclear waste in a number of countries. There have not been such accidents in Germany where they do things very efficiently.

It must be said, by the way, that in Australia there is a lot of expertise in the transportation of very low-level radioactive waste associated with nuclear isotopes used in hospitals and that kind of thing. But when you come to the level of waste that is left over after spent fuel rods have been sent overseas and reprocessed and brought back again, you are dealing with something much more serious. I am at least not opposed to the proposition that we should leave it where it is while people look further for better ways to deal with it. I say that in the knowledge that this is an extremely difficult issue. I say it in the knowledge that horrible problems are being left from decisions taken more than a generation ago, and that there are two ways to deal with the matter.

One is to think about exactly what to do with this existing waste—but I make that tentative conclusion as I will want to hear what this committee says as well about the way we should be dealing with the waste that exists. Given that difficulty, at least what we must do is have an open debate about the entire circumstance. At least what we must do is break open this culture of secrecy that the Commonwealth has imposed upon us that leaves us with such great concern, especially along the potential transport routes, about what on earth is going to happen. So there are a hierarchy of concerns and the very basic one is that we should have an open debate and get real information available to everyone in the community.

CHAIR: Taking the role of the devil's advocate, your current submission and the State Government generally has expressed concern about the proposals to transport low level nuclear waste through this area as well as other areas. Yet, earlier this week the *Daily Telegraph* said that another shipment of high-level radioactive waste, in the form of spent fuel rods, are to be transported to Port Botany from the Sutherland location. Yet we have not heard any concerns expressed about that. Would you comment on that?

Mr DEBUS: That issue is dealt with rather directly in one or both of the submissions from the NSW Fire Brigades. I know that such transportation occurs from time to time. I know that there are established arrangements under which it occurs but the key, I suppose, is that the transportation is over a very short route. Apparently there are well-established arrangements for it to be conducted. We are constantly confronted with these circumstances so far as nuclear activity is concerned. There is horrible poisonous stuff that exists in the world and you either do or do not do something with it. I think there is a significant difference in making the short journey to Port Botany, which the New South Wales Government cannot prevent but must ensure it is, at least, as safe as possible, and transporting waste, admittedly of a lower level of radioactivity but still extremely dangerous, for thousands of kilometres right across the State.

CHAIR: I have asked a number of people to what extent should the public, local councils, emergency services, et cetera be advised about the transportation of nuclear waste. I note that the only source of information the public had in this instance at Port Botany was a short article in the *Daily Telegraph*. If the transport of low-level nuclear waste were to occur through the mountains, who do you think should be advised?

Mr DEBUS: Certainly the State authorities who normally deal with hazardous materials, that is to say, the EPA and the NSW Fire Brigades. They not only know how to operate under the State Disaster Plan, and especially the Hazardous Material Sub-plan that exists already under the State Disaster Plan, but they are the people who will have the great majority of the necessary expertise to ensure safety to the degree that it is possible to ensure

it. I think it is important that the Committee should hear from both of those bodies. As I think I have said already, the Fire Brigades believe that if it was to be engaged in this kind of activity—I know that its employees would much rather not be engaged in this kind of activity—it would need a lot more resources in terms of protective clothing and the other equipment necessary to do with hazardous materials.

That is the first reason, the most obvious every day practical reason why the Fire Brigades needs to know in great detail what on earth is going to go on with this transportation. But beyond that, I think I have made it sufficiently clear that I believe, given the nature of the material and the relatively large quantities that are involved, the consequent legitimate concerns that the community might have, that local governments and other representative groups also definitely need to have an understanding of what is being proposed.

Mr McGRANE: In view of your statements in relation to medium levels of nuclear waste and the stated policy of the Federal Government to build a new reactor at Lucas Heights and the closing down of the existing reactor, the evidence given to us last week by an organisation of doctors in regard to medical nuclear waste was that 60 per cent of the world's medical nuclear material comes from one reactor in Canada—it supplies 60 per cent of the world. Is there a need for another reactor here in Australia?

Mr DEBUS: I think it is fair for you to ask me that question but I do not have that kind of expertise. I can only repeat to you that in my experience in politics, and before that in journalism, the almost unbreakable habit of the nuclear industry to conduct its affairs in circumstances of absolute secrecy and the fundamentally poisonous nature of the by-products of that industry always lead me to be intent on the possibilities of alternatives to that kind of production in the first place. I believe, though I can offer you no expert evidence in this respect, that there are increasing levels of alternative technology that can provide the undoubtedly but extraordinary valuable products like isotopes that are used in industry and medicine. But you will never catch me arguing strongly for the creation of any new nuclear device.

Mr IAN COHEN: When you were Minister for Emergency Services did you have a position on the supply of stable iodine tablets for the surrounding population and also now with the bridge over the Blue Mountains but also possibly the higher level radioactive materials going to Port Botany, given that I think the levels are higher than what was involved in the Three Mile Island incident.

Mr DEBUS: Certainly, under the disaster plan for the Sutherland Shire, my recollection is that there were arrangements in place for the distribution of iodine tablets. More recently my recollection is that there was some debate within the community, and perhaps in consequence of a review of the disaster plan, about exactly how the iodine tablets should be distributed. Since I have been Minister there may well have been new arrangements put in place. I cannot recall the details but they would be available to you. It is a question about whether you should keep them at ambulance stations only or whether they should be available in schools and that kind of thing.

Mr IAN COHEN: To be distributed at the time of a problem or other disaster, or should they be pre-distributed to people who can be potentially affected?

Mr DEBUS: Yes, but there was an intermediate position about pre-distributing them to locations where they could then be easily distributed to citizens in the event of some kind of accident. In other words, there was a question about what was the best method of distribution. I am not sure how it was resolved but you could relatively easily obtain that information either through the Office of Emergency Services, Sutherland Shire or the Department of Health, I imagine. The issue was addressed and there have been several reviews of the local disaster plan in the Sutherland area directed exactly at the refinement of potential responses to an accident.

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Mr IAN COHEN: Your office has stated—and it is involved with this inquiry—that you believe that affected communities should be given the information they are entitled to in relation to any Federal Government intentions. Have you received any information about the transport of nuclear waste to Botany? Have you been informed in any way?

Mr DEBUS: No, I have not. I cannot speak for every part of the New South Wales Administration. For instance, the police have almost certainly been told, and again it may be that this information could be obtained for you relatively easily. It may be that the Fire Brigades is also told when the transportation is to take place. It probably is the case actually.

Ms JUDGE: The Committee has been told on several occasions that the radiological consequences of an accident with low-level waste would not be significant. However, an accident with other hazardous materials could have far more significant consequences as the transportation of low-level nuclear waste is safer than petrol and other substances, and it has been quoted as being just a risk like other risks in our modern world. For example, there are more than 2,500 ANSTO isotopes transported per month around Australia and overseas for medical and industrial uses with no accidents, no issues, no problems, and a further 2,200 non-ANSTO movements per month in New South Wales under current EPA regulations. I put it to you: are the concerns about the transport of nuclear waste exaggerated?

Mr DEBUS: No, I do not think they are exaggerated. There is no reason for the community to behave irrationally about the dangers. There is no reason for the community to ignore detached scientific advice about the level of risk involved. However, I think the difference with nuclear waste is that we are constantly learning that it is more dangerous than we thought it was before. I can remember as a young journalist being told that it was not very dangerous at all, and people were constantly completely exaggerating its effects even though it began later to emerge that those early predictions were entirely wrong. You remember, to use an exaggerated example, when the first nuclear tests were taking place soldiers were put quite near to the explosions with very little protective gear on because it was presumed they would not be dangerous.

A problem with nuclear waste is that it goes back to the issue of secrecy all the time. We are not under an illusion about how dangerous a tanker of petrol is. We are never sure how dangerous a truck containing 300 tonnes of intermediate-level hazardous waste is. From the point of view of the community at large, the perceptions of danger are, if not as important, still significant beyond the question established by scientists about what the precise measurable risks are. The community's feeling is extremely important in this respect. I think I to a degree share that more general feeling of reluctance to believe assurances that are provided from nuclear authorities when all those assurances come out of such a secret society.

(The witness withdrew)

(Short adjournment)

JOHN LOY, Chief Executive Officer [CEO], Australian Radiation Protection and Nuclear Safety Agency [ARPANSA], P.O. Box 655, Miranda, affirmed and examined:

CHAIR: The Committee has received a submission from you. Is it your wish that the submission be included as part of your sworn evidence?

Dr LOY: Yes.

CHAIR: Do you wish to briefly add to it or elaborate upon it?

Dr LOY: Yes, I will. I am glad to appear before the Committee today to explain the role of ARPANSA, its Act and regulations as they bear on other matters relevant to the Committee's terms of reference. At the outset let me update section 4 of my submission dealing with the proposed national radioactive waste repository. Subsequent to lodging my submission I have now received an application from the Commonwealth Department of Education, Training and Science seeking a licence to site, construct and operate the repository at site 40A near Woomera in South Australia.

I have released details of the application and on 6 September I invited public submissions to be received by 8 November by way of advertisements in the *Weekend Australian* and the *Advertiser* in Adelaide. I have commenced a preliminary assessment of the application. I am sure that the Committee will appreciate that I must make my decision about the application on the basis of the evidence that comes before me and that I must not prejudge or be perceived to have prejudged matters that will be relevant to making my regulatory decision. I, therefore, may need to be constrained in answering some of the Committee's questions. However, I hope I will be able to be helpful to the Committee without prejudicing my regulatory decision-making role.

My submission first describes the legislative and regulatory framework that applies to Commonwealth entities that seek to deal with radioactive material or to site, construct and operate control facilities. This framework, which requires that Commonwealth entities obtain a licence from the CEO of ARPANSA, applies to the Commonwealth proposals that are the direct subject of the Committee's terms of reference. The submission described the matters that the CEO must take into account in considering a licence application. I particularly point to the requirement that I must take into account international best practice in radiation protection and nuclear safety as it relates to the licence application. I must also take into account for facilities such as the proposed repository and waste store, the content of any submissions made by members of the public about the application.

Turning specifically to the transport of radioactive materials, the regulations—the Australian Radiation Protection and Nuclear Safety Regulations—impose an automatic licence condition upon any licence issued by the CEO of ARPANSA. This is to the effect that the licence-holder must ensure that transport is in accordance with the provisions of the Australian code of practice for the safe transport of radioactive material, which I shall refer to as the transport code. The transport code is, to all intents and purposes, identical to the international transport regulations drawn up under the auspices of the International Atomic Energy Agency.

It should be noted that the transport code seeks to cover the full range of radioactive materials, from spent fuel through to medical radioisotopes. The transport code is adopted by Australian jurisdictions, including those in New South Wales. The submission then describes the basic approach of the transport code. Fundamentally, the code focuses on the packaging of the radioactive material and that it is designed to achieve an appropriate level of safety, taking into account the inherent hazard of the particular material. These passive packaging provisions are supported by various active measures, such as labelling, loading and stowage provisions, and quality and compliance assurance arrangements.

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With regards to the transport of material to the proposed national repository, it is envisaged that this material will be transported in the form in which it will be disposed of in the repository. This means that the waste acceptance criteria, that is, the criteria for actually accepting waste in the repository that will be applied based upon international best practice will thus also apply to the packages being transported. My submission also describes the planned process of assessment of the licence application for the national radioactive waste repository, set out at attachment C of the submission. I can confirm that this plan is proceeding along those lines. Finally, the submission also addresses briefly the regulatory requirements that will apply to the proposed national waste store. I look forward to responding to the Committee's questions.

CHAIR: Does ARPANSA have a role in the transport of high-level radioactive material to Port Botany?

Dr LOY: Yes. The transport of spent fuel from the Lucas Heights site must be approved under the licence that ANSTO possesses for the Lucas Heights site and for its fuel operations on that site. In addition, ARPANSA approves the transport casks in which the spent fuel is carried. In terms of my approval of the transport itself, I can advise that there are discussions going on between ANSTO, ARPANSA and New South Wales authorities about the arrangements to apply.

Mr IAN COHEN: I understand that you have considered the potential for the South Australian Government to prevent the repository and stated in April 2002 that you were satisfied that the waste from the existing and the new reactor can be contained and properly handled on-site at Lucas Heights. Could you explain to the Committee the situation where Mr McGauran seeks to impose the transport of these wastes through unwilling communities across New South Wales?

Dr LOY: The decision to have a national waste repository is one that was taken by the Australian Government. It is not for me to make that decision. That is the decision that they make and the relevant Commonwealth entity then has to apply to me for a licence. The rationale for a national waste repository has been rehearsed many times and, again, it is not really for me to make the rationale; that is up to the Government.

Mr IAN COHEN: You have stated that you consider that the material could be properly contained and handled in situ at Lucas Heights.

Dr LOY: Certainly it is possible for waste on the Lucas Heights site to be conditioned on that site and stored there. That is not, if you like, an end solution that a repository is, but in terms of immediate handling and medium-term handling that is certainly possible. I do not think anyone would deny that.

Mr IAN COHEN: I refer to the transportation of higher-level waste that will occur in the next couple of weeks to which the *Daily Telegraph* referred. Was the community then consulted or informed specifically about this impending transport?

Dr LOY: As I said, we are involved in discussions with ANSTO and the New South Wales authorities about the arrangements for that transport. That is really all I can say.

Mr IAN COHEN: Is there any community involvement, any notification?

Dr LOY: I understand that part of the arrangements would include notification to Sutherland council, but I am not aware of any other involvement other than with the relevant New South Wales authorities.

CHAIR: One of the many debates between various witnesses has been who should be notified about the transportation of waste, given security, terrorism, et cetera. That is why we are focusing on this point at the moment. For instance, there is the view that everyone in the

community should be advised. There is a view that only the Police and, say, an elite agency like the Fire Brigades and, possibly, the council should be advised. We are trying to get a handle on who, in case of the transportation of waste, you believe should be notified.

Dr LOY: My role is about safety. I need to be satisfied that the transport can be undertaken safely, which means that the material is in casks, which means that it is well protected and able to be transported safely, and that arrangements are in place to deal with any emergency contingency that might arise during the transport. That is my role, as I see it, to focus on those safety issues. I appreciate that there are broader issues of community knowledge and the like, and they are reasonable things to debate. But I need to focus on the packaging of the spent fuel and safety arrangements for its transport.

CHAIR: If we could focus on the safety of the transport, issues involving a local council and its emergency services role of co-ordinating if, for instance, there were a spill, an attack or anything else were to happen. Presumably, the local council would need to be involved in a whole range of things, including cleaning up, blocking roads, and moving individuals out of the local council area. Do think it would be appropriate for the local council to be advised, as part of your preventative safety regime?

Dr LOY: My understanding is that the arrangements in New South Wales put the sorts of decisions that you are talking about in the hands of the New South Wales Police, with action being taken also by the New South Wales Fire Brigades. That is the focus of our attention rather than on notification to councils.

Mr IAN COHEN: The last nuclear waste transport was 22 January 2001, and I understand that no ARPANSA senior staff was present during the time of the transport or the preparation times. Could you comment on that?

Dr LOY: Our role is to ensure that the transport plans and arrangements are in place and are agreed with the relevant authorities, and I am able to sign off on those arrangements. Whether we choose to have an observer taking part is a matter of judgement on the day. It is not a fundamental issue.

Mr IAN COHEN: I understand you have stated that the waste proposal would be written in blood before the building of the reactor would begin. But you have certainly accepted the new reactor proposal predicated on the national repository going ahead. Are we not getting the cart before the horse? We are still debating the repository, and the reactor is well and truly on its way.

Dr LOY: I always regret making colourful statements. However, I need to tease out some of the issues. In a statement I made in August 2000 I was drawing out two issues, one was the arrangement for the processing of spent fuel from the replacement reactor. I said that I was of the opinion that at the time of the licensing of the operation of the reactor, arrangements for reprocessing of its spent fuel would need to be entirely firm—written in blood. In regard to the process of a strategy for dealing with the return of the spent fuel product, if you like, after reprocessing I said that at the time of licensing of the operation of the reactor I would need to be convinced that a store will exist. There is a page on that, but that is the essence of what I was saying. An arrangement to take the spent fuel and deal with it in the first instance needed to be fully settled. That was important because there are some issues about the proposed use of specific fuels in the replacement reactor. The second was that I needed to be satisfied that there will be store for that waste product when it returns from overseas.

Mr IAN COHEN: There are concerns with all aspects of this industry and the lack of transparency, one of which is security. Sections 3.1, 3.2 and 3.3 of a report with which you were involved cover the manufacturing error, the unauthorised repairs and delays in notification. I have some of the details that I do not need to go into. I think it was the reactor, the pool tank and certain repairs. How can the Committee be assured of the safety of the new

reactor when it is being built overseas? Do you have a genuine way of knowing whether the reactor will be in accordance with the highest level of quality assurance? It is being built in Argentina by numerous subcontractors. Is it subject to the highest levels of quality assurance under Australian conditions?

Dr LOY: That is a very broad question. I can go into it at great length but I will not. I will just describe briefly the process from our point of view. Basically I made a decision that the construction of the reactor could proceed on the basis of the design as it was presented to me in 2001, but I said that before any systems, structure or component that is important for safety was constructed, I needed to give specific approval about the construction of that item. One of our major activities in the time since the issue of that license has been reviewing the detailed design and manufacturing arrangements for individual systems and structures that are important for safety in the reactor. That is done with a fair amount of blood, sweat and tears on the part of my staff to look at it in great detail. So I think from that point of view we can say that we are closely monitoring the manufacturing of the reactor.

In terms of what happens when it moves to actual manufacturing, a great deal of which is being done in Australia I should say, we certainly have inspectors who visit some of the manufacturing fabricators from time to time and generally keep an eye on the process. The whole manufacturing process is undertaken within quality assurance systems that are audited. We take part in some of those audits, and review the quality assurance process. I believe there is quite a strict overall regime in place, but that is not to say that mistakes do not happen.

Mr IAN COHEN: There have been manufacturing errors and there have been unauthorised repairs?

Dr LOY: There was certainly that instance of what can only be described as, first of all, a stupid mistake that was then, compounded by the fabricators undertaking some repairs without notification of the contract manager and the designer. I looked into that situation in some detail, and I have presented a report on it.

CHAIR: Was that as a result of human error?

Dr LOY: Yes.

CHAIR: Outside of the established procedures?

Dr LOY: Yes. It is one thing to make the mistake though: it is another thing not to have properly dealt with it.

Mr IAN COHEN: I understand there was quite some time before the company, JEDHI, properly attended to the mistakes.

Dr LOY: There was a lapse of time. The fabricators, a relatively small Australian company, was doing a lot of work at the time—not that that is an excuse—but they decided they would undertake some repairs. They did not notify the contract manager which is the JEDHI company to which you refer. Even when they had notified them, there was delay in JEDHI notifying INVAP, the designer and then ANSTO the ultimate customer. That is a great lapse that must not be allowed to happen again.

Mr IAN COHEN: The fact that it happened is worrying to me and to members of the public. In such an industry something like that could have serious consequences and be a potential disaster when dealing with material which we are all agreed, given our debate on transport of these wastes and the repository?

Dr LOY: No.

Mr IAN COHEN: Was the safety of the whole enterprise seriously compromised by this lack of proper quality control inspection and reporting?

Dr LOY: I do not believe so. In any event that particular matter has been properly dealt with. The repair strategy is appropriate and certainly we will be involved very closely in the final approval of the tank to make sure that the repairs have been fully and properly carried out.

Mr IAN COHEN: When you say you will be fully involved, do you have people who inspect the plans? Is Bureau Veritas still doing six-monthly quality assurance inspections?

Dr LOY: Their role is in relation to INVAP, as auditor of INVAP's quality assurance process. That is a review of the quality assurance process overall. But in relation to the particular fabricator, I think the fundamental root cause was a lack of resources in that fabricator, and a lack of proper attention to the quality assurance system, and that has been very much remedied. I have taken steps to ensure that if there are similar problems in other fabricators that that is dealt with also. I do not necessarily believe there are but clearly, I agree with you, if you find one problem you make sure that it does not occur elsewhere.

Mr IAN COHEN: Do you agree that problems of that magnitude on a potentially dangerous project are very serious?

Dr LOY: No, I do not necessarily agree with that.

Mr IAN COHEN: I will word it another way: Is there any way that these sort of mistakes, if not properly attended to, could endanger the local community?

Dr LOY: The mistakes were properly attended to.

Mr IAN COHEN: In relation to the type of material with which we are dealing, is this a potential disaster that could happen?

Dr LOY: If you are looking at the specific case, in fact, no it was not. It is obviously an important item for safety but even if in some fantastic way it had gone undetected or, at least, some parts of it had gone undetected, it would not have been a catastrophic incident. It would have meant that the reactor would not have been able to be operated, but it would not have led to a catastrophic incident. Honestly I think that debate is neither here nor there. The important thing from my point of view is to see that the lessons from that incident are well and thoroughly learned throughout the project.

Mr IAN COHEN: We talked about Bureau Veritas whose role you explained is six-monthly quality assurance inspections. Can those inspections be publicly tabled?

Dr LOY: I honestly have not turned my mind to that thought. If I could take that on notice and give you a response?

CHAIR: Yes. You referred to a situation that arose as a result of lack of resources and you agreed human error. The Commonwealth Department of Education, Science and Training advised this committee in its submission that:

There are well-established procedures to manage an emergency involving radioactive materials in New South Wales and elsewhere in Australia which would enable an appropriate response in the unlikely event of an accident. Specialists in managing radioactive materials would attend an accident if required.

Would you detail those well established procedures?

Dr LOY: The procedures, as they exist in New South Wales, I understand are that the response to any emergency that may involve hazardous materials is, in the first instance, by the HAZMAT capacity of the NSW Fire Brigades and the sites being secured by the NSW

Police. The specialist advice would need to come from the NSW EPA in terms of the managing of the radiological issues. Having said that, let me make it clear that part of what I need to be doing in assessing DESTs application is assessing the viability and necessity and strength of emergency arrangements for transport as part of the overall assessment of their application for a license for the repository. By that I mean the story does not simply end by saying what are the existing general arrangements, I need to examine the arrangements in the context of the specific proposal before me.

CHAIR: It sounds as though the well-established procedures are that someone calls for police and the fire brigade and expects them to be sufficiently resourced from the New South Wales Government to undertake whatever challenges are before them. From what you have just said the procedure is that someone calls the fire brigade and the police who are resourced by the New South Wales Government.

Dr LOY: And in that sense I do not think the transport of radioactive material is different to the transport of any other hazardous material.

CHAIR: They are the well-established procedures?

Dr LOY: Yes.

Ms JUDGE: A submission to the committee alluded to the fact that there has been an amendment to the Non Proliferation Legislation and Safeguards Act. If that is the case, are the consequences of the amendment that your organisation would be prevented from reporting certain incidences regarding things like radioactive waste, spent fuel et cetera because it could be said to compromise your nuclear material security and so forth? If so, if this amendment is ratified, how will it affect your reporting?

Dr LOY: I am not anticipating any effect.

Ms JUDGE: Will there still be a free flow of information?

Dr LOY: Yes. As Mr Cohen pointed out, security is an issue in relation to the flow of information and it always is. But having said that, I am not anticipating any particular effect from this legislation which I must say applies to nuclear material, that is, material that is safeguarded, not your average radioactive material.

Ms JUDGE: The committee has been advised by the Sutherland Shire Environment Centre that ARPANSA will not release either to the committee or the SES a consequence analysis at Lucas Heights because it is subject to security confidentiality. Is that so? What are your reasons for that decision?

Dr LOY: It certainly had nothing to do with the legislation that you mentioned. The very difficult subject to deal with is the subject of trying to make an assessment of possible consequences of a sabotage attack upon the replacement reactor, or indeed, an existing reactor. You can do a safety analysis of a reactor because you know how it works, if you will. So you understand the sorts of things that are able to go wrong and the consequences of those things, and what the protective measures are, so you are able to postulate a reasonable, if I can use that word, accident. Is it the outer edge of likelihood that is consistent with the type of reactor that you are dealing with? When you are turning then to sabotage, you do not really have a kind of direct basis for estimating the way in which an attack might occur, other than you can look at the ways in which the reactor is vulnerable and putting in protections to ensure that people do not reach it.

During the assessment of the construction licence I said, "Let us think about the consequences if we assume away all the safety and physical mechanisms that would limit the release of radioactivity, just throw them away and put in a big burst of energy and see what happens". That was done as an exercise to see if, even if you did all that, we would be talking

about very significant radiological consequences. My conclusion is that you would still be looking at consequences that were acceptable, especially in the context that if you are looking at, say, an aircraft crash on the facility you would be looking at hundreds of people killed in that. But that raises sensitive issues of security. I tried to find my way through that, to find a way of releasing some information that would be useful to the public without causing difficulties in security, and I was not able to do that. So I tried, if you like, to unpick the issues of security from the consequences analysis, and I was not able to do that and I did not feel I could release it.

Ms JUDGE: This is the difficulty that I think the Committee is also faced with. Perhaps it is a question of safety but there is also the question of balancing that with the community's need to know what is happening in their environment and further afield. I think that is the hard thing. On one hand you say that your job is to ensure that this is safe but then to be open and transparent in everything as far as possible. I think it is trying to tease out those issues so that there can be some sort of guidelines without being over-alarmist at the same time I think the Committee has the right to know. I am concerned that the whole issue of security could be used as a smokescreen or leverage not to let people know things.

I think it becomes a fine line; I do not want to see that happening. Unfortunately we have had these terrible tragedies overseas, in America and recently in Bali. But by the same token I do not want to see people using potential threats of terrorism just because they know that they will take some spent fuel rods from point A to point B, a short distance, and we cannot let the community know in case a terrorist hijacks it. It is important that we come to grips with this issue, and I would like to ensure that ARPANSA is aware of that concern.

Dr LOY: I do not disagree with what you have said. Again, you have to look at horses for courses. If you look at the issues of transport to a radioactive waste repository, a near-surface waste repository, where you are transporting largely low-level waste in a conditioned form, issues of security seem to me to be relatively minor ones. There is more security concern about the sources being stored and not well looked after in various locations than in a conditioned form ready for transport and for putting in a repository—I think it is a much lower level of security concern. Yes, I did try to release something but was not able to.

I regret that but I would defend strongly ARPANSA's record in terms of public information. We do put a great deal of material out. For example, in the current arrangements about the low-level waste repository, the application is readily available. It will be sent to libraries all along the transport routes. CDs are available to anyone who asks for them. The information is on our web site. When we come to further analyse the submission and ask questions of the department, which we will, those will also go on the web site, as will their responses. So putting aside issues of security which are there, I think we strive to be as open as possible.

CHAIR: As well as the issue of security, we have heard about issues to do with commercial in confidence. Could you tell us about, and detail, what independent checks you make of the processing of some of the Lucas Heights waste, including some processed water that goes into the local sewage system. Can you describe what checks you make in relation to that?

Dr LOY: We regulate the airborne discharges from the Lucas Heights site, which means that we impose limits. Some of these are notification limits for individual radionuclides and individual stacks, such that if they are exceeded we have to be notified and the reason explained. But overall there is a limit on the discharges based upon a maximum possible dose. In terms of water-borne discharges, the regulatory instrument happens to be an agreement between ANSTO and Sydney Water. However, we have reviewed that and accept it, and that is based ultimately upon the total radioactivity in the water at the Cronulla sewage treatment plant being within WHO drinking water guidelines.

CHAIR: But what checks do you make?

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Dr LOY: ANSTO carries out measurements, and from time to time we take independent samples and measure them to see that ANSTO's measurements are accurate.

Mr IAN COHEN: How pernicious is the water-borne waste? How long lasting is it? Can you comment on the waste in terms of the problems? I think Cronulla Council perceives that it is unable to reuse that waste water due to the fact that there is radioactive contaminant that could build up on playing fields or something like that?

Dr LOY: No, the discharge wastes are short lived, and the WHO drinking water guidelines are based upon a person receiving a small dose if they drank two litres of that water a day. So when you are looking at reuse of the water in some fashion for cooling towers or for watering golf courses or whatever, it is very difficult to see how anyone could receive virtually even any measurable dose of radiation from that source.

Mr IAN COHEN: Earlier you said that if there was a major disaster like an aircraft crash on the facility, other than the loss of life or the aircraft you did not perceive of a potential disaster with leaks from the facility itself.

Dr LOY: As I said, what I did was assume away all the things that would work towards limiting a release. Even in that case, yes, people would be getting doses such that you may seek to have them evacuated or have them receive iodine, et cetera, but you would not be getting people directly dying from radiation exposure. The total radiation risk is well below what you would be dealing with in terms of the rest of the disaster.

Mr IAN COHEN: So we could not possibly see a Chernobyl or a similar situation there?

Dr LOY: No.

Mr IAN COHEN: There is not enough material on site to warrant any problem?

Dr LOY: Basically, that is right, yes.

Mr McGRANE: You keep saying, and your department has said, that there are well-established procedures in place in case of an emergency, et cetera. All the reports and all the submissions we have been getting from local government and from other areas are saying that there is a lack of communication from your organisation and the Commonwealth Government to the people in local government and people in the streets, as well as government agencies. You keep saying "well-established procedures" but you are not communicating that to the people out there who are asking.

Dr LOY: I am not sure that I actually said that. I think the chairman quoted from the Department of Education, Science and Training submission. There are emergency arrangements in place to deal with the various matters that arise, including the transportation of radioactive material. When the Commonwealth is involved it is my job to see that those arrangements are in place and that they offer safety. That is where I believe my job focuses on, and provided that I can be satisfied with that, then that would be a basis for issuing licences.

Mr McGRANE: What about information to the councils? We have heard the council here today and other councils, and we have the Local Government Association saying the same thing. They are also claiming that your standards fall way short of standards for a hazard industry in New South Wales which they have some control over.

Dr LOY: I have not seen submissions to that effect and I would be glad to do so. No doubt councils will make those in relation to the application for the licences for the national waste repository and I will consider them. As I am trying to say all along here, I am in the

process of making an assessment and making decisions about the national waste repository, and part of that decision making will be about the transport issues. I look forward to receiving public submissions about that issue as well as any others which I must take into account in my decision making.

Mr IAN COHEN: You mentioned assuringly that this facility cannot have the same sort of impact as some of the major accidents that we have seen overseas. I get the impression that the levels of radioactive material are not that high. However, was it not the case that some 14,000 terabecquerels of radioactivity was in the last transport? Is it not something like the equivalent of 100 times more radioactivity than it was at Three Mile Island for example? We are dealing with quite high levels of radioactivity that could have major implications. I am a bit concerned that you have downplayed the potential danger.

Dr LOY: No. I answered a specific question when you asked about Chernobyl.

Mr IAN COHEN: You said yourself, you volunteered the information, in terms of an aircraft crash or something of major consequence, and I am simply trying to establish how big the disaster something like that could be and you played that down. I understand—

Dr LOY: I am not playing it down.

Mr IAN COHEN: The radioactivity that was transported last time is something like 100 times more radioactive than at Three Mile Island.

Dr LOY: I am not sure what you mean by "100 times more radioactive than at Three Mile Island". Do you mean the releases from Three Mile Island?

Mr IAN COHEN: Yes.

Dr LOY: There were very small releases from Three Mile Island so that is probably not surprising. Spent fuel is highly hazardous material—I would never say otherwise—and it has to be handled in a very strict and careful method. It is highly hazardous material inherently, no question. But if you then take a different sort of analysis of trying to say, "What is the worst kind of spread of radioactivity that you could get from the worst imaginable disaster at Lucas Heights", then you are looking at things of many orders of magnitude below a Chernobyl accident.

Mr IAN COHEN: Looking at the relatively low levels of radioactivity being transported in terms of the long trip going to a South Australian repository, your organisation is in charge of the quality control of the packaging, et cetera. Am I correct that you are oversighting the containing of those materials so that they are in a safe manner in the case of accident for example?

Dr LOY: You are taking it a step ahead in the sense that I have not issued a licence for there to be a repository to have anything transported to.

Mr IAN COHEN: That is reassuring. In the event of there being such transport, in a sense your organisation is the watchdog on the quality of packaging.

Dr LOY: We would be the regulator of it, yes, and that would be laid out in the licence conditions for transport.

Mr IAN COHEN: I have heard many statements that containers are tested, drop tested and the like. What if there were to be a significant fire following a truck overturning. A fuel tank is a bomb, in a sense. Can an assurance be given that the containers can survive a heat test when a truck burns?

Dr LOY: No, I think I need to take a step back and say we are talking about a range of material here. If you are simply looking at the transport to the proposed waste repository, you are certainly not looking at containers that have been dropped from great heights or had locomotives run into them, and so on. It is a lower level of containment because the material itself does not require higher containment. But, I would emphasise, that what you are dealing with is material that has been conditioned for waste disposal and, therefore, the likelihood of it being dispersed through a fire is, I think, small. But again, I need to qualify that by saying that that is something I will have to look at in my process of examination of the application. I am, in one sense, talking off the top of my head, but that is based on my a priori knowledge that this stuff is not likely to be dispersed through fire. That is something that has to be examined in the context of the assessment of the application.

Ms JUDGE: I am reading from an article dated Tuesday 23 September about the nuclear waste transit city, stating that spent fuel rods will travel from Lucas Heights to Port Botany. I am always amused by the term "spent fuel rods". Do you define this as nuclear waste?

Dr LOY: No, it is spent fuel.

Ms JUDGE: What do you mean by that?

Dr LOY: It is fuel that has been used in a reactor and is not able to be used effectively any more. It contains the original fuel as well as higher quantities of fission products and it is those fission products in particular that make it highly radioactive and, therefore, hazardous. The purpose of the next stage in its life is for it to be reprocessed into a waste form that is much more manageable, and that is the aim of it being transported to Port Botany and, hence, to France.

Ms JUDGE: It is a rod, a container, and in that container there is some sort of fluid that emits radiation, is that what you are saying?

Dr LOY: Yes. The fuel assemblies for the HIFAR reactor, they take them out of the reactor, put them in cooling ponds for a period of time to physically keep them cool and to allow for decay of many of the radioactive products and, yes, basically nuclear fuel is two plates of aluminium with what they call a meat of chemical uranium compound plus lots of fission products.

Ms JUDGE: I am not a scientist or a technician, but you could term this as waste radioactive fuel?

Dr LOY: People spend a lot of time debating what to call things. I honestly get a little bit impatient with it because, from my point of view, you look at the product and you look at the hazard of the particular material and you take measures to deal with that hazard. Whether you choose to call it spent fuel, high-level waste or whatever I do not find particularly enlightening. I understand what spent fuel is and I understand the measures you need to take to transport it and deal with it safely, so what other name you might like to call it does not matter.

Ms JUDGE: I like to call a spade a spade, but I have noticed, particularly in our modern contemporary society the words are very powerful and they can actually be used to give a totally different impression depending on how you use those words, for instance, advertising these days. Terminology is very important. If you say, "spent", people think that is not something they need worry about. We have a throwaway society and you just throw it away. If you say, "radioactive nuclear fuel is going to be putting containers and shipped", that would ring alarm bells for many people. It might seem inconsequential to you but I think terminology is very important. How many fuel rods are going out?

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Dr LOY: I would have to take that question on notice. I am not sure. There are three large casks, but what it all adds up to, I do not know.

Ms JUDGE: There could be 10, 20, 40 or 50 rods in those casks, full of what? I am just trying to get a grip on what we are talking about.

Dr LOY: As I said, a spent fuel rod is a very highly radioactive material, so the cask in which it is transported has a very large amount of shielding to shield the environment from that radioactivity and as well, that then acts as a protector against accidents and the like, so it is a serious product of high potential hazard but it is dealt with, and it must be dealt with, in a very significant and highly shielded way.

CHAIR: I will go down a level, from high-level waste to the proposed intermediate level waste. In terms of the proposals to package it and transport it according to the code, can you give an oversight on how it would be packaged and transported in terms of the code?

Dr LOY: It is a little bit more difficult for me to do that because I am not entirely sure of the full nature and range of what will be dealt with in that store. There will be a number of different sorts of product. If you are looking at the spent fuel that has been sent to France, the product will be returned as a glass, a vitreous material in a stainless steel container that is also available for transport of that material. There is some spent material that was sent to the United Kingdom some years ago. That will come back in a rather large block of concrete. That is also able to be transported. Then there are other kinds of intermediate level waste in Australia.

Mr IAN COHEN: What are you going to do with the block of concrete?

Dr LOY: That will go in the store.

Mr IAN COHEN: Aboveground or below ground?

Dr LOY: The proposal for the store is just that; it is a store. I think that needs to be borne in mind as well, that for long-lived material, including spent fuel—the product from the processing of the spent fuel—a final disposal route has not been determined in Australia and the store is a store.

CHAIR: Would it be transported by road, for example? I am trying to understand what you would regard as world's best practice.

Dr LOY: The code ultimately relies upon the packaging as the ultimate protection. I think the code says that irrespective of how you transport it, whether it is by road, rail or air, "here is how you have got to package it", and when you have packaged it that way, it can be safely transported, whether you throw it on the back of a truck or whether you use a train. In that sense the code is about the packaging, not about the mode of transport. There was some tweaking in relation to air transport but basically that is the case. The decision about the mode of transport for the intermediate level waste going to the store is one that the Department of Education, Training and Science will have to take into account as it prepares its proposals.

CHAIR: ANSTO advised the Committee during hearings last week with regard to the repository proposal that, "a transport plan has to be prepared and it has to meet the requirements for the shipment of radioactive material". Apropos our earlier discussion, could you please explain what would be in such a plan? Would New South Wales agencies be involved in the development of the plan and at what point would the plan be developed?

Dr LOY: Are you referring to transport to the proposed repository?

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CHAIR: I am talking about low-level waste at this stage because I know that no decision has been made in relation to the intermediate level waste. In relation to the transport plan, what sort of things would be in the plan? What New South Wales government agencies would be involved in the development of the plan and at what stage of these proceedings would it be developed?

Dr LOY: Again, I think I will bounce around it a little bit by saying that these are matters that will be part of my consideration for the licensing process itself. Clearly, the basics for a transport plan are found in the transport code in terms of the packaging of the material, the labelling and how many canisters you might put on a truck, and so forth. All of that basic detail will be found in the transport code. In terms, then, of the emergency arrangements to the extent that they are needed, they do need to be discussed and arranged with the State authorities. I would envisage—and in a sense I am just giving an opinion prior to making decisions on the repository—a kind of overall licence in relation to transport that sets out the generic features arising from the code and involving emergency arrangements and so forth and then each specific transport would be the subject of some process.

CHAIR: As you indicated earlier, you would expect that the Fire Brigades and the police would be the key agencies involved and I assume that the Environment Protection Authority would be involved as well. Leaving aside those, would you have a role in making recommendations in relation to funding the additional services that might be required?

Dr LOY: I do not think I have a direct role. My role would be saying what has to happen and putting that as a condition of the licence for it to happen and then that would be a matter of negotiation between the Commonwealth and the States.

CHAIR: If the Committee wished to look at what you would regard as world's best practice in relation to the transport of nuclear waste, could you advise which country is doing it well at the moment?

Dr LOY: Again we are talking about low-level waste?

CHAIR: At this stage I am talking about low level, but let us throw in the intermediate level because that is also of concern to the Committee.

Dr LOY: Two weeks ago I was in Utah in the United States where there is a very large low-level waste repository operated by a private company that struck me as being close to state-of-the-art in this field. The trouble with going anywhere in the United States is that it is so big, and this place is handling something like 14,000 shipments a year. It dwarfs anything that we are talking about by an order of magnitude.

Mr IAN COHEN: Aboveground storage, or shallow burial?

Dr LOY: It is sort of half and half. They dig down a certain distance and lay down a clay bottom and then structure the waste so that it is up to 40 feet aboveground when it is covered and their particular focus is on the coverage.

CHAIR: Are you satisfied that the transport arrangements to this place are in accordance with world's best practice?

Dr LOY: Certainly in terms of transport they would be up there, yes.

Mr McGRANE: By road or by train?

Dr LOY: Both. They have the great advantage of being quite close to the transcontinental railway in the United States. It is certainly possible for them to get quite a lot of the material in by rail, but they also get something like 20 or 30 per cent in by truck. Both the United Kingdom and France, for example, are good at transport. The waste

repositories are not as comparable because they are dealing with wet climate rather than arid ones for the repositories. They are built on pretty different principles. But they would be up there in terms of transport. A number of those countries handle the issue well, but most of them are different orders of magnitude for us because they are dealing with nuclear power programs.

CHAIR: If you have any material that you could make available to the Committee, particularly about their codes and their emergency services, that would be extremely helpful.

Dr LOY: Yes, I am sure we have and I am sure we could do that. As I said, the Australian code is not something we made up. It is very much a copy of the international code. International transport is relevant.

CHAIR: A particular concern is in a Federal structure similar to the US, as you indicated.

Dr LOY: I will give some more thought to other examples that I might be able to bring to your attention.

Mr IAN COHEN: You are aware of the preliminary safety analysis report [PSAR]?

Dr LOY: Yes.

Mr IAN COHEN: I understand that scientists from the University of Western Sydney were not allowed to have a copy of the PSAR. Could you comment on that?

Dr LOY: No. I have no knowledge of that. The PSAR was the basis for ANSTO's application for a construction licence for the replacement reactor. We certainly made it available. It is a 16-volume document. It is not a small piece of writing. We certainly made it available at the time to major community groups. It was in libraries and available at our offices.

Mr IAN COHEN: So far as you are concerned it is still publicly available?

Dr LOY: Yes. The reservation I put on that is that the PSAR was at a point of time. It is now under development into what, imaginatively, is then called the final safety analysis report [FSAR]. In that sense it is a moving target. But the PSAR at the time of the application is still around. I am not entirely sure of its actual physical availability, but it is there. It was part of the public record.

Mr IAN COHEN: Could any of the waste destined for the repository or the store be utilised effectively as a dirty bomb?

Dr LOY: I do not believe so insofar as you would be dealing with waste that had been prepared, conditioned, for placement in the repository or use in the store. As I said, if you are looking to get sources for a dirty bomb you are more likely to look at sources that are in use or that have been forgotten about or stored in somebody's bottom cupboard. Once they are, if you like, put in a drum with concrete poured over them, they are much less available for malevolent use of that kind.

CHAIR: We really appreciate the opportunity of being able to speak to you today. We look forward to reading through the transcript and getting a better understanding of the whole industry.

Dr LOY: Any other assistance we can render to you we would be glad to do so.

(The witness retired.)

DARRYL JOHN SNOW, President Fire Brigade Employees Union, 267 Sussex Street, Sydney, affirmed and examined:

CHAIR: We have received a submission from your organisation. Is it your wish that the submission be included as part of your sworn evidence?

Mr SNOW: It is.

CHAIR: Do you wish to briefly add to or elaborate upon your submission?

Mr SNOW: I would, to some extent. I was going to add some other information, but the priority has gone down a little because, reflecting on Dr Loy's evidence, it might be more important that I comment upon that rather than offer something that I consider to be of less priority. I will give you the background. Obviously, I am here to represent the interests of firefighters who, by their profession, exist to protect the public. The Committee should note, and I am sure some members of the Committee would be well aware, that the Fire Brigade Employees Union and the New South Wales Fire Brigades have a history of agreeing on nothing. In this we have shown that when it comes to operational matters there is confluence in our opinions. To me it borders on amusement when I look at their submission, which reflects ours, or ours reflects theirs. But I can assure you that there certainly was no working together on it. That is something the Committee should note, because both the submissions reflect the opinion at the organisational level and it is the opinion also of the membership of the Fire Brigade Employees Union.

I am concerned, after listening to Dr Loy's evidence, because this union has previously placed submissions on the record to ARPANSA on the draft intervention levels when ARPANSA proposed certain measures that would be taken by emergency services in the event of a radiological release of some kind. I responded to those draft intervention guidelines absolutely horrified that one of our agencies, and we all have to mesh together in these circumstances, had such little understanding of how an incident involving a radiological release would be combated in one way or another. I described it at the time in the submission in colourful words as breathtakingly inept. ARPANSA's evidence given this morning indicates to me that it remains breathtakingly inept at understanding the role of emergency services in an incident dealing with the release of a radiological substance. I am not a bureaucrat firefighter, I am a firefighter of 23 years standing. I am also one of the specialist hazardous materials [HAZMAT] technicians referred to by Dr Loy. If we have an incident you may well see me there. Therefore, I am entitled to comment on some of the observations he made about our preparedness to deal with low-level, intermediate-level incidents or whatever.

Dr Loy spoke of the ability of ARPANSA to issue licences, which scared the hell out of me because it is already issuing licences to transport spent fuel rods. I understood from his evidence that in issuing that licence he was supposed to consider the capability of emergency services to deal with that along to transport route, not just the packaging, but how we deal with it. I do not know how he has issued the licence for spent fuel rods because we have no ability whatsoever to deal with an accident involving something that, on his admission, is a serious product of a very highly radioactive material. Today the Committee is inquiring into low level. I can assure you that, generally, we are not informed of the movement of high level in a highly urbanised area. There are three ways that we can deal in any manner with a radioactive release, and not much of it involves getting near it. It is really about time, distance and shielding. We really need to minimise the release in the first place where that is possible. We have to create maximum distance between where the release occurs and where the public are. When we have created the maximum distance we then have to shield the public.

I have a fair understanding of the roads around the Sutherland Shire and way out to Port Botany. If you can create distance and shielding between a substance like that and such a highly urbanised area then I wonder how you would have issued the licence the first place. I

am very concerned about ARPANSA's role in issuing the licence for this or any other repository. Do not accept my evidence, go back and have a look at the draft intervention guidelines proposed by ARPANSA about how emergency service would deal with a radiological release. It is clear to me that it is completely at odds with how we would deal with it. It is completely at odds with an understanding that New South Wales Fire Brigades has its own responsibilities under occupational health and safety and how it deals with our employees. Not even our mean, mongrel bosses would propose what ARPANSA proposes for firefighters to be involved in.

Dr Loy indicated that the low-level waste would not be affected in response to questions about an accident with a petrol tanker. He said that it was in a drum, but it still burns. Everything burns. There is no doubt that everything can burn. There is not one substance on this earth that cannot burn and, therefore, cannot be released. I understand that low-level waste will be packed into solid form. It, too, can burn. I understand that the man is a scientist, but it is obvious that he does not understand emergency services or he has not had a whole lot of experience with it. He demonstrated that by saying that well-established procedures were in place and which, I think, one member of the Committee observed means picking up the phone. I do not think he understands what happens past the process.

Other than that, I would prefer it to leave it to questions. I note that the radiation consequences analysis has not been released. That is a fundamental issue that we, as an emergency service, need to understand. You cannot say it does not cause any problems when we do not know whether it does. You cannot just keep on giving us the soothing assurance that it is okay. There is a report that tells us. Let our members assess it and assess whether we can factor that into our emergency response planning. If ARPANSA scared me before, I am absolutely terrified now.

Mr IAN COHEN: I appreciate that you are part of the HAZMAT unit, but in relation to protections like Geiger counters and equipment with which you are issued, can you describe to the Committee how much that equipment would, for example, protect against radiation?

Mr SNOW: The equipment does not protect against radiation; it monitors the levels of it. We have no equipment that protects us from radiation gamma rays and the ability to penetrate any suit we have. There is no protection whatsoever that we carry that allows us to deal with that. It can deal with keeping out vapour and dust and chemical substances. We have charcoal suits that allow us to deal with biological substances to some degree but we do not have anything that allows us to deal with radiological substances. That is why principally our role is to create as much distance even between ourselves and the actual source of the substance, rather than the misguided impression that people have that fireys just walk in and pick up the stuff and save the day.

It simply will not occur that way with radiological substances. We have no protection more than you have in order to deal with it. We have meters that we can work out how much any particular member absorbs. We have radiation monitoring equipment which will give us an indication of the levels. There is a bit of logic associated with that. The level tends to get higher the closer you get. It does not require a fantastic understanding. All it does is indicate where those levels are safe or not safe, under our understanding of what constitutes a safe level.

Mr IAN COHEN: Given the debate on what is a safe level, are you assured that your members have appropriate information on what is a safe level? Whose guidelines are you relying on? Is it ARPANSA?

Mr SNOW: No, I do not. I refer to the Minister's statement. Being involved very much on the periphery on nuclear issues, I have learned what a lot of people have learnt that information is scant, and often changes. Outside of those who are intimately involved in the industry, I do not have faith in the information that we are given in terms of what are safe

levels. I note those safe levels have changed from time to time. To that end, taking the extreme angle, I say that I prefer safety over anything. I do not think there is a safe level.

Mr IAN COHEN: In terms of the transport of lower-level material westward along a significant distance, are you comfortable with the level of equipment that is available along that route? Does it need upgrading? Do you need extra training and equipment? Where is that coming from? How does your membership get the opportunity to deal with potentials?

Mr SNOW: In my written submission I basically contemplated all of the routes that may be taken. I think, particularly option one and option two, from Sydney to repository, it is safe to assume that there is a possibility that they will both be used at some stage. Perhaps due to one reason or another they may use that route as an alternate route. Outside of Greenacre in Sydney, Shellharbour in the Illawarra and Newcastle we do not have the equipment capable of monitoring the effects of a radiological release. So for the entirety of the route, once it left the greater Sydney area, would need to have very substantial upgrades in staffing, equipment and training.

I would say wouldn't I, being a trade union official. We love jobs. We would like to have them everywhere but the reality is that that is not the angle we are taking here. We are saying at an operational level. I might get shot when I get back at the office. I could say yes, we need hundreds and hundreds of people and we would then have more membership. The real perspective I take on this one is from an operational level that that would be required. I cannot really see other than that transportation why such high levels of equipment and training would need to be maintained in so many centres. I agree that areas like Dubbo will develop that capability within the next five years because of the growing size of the area but all the towns in between would never need that capability but for this proposal.

CHAIR: What are your comments on an alternative proposal to have a specialist response vehicle escort waste shipments? According to the submission of NSW Fire Brigades this occurred in 1997 when a HAZMAT team escorted shipments of waste from ANSTO to Woomera. Does that proposal have any merit? Is it a cost effective proposal? Does it have a downside?

Mr SNOW: The real downside is that no matter who you put there, the key issue in dealing with any potential accident, rather than have our members there, is to understand that you need to create distance. You can have a vehicle riding with it if you like, and it can follow it all the way, but wherever it comes a cropper somebody will be too close one way or another. If a vehicle is with it will it be too close immediately? Realistically the only thing that a response vehicle could do under that circumstance would be to withdraw. It throws the whole thing into focus as to why we have one trouble with it. You really need one coming from that way one coming from the other way and then stop. You do not want one right next to it because it almost defeats the purpose of having one. In an operational sense you are better off having someone coming from towns either side, or wherever the incident occurs, and meet at a safe distance. As you enter you will commence monitoring and then you will reach a level where you will stop. If there is a radiological release you will always reach a level where you will stop. It is not good to have a vehicle right next to it.

Mr IAN COHEN: We are dealing with a situation like at Chernobyl where fireys had to sacrifice themselves.

Mr SNOW: I believe there is an alternative. For that reason we do not just have a philosophical or social issue-based opposition to nuclear energy in any way, shape or form. Ultimately we have to deal with it. As far as my knowledge and education is concerned I know we cannot deal with it. It is not a matter of you saying we say that because we are left wing union. Realistically we cannot deal with it in any way shape or form. We take the view that not only should it not be transported and not only should it not be stored on site, realistically it should not be created. For everything else we do, we have a response plan that allows us effectively, with a degree of confidence, to deal with it. This is perhaps the only substance

that we really cannot deal with. So I do not understand why you would want to liberate it from one spot and then start trickling it out across the State.

CHAIR: If a model were proposed, given what you have said—and I acknowledge you are a left wing union but the NSW Fire Brigades backs up a lot of what you are saying—would you agree to take away a model and ask your membership to think about what would be preferable? We know about all these problems in relation to properly resourcing along whatever route it is. You have indicated it is not an issue because there is nothing you could really do anyway. Rather than ask you to talk about cost benefits, what does your membership feel in terms of any other benefits in relation to that model? Would you take that away and come back to us with some other thoughts.

Mr SNOW: Yes.

Mr IAN COHEN: It would be valuable if the Committee had your thoughts on the in situ storage on-site at Lucas Heights? As an emergency service representative what do you consider would be safe or the relatively satisfactory safe storage on-site?

Mr SNOW: I also acknowledge that obviously if they were going to build another research reactor it would not be built in Sydney. I keep pointing out this critical issue of distance in a radiological release. They built it in the wrong place in the first place but it does have a 1.6 kilometre buffer zone around it which gives us some chance of perhaps controlling a release, I am not sure. I can assure you of one thing, when you have a buffer zone there is no-one in it so the intensity as it dissipates becomes less of a problem. To that end, on-site storage is preferable because even in moving waste you cannot put a 1.6 kilometre buffer zone around it anywhere. So it has got to be preferable to keep it at least where it is, as unsatisfactory as it may be, because the moment you move it you cannot put 1.6 kilometres around it.

CHAIR: Greenpeace characterised this last week when it said any clean-up of low level nuclear waste has been described to them by ARPANSA—and ANSTO told us—would be simply a shovel and wheelbarrow job where if it fell out they would bring some people in to clean it up. Greenpeace characterised that as a shovel and wheelbarrow job.

Mr SNOW: Whose shovel and whose wheelbarrow?

CHAIR: Do you have any comments?

Mr SNOW: It is a bit like how did you say they are wrong when they will not tell us what the potential danger of that waste is? The radiological consequences of it are unknown, and they will not tell us. I do not know how long the handle is on the shovel nor do I know whether you need a fully encased wheelbarrow. We are not told. It is very hard and ill-advised for me to make a comment on that. I will add my thoughts of a political process: There is no doubt they are introducing the low level first, and then they will say "we have had no accident for a couple of years, safe as houses, do not worry, here comes the intermediate level".

They will point to what they understand to be the custom and practice—they have had no accidents! It may well be that they have not had an accident in a chicken truck for the same period, but no-one else would point it out, other than them. We have to make sure that we understand that what this Committee is inquiring into, and I think the Chair made that observation, is that it is not necessarily only low level. We need to also fully understand that from the point of view of my members that they are also contemplating intermediate level which will not be a wheelbarrow and a shovel job, that is for certain.

CHAIR: It has been put to us that there are many thousands of movements of radio isotopes for medical and industrial purposes around New South Wales every month. Do you have any concerns about the transport safety of these radioactive materials? For instance, I note the media reports earlier in the week that the HAZMAT people were called out to a

school at Broadmeadow. The response to an issue of radiation was to call in the Fire Brigades, and that school radiation scare led to four people being hospitalised, according to the media. We were told, "What are you worried about? Medical and industrial purpose radio isotopes are transported all the time around New South Wales. It is not a problem." What is your comment on that?

Mr SNOW: I think the question there is: What level of radiation are they capable of emitting? We do not know, and we do not know what level of radiation, even though I note Dr Loy's comments about the spent fuel rods—really high! It is the same thing, is it not? We do medical isotopes every day. Apparently they do spent fuel rods too. I would rather concentrate on the spent fuel rods and say, " They are really high. What are you doing about them?" You pointed to it as well—it is language. It is about how you approach something and whether the soothing dulcet tones of one expert or another keeps us all happy or some of us happy. We have had incidents involving breach of packaging in medical isotopes. It has happened on occasions at Sydney airport. We have not had releases as such but we have had breach of packaging on some occasions at the airport and at other locations. I think the one you referred to the other day up in Newcastle did not involve a breach of packaging. I think it still remained in tact in its container.

Mr IAN COHEN: Presumably it, what, fell off a vehicle?

Mr SNOW: Yes. I do not think it was identified which vehicle it fell from either.

Mr IAN COHEN: So that could well be something not medical but an industrial use for checking cracks on equipment or something like that.

Mr SNOW: Yes. I think it was used for calibrating equipment.

Mr McGRANE: So accidents could happen and not be reported.

Mr SNOW: Indeed, yes. I think that is a grand possibility. It is a bit like discovering Japanese hand grenades 20 years later. We do not know where anything is at the moment.

CHAIR: Are you aware of any legislative requirement to report these matters? I am interested in getting a handle on statistics.

Mr SNOW: In terms of holding that substance?

CHAIR: In terms of accidents, in terms of issues in which there is a breach.

Mr SNOW: Storage issues—I am not sure whether it is a legislative responsibility. I know there is certainly a program that firefighters generally go through or we identify. We have a SCIDS acronym—stored chemical incident database, which also includes any possible understanding we have of the location of substances of the radioactive nature or biological nature and all of that. That is to assist firefighters when they go to a particular building that they have an awareness that such a substance exists so that they can take whatever remedial measures they need to or evasive measures they might need. It may well be stored fuels. It may well be biological substances when liberated by fire or a combination of those things. We need to be aware of that so that we can at least take some measures to prevent.

CHAIR: There are no statistics that you know of?

Mr SNOW: A requirement?

CHAIR: A requirement.

Mr SNOW: No. There is a requirement for placarding and labelling. That is a legislative requirement, that is for sure. But as far as the companies or organisations having

to notify a central authority of the existence of something, I will not say with 100 per cent certainty but I do know that WorkCover requires organisations of a certain size to notify of certain substances. I am not quite sure if any radioactivity or whether they cut it off at a level.

CHAIR: We may need to contact at the very least WorkCover to get some sort of indication.

Ms JUDGE: Perhaps the transportation of dangerous goods could be under the Hazardous Goods Act. I think that legislation was just amended.

CHAIR: No-one else seems to keep any statistics. We were sort of hoping the union did.

Mr IAN COHEN: Do your members, particularly HAZMAT, have on them or as part of their kit stabilised iodine tablets in case of dealing with—

Mr SNOW: No, we do not, and we have made representations in different forms on that. The union, as a policy position rather than an operational position, has taken the decision that we will not distribute stable iodine mainly because we hope to place pressure on the appropriate authorities to pre-distribute stable iodine because of the necessity to ingest the tablet within the first hour. That means that we would be putting our members into a situation that could be avoided. If it was pre-distributed people could stay in shelter and take the stable iodine and then offer that protection, which the Committee may be aware must be taken in the first hour to be in any way effective.

If there is a release of some sort we would much prefer that the people had the stable iodine themselves and could self administer, rather than rely on responding firefighters, ambulance officers or whatever to then respond into that area to provide something that could have been provided in the first place. We have taken the policy position of advising that we will not distribute post-incident stable iodine tablets because in our opinion the only reason they do not pre-distribute them is because they do not want to cause alarm, and they do not want to cause alarm because they do not want to admit that something might happen, and they do not want to admit that something might happen but on the other hand they are briefing emergency services on what to do when it happens. I think they need to cut their own cloth and determine whether we will take any remedial measures prior to an incident or whether we will just leave the whole thing until it all goes belly up, in which case I think, from the Committee's point of view, that wherever you can drive this argument it needs to be driven that in terms of emergency response it is essential that it is pre-distributed.

Even if at best we lifted our ban tomorrow and decided that we would do that, by the time we get there it will be ineffective. It is just in that time it will be chaotic, and by the time we got that to every person who was supposed to stay in shelter—they are not supposed to come out in the streets and say, "Hey, fireys, where is my stable iodine tablet?" They are supposed to stay in the shelter and to self administer stable iodine. We would have to knock on their door, find out whether they are there. I do not know who came up with this idea that they would not pre-distribute it, especially around Lucas Heights. But it may well be, depending on the levels of the waste carried, that you would want to pre-distribute stable iodine along the entire transport route. It depends on whether we were not really interested in protecting the health and interests of the public or whether we were interested in making sure that no-one got scared by the fact that we actually have an active nuclear industry going on in this country.

Mr IAN COHEN: I appreciate that but do your own personnel on your firefighting equipment have immediate access to stable iodine tablets? Are they part of your equipment regime?

Mr SNOW: New South Wales Health actually holds all the stocks of it at this stage.

Mr IAN COHEN: You do not have it on, say, a HAZMAT truck?

Mr SNOW: No.

Ms JUDGE: Do you think it would be a good idea to administer the iodine tablets along the proposed route that will be taken in a couple of weeks—we are not quite sure when or where or how many of these so-called fuel rods there will be—as per the article I read earlier, that is taking these fuel rods from around Lucas Heights down to be loaded on the ship at Botany? Do you think the workers who will load those on to the ship should also be given iodine? Do you think that should happen?

Mr SNOW: The answer is yes, and my opinion is probably joined by Dr Loy's when we are talking about the levels of potential radioactive material that may well be released in that particular instance. It is not only prudent; it is irresponsible not to.

Ms JUDGE: If those tablets are not administered along the route, who do you think should supply them?

Mr SNOW: In terms of administering them?

Ms JUDGE: Who should pay for them and provide them and administer them? Whose responsibility do you think that should be?

Mr SNOW: The fact that it is a Federal or Commonwealth responsibility, ANSTO and those who created the problem should foot the bill. I have no doubt about that. I think the issue more broadly needs to be understood that it should not fall on the taxpayers of New South Wales who are just unfortunate enough to have ANSTO within its borders.

Ms JUDGE: I presume that police officers involved in this operation as well as the people who work on the docks, everyone involved, should have those available to them.

Mr SNOW: I would go further and say the residents along the route as well. That is what we are talking about here. Emergency services personnel or anyone handling or involved in the process most certainly should but I think to me it is profoundly obvious that when you are dealing with a substance of that severity it should also be spread in a manner that will prevent whatever possible effect may happen.

Mr IAN COHEN: I appreciate your long-term active service as a firefighter and involvement with HAZMAT. Have you had experience of a tanker accident or incident that was serious enough in your opinion to jeopardise the containers that these materials are moved in?

Mr SNOW: Yes. I will not claim to have a complete understanding of how robust or otherwise these particular containers are but I do know who—perhaps the other issue associated with that is the intentional piercing of those containers, which in that sense scares me. But I have seen very high impact tanker fires or liquid petroleum gas explosions which have definitely incinerated absolutely everything within that general area. I think in a case of nuclear transport—and I know they said they have not had many accidents—I do not think that excuses them in any way because an accident does not say, "Christ, that stuff has got radioactive material on it. I will not go there. I will just duck across to the milk truck." There is absolutely no guarantee that you will prevent an accident.

Most of our members would be aware, and now the front line of civil defence subsequent to some would say September 11, some would say prior to that, we must now contemplate scenarios very much from the hazardous materials aspect. There will be intentional piercings and intentional damage made to substances while in transit or elsewhere. I think I put it in my submission that the environmental impact statement just refused to consider that or ignored that again. On one hand we cannot be absolutely concerned or alert, not alarmed. We cannot, especially when we are not even going to be

alerted, so in the case of the Commonwealth Government we have only one path left and that is to be alarmed.

But they will not alert us to the transportation of this substance and they will not admit the possibility of terrorism impacting on that when it is absolutely logical. It is just a moment of serendipity for a potential terrorist to say, "Christ, they got that stuff out of Lucas Heights. We can get to it on the way." It is not even a matter of whether the substance is dangerous or not. Terrorism causes alarm. That is the nature of it. It is just meant to scare people. You can say you have a low-level truck and if you are a terrorist why would you not have a punt at that anyway and scare the Christ out of everybody. No-one knows how radioactive that substance is. When they tell us I will tell you then.

Ms JUDGE: It is like holding a syringe and saying it contains infected blood?

Mr SNOW: Yes.

CHAIR: The Committee has been advised on a number of occasions that the transport of low-level nuclear waste is safer than the transport of petrol or other volatile or toxic substances, would you agree?

Mr SNOW: No, and the reason I would not agree is that I have had involvement with liquid petroleum [LP] gas explosions and petrol explosions during transport. The good thing with LP gas is that it goes away. You only need a little bit of air between it and off she goes. You just have to stop the ignition source whilst the concentrations are high. But in terms of contamination using other hazardous materials—and I think someone referred to the life of the substance—is vital, especially when you consider dealing with watercourses and matters like that, the possibilities are unthinkable and endless about what sort of damage can be caused by an accident involving the release of a radiological substance, because other stuff does dissipate and we can dam it. Even in the case of a liquid spill, we can take measures to dam it and get close to it.

We can block off the waterways, we can actually use booms, earth mounds, all sorts of stuff to control it, but in the case of a radiological release, you cannot control it, even if they say it may well be transported in solid form. If that is breached and it is involved in the fire, it will not stay in solid form so there is no way of necessarily containing it after that. I would not agree at all that it is in any way comparable to liquid petroleum gas, petroleum or any other liquid product or vaporous product.

CHAIR: When we first began you alluded to this question and you have just answered it, but I want to make it specific. ANSTO advised the Committee recently that there was no concern about low-level radiation, even in a collision where there is "an associated fireball" because "most radioactive material is not flammable so it will not burn". As it will be in cement or steel "it will just sit there during the fire and once the fire is out, you can come and recover it." What is your response to that?

Mr SNOW: Concrete burns, it spalls, it expands and it explodes. That is what happens to it if it is subject to fire for long enough. You can put it in concrete and you can have steel mesh holding the whole thing together, but when you apply heat, the granules grow and things start spalling, just throwing out bits of itself everywhere until, in the end, that concrete or the integrity of the structure that encases it is broken. Steel burns as well. It does not surprise many firefighters but steel burns. Anything burns, distorts, warps, breaks and spalls. Maybe that is why we have a fascination with it, but in our society nothing is safe from fire. There is nothing in this world that is safe from fire.

Ms JUDGE: Point zero is a good example. It is just dust.

Mr SNOW: Yes.

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CHAIR: We have asked you to think about a couple of matters and you will be given a copy of the transcript to remind you. On behalf of the Committee I thank you for appearing today. Your evidence has been very thought provoking and we deeply appreciate you attending today.

(Luncheon adjournment)

JEANETTE MARIE CARROLL, Member of the Blue Mountains Nuclear Free Zone Group, 8 Station Street, Katoomba, and

DIANNE CHRISTINE JACOBUS, Member of the Blue Mountains Nuclear Free Zone Group, 8 Station Street, Katoomba, and

MARK ALAN LUTHERBORROW, Member of the Blue Mountains Nuclear Free Zone Group, 8 Station Street, Katoomba, all affirmed and examined:

CHAIR: We have received a submission from you. Is it your wish that the submission be counted as part of your sworn evidence?

Ms CARROLL: Yes.

CHAIR: Does each of you wish to make an opening statement?

Ms JACOBUS: Thank you for the opportunity to speak to this inquiry. Ms Carol, Mr Lutherborrow and I are members of the Blue Mountains Nuclear Free Group and each of us will focus on different issues. Two previous speakers today confirmed concerns that we have. One was Bob Debus who referred to the Commonwealth secrecy and lack of transparency. The other was Darryl Snow who talked about the lack of understanding of ARPANSA of emergency responses and the inherent risks of nuclear contamination. Our group came together because we were concerned that it was proposed to transport nuclear waste through the Blue Mountains. Even at our first meeting we realised that we could not isolate transport, that is we could not talk about it as the only issue because it was inextricably linked to production, storage and disposal. We also realised that as precious as we know the Blue Mountains are today, we could not say that we wanted it transported through other communities. We do not have a "not in my backyard" [NIMBY] attitude.

Our aims are on the front of our submission, and they are congruent with the terms of reference of this inquiry. Turned around, they state what we seek to have adopted as recommendations and outcomes from this inquiry. The first one is that the New South Wales Government pass legislation to give the residents of New South Wales more protection from Commonwealth initiatives regarding the nuclear industry. Currently, New South Wales legislation exempts all Commonwealth activities. The New South Wales Government may well say: the Commonwealth Government can override State legislation, so why bother? We could counter argue by saying: you should still go ahead because it sends a strong message that New South Wales is serious and does not accept the Commonwealth proposals as a fait accompli. It is a powerful legal tool. South Australia has already legislated, and Western Australia has draft legislation that will be passed by the end of 2003.

The New South Wales Government could unite with other State Governments and stand up to the Commonwealth. They do it on other issues, such as health. We do not want a new reactor to be built at Lucas Heights. We want existing waste stored according to world's best practice, that is on site above ground, not according to acceptable practice. We do not want nuclear waste transported anywhere through New South Wales by any means, that is road, rail, water or air. We do not want waste dumps built in New South Wales. We want people to listen to indigenous Australians who speak against dumps being built in the interior of Australia. We want support for the research and implication of options to reactor-produced medical isotopes, and real consultation that gives the people of New South Wales full disclosure of the potential impacts of the nuclear industry. The Commonwealth EIS consultation did not include all communities along the proposed 1,700-kilometre transport route, and the people of the Blue Mountains were not consulted. We would like a real understanding of emergency requirements associated with nuclear contamination, not to pass the buck to emergency services personnel who do not have adequate training or equipment and who could be put at great risk.

We do not want to see the world heritage area of the Blue Mountains put at risk, and we would like the New South Wales Government to consider strategies to reduce terrorist risks, not increase them. I want to focus on two things, one of which is the world heritage listing of the Blue Mountains, which is not easy to obtain. It has been given in recognition of the environmental significance of the area. Pages 2 to 4 of our submission detail those issues. The area includes more than 100 known species of eucalyptus, a diversity of landscapes, geological features, plants and animal communities, as well as rare and threatened plants and animals. It also includes clean catchments and high-quality water streams. We do not want any of those ecosystems put at risk. They cannot be found anywhere else in the world. We consider the Blue Mountains to be a national asset. The second thing I want to focus on is indigenous Australians. There is a campaign to stop dumps from being built in the interior of Australia. We want it recognised that vast open spaces are not wastelands, they contain underground water systems that are essential for survival.

Ms CARROLL: I wanted to speak about three points, one of which is medical alternatives, which appears on pages 5 to 7 of our submission with more information. I wish to make an additional comment about the feasibility of the importation of all medical isotopes currently produced at Lucas Heights. We heard that 60 per cent of the world's isotopes are produced in Canada. We currently import 20 per cent of our isotopes, and could import the rest as we have at times. During the February to May closure of the reactor in 2001 there was no evidence of a disruption to the isotope supply, and that is confirmed by ANSTO scientists. Three of the world's superpowers—Japan, the USA and the UK—do not rely on a domestic supply of reactor-produced medical isotopes. They use a combination of cyclotron technology and imported isotopes. In these countries nuclear medicine is widely practised and technically sophisticated, despite their reliance on imported radioisotopes.

New Zealand has a comparable health status to Australia without having a reactor. In this light it is hard to be convinced of Australia's need for a new research reactor at Lucas Heights. As an interim strategy, Australia could import some of the current glut of nuclear medical isotopes from Canada, giving us some time for new technologies to be developed. The reasons we prefer cyclotron technology to reactor-produced isotopes are outlined in our submission. The essential isotope not currently produced by cyclotron is Technetium 99m, and a good case can be made for Australia establishing a research project along these lines. In fact, nuclear physicist, Dr Robert Budnitz, and energy and technology consultant, Dr Gregory Morris, argue that this would benefit Australia commercially, as Australia would develop and possess valuable expertise in a nearly radioactive waste and proliferation-free route to the production of the world's medically most important isotopes. In addition, the closure and non-replacement of the current reactor might also free up resources. Even a fraction of the budget for the new reactor would make a significant investment into research for alternative technologies such as positron emission tomography, which is the cutting edge of nuclear medicine.

I now refer to storage and world's best practice. I refer the Committee to pages 8 to 13 of our submission for details about storage of nuclear waste at Lucas Heights and the proposed national repository. Our submission also covers the dangers of various categories of waste, and I am no expert so I will not go into it. But in summary we find the proposed storage system will be inadequate to deal with the waste from the new reactor. We are particularly concerned that the EIS of January 2003 for the new reactor at Lucas Heights uses the terminology accepted international practice as opposed to world's best practice or international best practice. The difference is that this document recommends shallow burial at a remote repository, while both world's best practice and international best practice recommend storage of radioactive waste in aboveground, on site facilities. It is worth noting that the 1996 report of the Senate Select Committee recommend a system meeting these standards for storage of even lower-level waste. The advantages of adopting a system consistent with international best practice are outlined in our submission. Thus, we find the proposed storage method far from acceptable.

The last point I wish to refer to is transport. I refer members of the Committee to pages 11 to 15 of our submission for further details on transport, terrorism and accident issues. Residents of the Blue Mountains are concerned that the already congested Great Western Highway is totally unsuitable for movement of such hazardous materials, and I refer members to appendix B of our submission for further details. An additional question we wish to pose: If intentional damage of a cask by terrorists poses enough of a worry to institute specialist training, would not the accidental damage of such a cask in a truck accident pose the same risk?

Darryl Snow has already covered some of the misconceptions about the “harmlessness” of the casks being carried. Debate about whether it is more or less toxic than petrol or gas is not something that I can go into. I do not know about it, but what I do know is that radioactive material can have a long-lasting effect, whereas those other things can be cleared up easily. Unlike chemicals, radioactive material will not dilute when exposed to air or water, and will not evaporate or disperse. As Bob Debus mentioned earlier today, new data is constantly being provided about the level of hazard a particular material poses. Such updates are generally in the direction of more harmful than previously held to be true, and we are not convinced about the harmlessness of the waste that is to come through the Mountains. We also note that the EIS data relating to truck accidents carrying radioactive materials was based on previous records about transportation of small packages infrequently delivered over small distances. This cannot be compared to the proposed frequent movement of very large volumes over massive distances, that is consolidated loads on container trucks each carrying 72 drums, each packed with 205 litres of radioactive material over a 1,700-kilometre stretch.

A lot of the data in the EIS does not come from Australian statistics, let alone those related to the locally proposed routes. We have not been able to get enough detailed data to satisfy ourselves, and we have tried with various agencies—the RTA and the Police Westsafe Operation. We would like to see the EIS deal with these local issues for all the places along the proposed routes. According to the Federal Government EIS there is a 23 per cent risk of accidents transporting the existing national inventory to South Australia. This is more than a one in five chance of an accident, which is not acceptable to the Blue Mountains community. However, we do not want these problems shifted to another area. We are against all transportation of nuclear waste in New South Wales or anywhere. We recommend the adoption of world's best practice which is on-site storage, coupled with the cessation of production of any future waste.

Mr LUTHERBURROW: I am very mindful of the time that we have spent so far and I am keen to give the committee an opportunity to ask us questions so I will cut short my spiel. I am employed by the New South Wales Fire Brigades as a firefighter and, in light of my professional expertise and experience, I want to restrict my comments on the transportation of nuclear waste to the ability and preparedness of local fire stations in the Blue Mountains to deal with an emergency incidents of a radiological nature. I want to make clear that my comments are not an official statement of the NSW Fire Brigades, but are my observations as an individual and community member.

The committee should be made clear that if transportation of nuclear waste is routed along the Great Western Highway through the Blue Mountains there will be varying levels of fire cover provided along the route. Once the trucks cross the Nepean River and begin the ascent of Lapstone Hill they will leave behind the last permanently manned 24-hour fire station at Regentville, which is a suburb near Penrith, and will not pass another manned fire station until they reach Katoomba, some 45 kilometres away. Five other fire stations will be passed along the way but they are not permanently manned 24-hours a day but are staffed by retained firefighters who respond to the fire station after having received a pager notification of a fire call.

The NSW Fire Brigades' Guarantee of Service dictates that standards of fire cover allow for a response time of 10 minutes for a permanent station, and 18 minutes or as soon as possible for a retained station. So whereas in the Sydney Basin a Fire Brigade crew could

reasonably be expected on the scene within 10 minutes, once the Blue Mountains is entered, this response time may be close to double, dependent on the location of the incident. Obviously the longer it takes for fire crews to arrive on the scene, the greater the magnitude of the incidents they are confronted with upon arrival.

So far this year, there have been approximately 50 motor vehicle accidents on the Great Western Highway in the Blue Mountains of sufficient seriousness to warrant the attendance of the Fire Brigade. This number of accidents highlights the hazardous nature of the proposed route due to a combination of road and weather conditions prevalent in the Blue Mountains. I would direct the committee to the NSW Police Blue Mountains Local Area Command for more accurate statistics—which they would not provide me—which I believe will indicate that the number of motor vehicle accidents along the highway is much greater than this.

I would also draw the attention of the committee to recommendations in the submissions of both the FBEU and the NSWFB to the need for greater resourcing and training for firefighters stationed along the proposed transport route to allow for an enhanced response capability. This response capability would need to be in place well before any of the proposed transportation of nuclear waste takes place. In fact, the submission of the NSW Fire Brigades states that by carrying out training exercises in regards to radiological incidents there may well be needs and capabilities identified which have not yet been anticipated.

Another concern I want to bring to the attention of the committee, as part of my role as a firefighter, is that the Fire Brigades' Standard Operational Guidelines indicate that a maximum dose for firefighters to receive at a radiological incident is 10 milli sieverts per hour whereas in ARPANSAs draft emergency intervention paper released earlier this year it states that first responders may be exposed to up to 500 millisieverts per hour. This discrepancy indicates that appropriate and effective consultation between the fire service and ANSTO or ARPANSA has not been realised to date.

In summary, the Blue Mountains is at particular risk of a radioactive accident, and local conditions make such an accident more likely and the effects particularly devastating. We do not wish to see these problems shifted to another area: We are against all transportation of nuclear waste in New South Wales, and anywhere in Australia or overseas. We recommend the adoption of world's best practice on-site storage aboveground.

Ms JUDGE: What is the view of your organisation to the transportation of medical and industrial isotopes in your nuclear free zone?

Ms CARROLL: We do not actually have a special position on medical isotopes as opposed to industrial or any other. We are against the transportation of radioactive wastes throughout our area.

Ms JUDGE: Would you classify those as being radioactive waste?

Ms CARROLL: I do not pretend to be an expert. I do know that Dr Jim Green is going to give evidence to the next forum in Dubbo. He has some information on that kind of thing, but I have no idea about how dangerous gloves that somebody has worn at the hospital may be. I could not answer.

Ms JUDGE: In your submission you argue that a range of existing alternative technologies make it no longer necessary to rely on nuclear reactor source medical isotopes. The Committee has received advice that the main isotope, technitium, can still only be produced in a nuclear reactor. How do you respond to that?

Ms CARROLL: I covered that in the submission also today. All I could say is that is a challenge to find a way to produce that cyclotron technology and a precedent for that is that there was an isotope, called Palladium 103—it is in one of my longer versions that I was

going to give today—and that was formerly only produced in a reactor and when the reactor supply dried up for some other reason, scientists in the United States of America found a way to produce it in a cyclotron. I am encouraged to think we can do so with technitium 99M as well.

Mr IAN COHEN: Ms Carroll, you mentioned a one in five chance of an accident, how did you figure that? I want to hear more about the dangers and any statistics you could take on notice of the amount of days that the Blue Mountains are either in fog, rain or adverse driving conditions.

Ms CARROLL: Actually, I do not have any statistics. That came from the EIS, the 23 per cent likelihood of an accident. It includes major and minor, an overturning that does not even break a cask. It was including all kinds of accidents but I believe Darryl had some figures on number of accidents seen to by the Fire Brigade in the Mountains over the last year, which might be a helpful statistic.

Mr LUTHERBURROW: That is right, up to this date approximately 50 accidents of a serious enough nature to require the attendance of the Fire Brigades. I believe that that number is probably much greater because the Fire Brigades does not respond to every motor vehicle accident on the Great Western Highway. That is why I recommend that the committee approach the Blue Mountains Local Area Command and get the traffic statistics.

CHAIR: Was that approximately 50 for this calendar year to date?

Mr LUTHERBURROW: To this date, yes.

Ms CARROLL: We have found it hard to get such local data ourselves. We notice that the EIS did not cover that. That is one of recommendations we want to make that that kind of data be found.

Mr IAN COHEN: In terms of the World Heritage listing, what is the role and obligations of the Commonwealth Government in conserving sites? How might that be contraindicated by any possible accident involving radiation?

Ms JACOBUS: I am not sure if this answers the question but in our submission we say that the Commonwealth Government has a key role and obligation to conserve sites recognised to be of national and international environmental significance. I actually could not tell you what is in place to back that up. That is a statement that we have got there. Does that answer your question?

Mr IAN COHEN: Could you take that question on notice in terms of the responsibilities of the Commonwealth Government, given that that is the authority that is proposing this nuclear waste transportation through the area?

Ms JACOBUS: We can submit that.

Mr IAN COHEN: Has your group been formed for quite a long time? Is it part of the original nuclear free zone movement that occurred quite some years ago? Is it a separate group formed in response to the possibility of radioactive transport?

Ms JACOBUS: Our group was only formed in January this year. But we said we are part of an ongoing movement. As was stated earlier, Blue Mountains City Council became a nuclear free zone in 1982 and over the past 21 years there have been various groups and movements who have come together at different times. Our group is quite diverse. We came together in January this year when there were media reports about the potential proposal to transport through the mountains to address this particular issue. We are not the group that was doing it a few years ago.

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Mr IAN COHEN: How many people came to that meeting? Was it an advertised public meeting? Would you describe the level of concern about this issue?

Ms JACOBUS: There is great concern. We have approximately 100 people on our mailing list. We have a core group of people who come to meetings and have been very active. We have been contacted by parents and citizens associations across the mountains who are concerned about schools on the highway. A lot of people have expressed their interest but they do not necessarily come to meetings. We could say that there is great concern and interest in this community.

Mr LUTHERBURROW: We actually held a politics in the pub meeting at the local hotel in February this year. We did not take a headcount but I would estimate there was between 200 and 300 people at the hotel for that meeting. The Minister, Bob Debus, the mayor, Jim Angel and Darryl Snow, President of the Fire Brigades Employees Union, spoke at the meeting. The meeting was well attended and well-received by the local community.

Ms CARROLL: The public meeting in February had about 250 attending. Some of the members of this group came to that public meeting and have networked with other groups existing in the community as well.

Ms JACOBUS: At that public meeting in February a statement was made. Dr Keith Locken who was a representative of the Science Minister Peter McGauran, and he was the one who said a shovel and a wheelbarrow will do the job if a clean-up is needed. We were all concerned about that.

CHAIR: Your Federal member, Mr Kerry Bartlett, wrote to the Working Better Together in relation to the proposed transport of low level, I presume, nuclear waste and stated:

It is all solid waste set in concrete in steel drums which are then stored in metal containers. There is no chance of leakage even if a road accident occurred. The transportation of this waste is far safer than the transportation of petrol or other substances which occurs daily across the mountains.

Do you have any comments in relation to that statement?

Ms JACOBUS: I know that someone later will talk to the Committee about that.

Mr LUTHERBURROW: I would like to refute that along the same terms as the president of my union, Darryl Snow, refuted it. It is an absolute nonsense. I do not know how he could make that assumption. The fact of the matter is, given the right circumstances, those containers will fail. I do not see how he can make a judgment that that cannot happen.

CHAIR: This morning council said that we are not only talking about actual physical health safety but other impacts to do with tourism and other matters. Do you want to comment upon the possible other consequences or, if you like, the opportunity costs that you face?

Ms CARROLL: Firstly, when I heard that this morning my first comment as a member of the community is that the reason that we were not making complaints about other transportation so far is that we did not know about it. It gets back to being informed. The council member covered the economic cost and the tourism costs, and the psychological costs are seen by the number of people turning up to our meetings who are all particularly worried about this. Whether it is a misconception about how harmful it is, we do not have the information. And definitely that lack of information is having a psychological impact on the local community. Just by the fact that I have spoken in public before many times, when I go out in the street in my local community people come up to me and want to talk about the issue. There is a grave concern in the local community about it.

CHAIR: Are you not convinced that the proper packaging will protect you, and that the codes of practice for the transport of nuclear waste will ensure the safety of your community in the event of an accident?

Ms CARROLL: I am not as an individual, and I refer you back to the Mr Debus' comment before that new information comes to light all the time. What today is considered okay may not save the people in 200 or 2000 years time who are facing the results of an accident today.

Mr LUTHERBURROW: Harking back to Dr Loy's comments earlier, he said that in regard to this code of practice of transportation it is not only packaging but also liaison with emergency services so there is an emergency response plan. But as I think we all discovered this morning, the detail of that plan is sadly lacking. So I am not convinced that we are safe.

Mr IAN COHEN: In terms of the nature of the local area, we see that the road is like a spine running along quite spread out communities. I am wondering if there are alternative roads and ways of getting around in case there is a major accident.

Mr LUTHERBURROW: There are alternate routes that are used from time to time, depending on where the accident is or where the blockage to the highway is. There are certain pinch points where there are no alternative routes along the Great Western Highway corridor. One of them is at Linden and the others are between Katoomba and Blackheath and at Mt. Victoria.

Mr IAN COHEN: How many schools approximately would be on the immediate road along this route in the quite heavily populated area?

Ms CARROLL: There are nine directly on the highway. There are several more a couple of streets away.

CHAIR: Certainly, travelling up this morning, there seemed to be 40 kilometres an hour zones everywhere. Given our time constraints, I know that you had to cut short your full statements. Would you like to table those full statements so that they can come to the information of the Committee?

Mr LUTHERBURROW: If we could table it at a later date. It is probably not in a fit state to be tabled now.

CHAIR: If you wish to make them a supplementary submission to us, that would be appreciated.

(The witnesses withdrew)

BARBARA JEAN ARMITAGE, Member of the Management Committee, Blackheath Area Neighbourhood Centre, Gardiner Crescent, Blackheath,

PAMELA THERESE CRAFOORD, Representative, Working Together Better, c/- Winmalee Neighbourhood Centre, PO Box 4031, Winmalee,

BRIAN JOHN GRAVISON, Chairperson, Katoomba Neighbourhood Centre, 8–10 Station Street, Katoomba,

MARY LORRAINE WATERFORD, Mountains Community Resource Network, PO Box 152, Lawson, affirmed and examined:

CHAIR: Each of your organisations has made a submission. Is it your wish that your submissions be included as part of your sworn evidence?

Ms WATERFORD: Yes.

Mr GRAVISON: Yes.

Ms CRAFOORD: Yes.

Mrs ARMITAGE: Yes. I also tender copies of these documents and a letter.

Ms CRAFOORD: I ask to delete from my submission on the front page, the bottom paragraph, from the words "but expressed only the Federal Government's" to the end of that paragraph.

CHAIR: I understand that each of you would like to make a short opening statement.

Mr GRAVISON: Part of the Katoomba Neighbourhood Centre's vision statement states that it will promote social justice and enhance quality of life for people living in the Blue Mountains. We see the transportation of nuclear waste through the Blue Mountains as a potential threat to quality of life, and we see the building of a dump for nuclear waste in New South Wales or in any other State to be a potential threat to people's safety and health. We have had many phone calls from residents in the community with their concerns. There is quite a big fear out there of the unknown, I expect. We have also had a letter from the Blue Mountains Parents and Citizens Association with their concerns around children in the Blue Mountains and the schools that are situated along the Great Western Highway.

The neighbourhood centre has concerns around the complete disregard for Aboriginal people and the idea that waste will be all right dumped out in the remote areas of Australia. Aboriginal people do not see a house and a quarter acre of land as their home; they see these vast remote spaces as their home. We have already seen what happened at Woomera in the 1950s and the effect it had on the Aboriginal people in that area, and we would not like to see that happen again. Katoomba Neighbourhood Centre encourages the State governments to work to not only stop transporting and dumping nuclear waste but to stop producing it. After listening to Darryl Snow today, I think those concerns are even more enhanced for me.

Mrs ARMITAGE: I support the comments made by the previous panel. We are looking at a community at the moment of 76,541 and the projected increase of that community, according to this little book, to 85,000 people by 2019. If you look at pages 20 to 21 of this magazine, it is obvious that the schools and the tourist facilities are concentrated either on the highway or fairly close to it. I have travelled all over New South Wales and I think this highway is probably one of the most dangerous. I do not have the statistics—I have not been able to obtain them—of the accidents and road closures due to black ice, snow, mist, bushfire and heavy vehicle accidents. As far as I understand from statements made by the State Government and the Federal Government, there is a wish to decentralise and move

services, particularly government departments, outside the main metropolitan area. One of those, I think, is the State Debt Recovery Office, which is moving to Lithgow in the near future.

The rail line runs almost parallel to the road in most spots so any spill, accident or perceived spill or accident would close down transport out west. It is pretty miserable as it is, so having that closed down would be a disaster. I think my experience in the past with sewage going on to Bondi Beach, and made a fuss about in the newspaper, caused people to remove themselves from the tourist zone, from swimming, and that was only just sewer, and sewer cannot do that much harm. Having listened to the previous speakers, the concept of people coming to the mountains and having an iodine tablet in their purse or pocket, I think, would dissuade people from coming to the mountains. I think it would be the end of that.

The proposal to transport and store nuclear waste, I have made it my business to talk to quite a number of people in the community and in the Blackheath area in particular, the kids at the skateboard ramp, the school, child care centres and the business community, and they are not well informed. They are very nervous about what is happening. Arising out of that, we see that this concept the Government has at the moment of self-regulation, if that were applied to this, it would be chaos. I do not support the concept of nuclear waste being transported here or elsewhere, as said by the previous speakers. The Government, the Minister and ANSTO hold positions of trust, and that trust in the Government has been broken over and over again with issues such as the *Tampa*, children overboard, sheep overboard, children not overboard—name it the way you want. We do not have trust in this Government to run something as dangerous as this through the city, and I certainly oppose it. I know the Committee does. I am happy to answer questions about my discussions with the community, but I know they feel very strongly about it. A look at this map will show you how concentrated the community is along that route.

CHAIR: Does anyone else wish to make a statement?

Ms CRAFOORD: No, I do not think so. I think everybody has more or less said what I was going to say, so I just leave it to questions.

Ms WATERFORD: I work with other community and health workers in the mountains and on a great number of committees about the whole-of-government and whole-of-community approach to providing better lives for children in New South Wales; I hope that the Committee is familiar with some of the processes such as the *FamiliesFirst* and the Better Futures programs. To contemplate transporting nuclear waste throughout New South Wales seems to be a total contradiction to those kinds of programs.

CHAIR: I noted in a letter from Mr Kerry Bartlett, the Federal member for Macquarie, to the Working Better Together Group, in terms of low-level waste he said, "It is all solid waste set in concrete, in steel drums, which are then secured in metal containers. There is no chance of leakage even if a road accident occurred. The transportation of this waste is far safer than the transportation of petrol and other substances which occurs daily across the mountains." What is your response to that and are you satisfied with those assurances from your local member?

Mrs ARMITAGE: No.

Ms CRAFOORD: That letter went back to the group I come from and we were not satisfied. Indeed, we were most dissatisfied that he told us that our concerns had no basis. That is early in the letter, and we do not believe it.

Mrs ARMITAGE: I am not a nuclear scientist or a concrete construction worker but I understand that what you have just described would disintegrate in certain circumstances. As for petrol being dragged across the mountains and all other things, there have been accidents

and the road has been closed. Most of us would have spent one night in Katoomba, Blackheath or Lithgow, and not been able to get home because of something happening.

Ms WATERFORD: The other concern is being used as a terrorist target, as clearly articulated in the submission from the New South Wales Firemen's Union. It is far more difficult to safeguard a moving target than a stationary one and it has been clearly articulated in the media that Australia is at risk of a terrorist attack.

Mr GRAVISON: I do not regard the argument that transportation of petrol or other hazardous substances across the mountains as a valid argument. Just because they are hazardous and we already have them in our midst, why add to it with another dangerous substance being transported across? I do not think that is a valid argument at all.

Mr IAN COHEN: Would your organisation support upgrading the roads?

Mr GRAVISON: Not for transporting nuclear waste, no.

Ms CRAFOORD: Not for that price, no.

Mr GRAVISON: For other safety reasons, yes.

Mr IAN COHEN: Obviously, that was a bit tongue in cheek but there exists a set of values in the mountains. Could you describe to the Committee why people live here, the facilities that exist and how you feel about them?

Mr GRAVISON: I lived around the inner city for 27 years. I moved to the mountains about 11 years ago because I just think it is a better and healthier environment. I see that deteriorating as the years go on, I really do. I would like to take all the trucks off the highway because I have seen many accidents and I have had friends die on the roads through bad roads and for other reasons.

Ms WATERFORD: The highway, as it is, divides the Blue Mountains communities and has a major impact on the ability of people to come together. Whether we support it or not, we have a continuous upgrading of the Great Western Highway and that has a great effect on people's lives.

Mr GRAVISON: It does isolate people. I did not understand that argument at first but it does. Elderly people cannot get across the highway because there are four lanes of highway. If they live on one side of Lawson, if it is to be a four-lane highway down there, they will not be able to get across to the other side. It is very isolating. As someone said before, we live on a very narrow ridge up here.

Mr IAN COHEN: You mentioned that it is good for the community to be cognisant of the facts. You mentioned snow, mist, bushfires and black ice. How often is there black ice and how dangerous is it in terms of heavy vehicle movement?

Mr GRAVISON: Snow and black ice would not happen that frequently, but it does happen. It is probably annually. I had an experience with black ice and I will not drive if there is snow or ice around. I did a 380 degree turn in Katoomba once and several other cars just stopped in the middle of the road. It actually stops you. You cannot move.

Mrs ARMITAGE: It exists up to Lithgow. There are areas of Lithgow with special lighting to deal with that. The thing with black ice is that you cannot see it. It is where shade exists and the sun does not melt the snow or sleet. In wintertime everybody scrapes their windscreens in the early morning. It is not unusual.

Ms JUDGE: Are you aware of the storage and transportation of any medical and industrial isotopes through your area?

Ms WATERFORD: No, we are not. Part of the issue is that the community is not kept informed. It is their right to be informed.

Ms JUDGE: What is your view of that transportation? We have been given the figure of 4,700 monthly movements throughout New South Wales for medical and industrial waste. That is happening all the time.

Mrs ARMITAGE: This is something that concerns me. In order to justify what is happening, dumping it in Central Australia, is the medical excuse. This arises from what I said before, that I do not believe that this is just about that and the environmental impact statement does not cover what is to happen in the future. It does not even cover issues that were raised by early speakers. I do not believe the discussion about taking medical isotopes to Bathurst, Lithgow or Katoomba now, those movements, has any real bearing on this issue of taking nuclear waste to the centre of Australia and dumping it in what is a supermarket for the Aboriginal community over at Coober Pedy.

Ms JUDGE: One of the reasons ANSTO gives for them being there in the first place is that 10 per cent of its production is justification for its existence?

Mrs ARMITAGE: I feel very strongly—I do not know about the other speakers—that waste should be disposed of closest to its source.

CHAIR: Can we look at consultation, which is relevant to what we are talking about and is central to a lot of what you have said. You were present when we referred to the article in Tuesday's *Daily Telegraph*, which is how we found out about the proposed transport of waste in the form of spent fuel rods from Lucas Heights to Port Botany through a densely populated area. I raise again security and who should be advised—local councils, police and emergency services. There seems to be a strong view that local communities should not be notified on the basis of security. What are your views in relation to transport, in this case of low level but also intermediate and high level waste. Who should actually be consulted?

Ms CRAFOORD: I do not think terrorists need to read the *Daily Telegraph*.

CHAIR: Committee members do.

Ms CRAFOORD: I do not read the *Daily Telegraph* by the way, but I think terrorists have other means of discovering what is going on. I think the community should be involved.

CHAIR: At what level? Should local councils be advised?

Ms CRAFOORD: Yes.

CHAIR: Should there be advertisements placed in the newspapers?

Mr GRAVISON: I think all parts of the community should be notified about it. Somebody earlier this morning referred to the secrecy around all of this. It treats us like fools, suggesting we do not have the intelligence to deal with these things. You are either for it or against it; you either say it is all right to transport it through or it is not. I see no reason why members of the community should not know what is happening in their community. I would advocate that if it does happen, those nuclear-free zones around the place should be changed to "This is not a nuclear-free zone" and see what that does to tourism and whoever else wants to come up here and live, as I did.

Mr IAN COHEN: Putting aside many of the issues you have raised like the inappropriateness of dumping it out west in Aboriginal communities—and you will find a degree of sympathy with certain sections of this Committee—is there a possibility of using rail as a safer alternative. Is that feasible and, if not, why not?

Ms CRAFOORD: You notice that the railway goes through the centre of towns too and it is often alongside the highway. Also, we had a great big smash down at Glenbrook last year, so the railway is not safe.

CHAIR: To what extent have your communities been consulted so far by people other than yourselves?

Mr GRAVISON: I do not think there has been a lot of stuff in the papers or on radio. There was a small amount on radio but certainly not in the gazette, the local paper or anything. I think we have a large aged community in the mountains and we must advocate for services for them because they are passed worrying about what is happening along the highway and what that truck has got in it, and I do not mean that in a derogatory sense. It is up to people who are concerned about them to advocate for services for them and for the children. If you said to a five-year-old child, "There is a truck with nuclear waste going up there", they may or may not know what you are talking about but they certainly would not feel any danger.

Mrs ARMITAGE: They would probably think it is a Nintendo game.

Ms WATERFORD: I would like you to return to the letter from our Federal member, who dismisses people's fears as not being of any concern at all, so generally he and his Government are not publicising the fact that they have plans too.

Mrs ARMITAGE: I was listening to the radio when they talked about the boy finding or pinching the caesium-137. There was an enormous amount of hype on the radio. They started talking to people in the community and they were frightened. That was only low level, one tiny little pellet and everybody was put on alert, schools were closed and people were cross-examined. If that happens with one tiny piece, imagine what it would be like with a spill.

CHAIR: A couple of semis or something.

Mrs ARMITAGE: Yes.

Ms JUDGE: Or fuel rods?

CHAIR: Yes. You have basically covered all the points in your introductory statement and your excellent submissions. Do any other Committee members wish to ask anything else?

Mr IAN COHEN: No.

Ms WATERFORD: Can I just make one more point?

CHAIR: Yes, certainly.

Ms WATERFORD: This is a crucial issue and we cannot leave it just to governments to make these decisions. The community has to be consulted and fully informed. We know in the past of issues where the Government has made decisions which, in retrospect, have not been in the best interests of the community. It is very important that consultation on this matter is widespread.

Mrs ARMITAGE: Also, the economy here is fragile. We have a high rate of unemployment amongst young people. A lot of people come up here to live because they cannot afford to live in Sydney and people who have built businesses here are often sole operators. The economy is fragile and they rely very heavily on the tourist industry for employment. I do not agree with some of the employment that the kids are getting, such as waiting on tables, but at least it is employment. Anything to cause an imbalance there would

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put paid to the Blue Mountains being a special place to be. If it comes to pass that the Federal Government pushes forward with this project design, direction and transport do you think the community will undertake further action? Did you have any other suggestions?

Ms CRAFOORD: I think we might have to get out on the streets.

Mrs ARMITAGE: Once people realise the enormity of what is happening, and they do not at the moment across the board, there will be an enormous rising up of community against it.

Ms WATERFORD: We are fortunate in the Blue Mountains to have a very active community that will stand up against multinationals.

Mrs ARMITAGE: Or lie down.

CHAIR: Thank you very much for your time today.

(The witnesses withdrew.)

JAMES CHARLES ANGEL, Mayor of the City of Blue Mountains, Blue Mountains City Council, Civic Place, Katoomba, affirmed and examined:

CHAIR: The mayor did not think he would be available today, but we are really grateful that he has been able to make time to appear and make a short presentation, and to take questions from the Committee. We have already had the council's submission taken as part of sworn evidence earlier today. I invite you to make a statement or elaborate on that submission.

Mr ANGEL: I would like to make a short statement. As I have explained, I was not certain of my whereabouts for the earlier part of the day so I asked Mr Garofalow, one of our staff members, to present the submission of the Blue Mountains City Council, which I am told he did very well. Part of that submission was an invitation for you to meet at the Blue Mountains. I am very grateful that the Committee was able to do that. I pass on my thanks to all of you for the effort you have made to come up here. I reinforce the views you have heard from members of the community. You have heard from a whole range of community people within the Blue Mountains today. I reinforce that the Blue Mountains City Council was unanimous in its decision to present our opposition, which is very important.

I have been involved with the reference group that was put together by the New South Wales Local Government Association. We will do some more work on our submission on behalf of New South Wales local government in general, which, according to the advice I have just received, I will present to the Committee on 22 October. We have a little bit of work to do on our broad submission from the local government perspective before that. I have been invited to various other meetings to put that together. The Blue Mountains City Council will reinforce and support that submission when it gets to you on 22 October. If there are any questions, I am quite happy to answer them.

CHAIR: One of the things we would be keen to do is make sure we cover the whole community. Today I have quoted, for instance, from your Federal member for Macquarie, Mr Kerry Bartlett, about his views in relation to the waste. But we have not been able to locate other community groups or other people, apart from Mr Bartlett, who support the transportation of nuclear waste through the Mountains. Could you give us some ideas as to where we might find those people so that we could call them as witnesses?

Mr ANGEL: I am not sure that you will find too many. I am surprised by the amount of support for this issue and the opposition it gets from a whole broad range of different groups and community groups. Some community groups or members that I would have thought would have held the opposite view actually do not. I am sure there are some people out there, but I am not aware of too many of them.

Mr IAN COHEN: The unanimity of the council is an indication of that. As a mayor, have you experienced that degree of support across council on any other major issue?

Mr ANGEL: Not too many. But the Blue Mountains City Council has been very much like that for a long time now.

Mr IAN COHEN: On this issue?

Mr ANGEL: On this particular issue. It has varied in degrees since 1983, depending on who has sat around the table. We first started to talk about becoming a nuclear free zone and doing it in the middle to the late part of the 1980s. It has always been a fairly strong issue that has bound the community together. There is a fairly strong bonding among all the people.

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Ms JUDGE: One of the factors would be the wonderful environment. People come here because of the environment. People go to other cities because of employment, but a lot of people come here because of the environment.

Mr ANGEL: Yes, and tourism, particularly in the upper part of the Mountains, is the focus of the local economy. Since we have been granted world heritage status for the national parks the funny thing is that it has picked up, particularly the ecotourism side of the industry. Although you could have transportation of anything across the Blue Mountains and not have an accident for 10, 20 or even 30 years the difference in geographical terms of this part of the area is that when our highway is cut we are cut off: we are not like a lot of other places. Even in country areas you can always find a road to get around, but in the Blue Mountains it is not that easy. There is only one transport road and rail link.

We tried to find alternatives for emergency services to get around some of those areas, but it is not very easy in the Blue Mountains because even where we sit it is only four kilometres each way to the end of suburbia and the national parks. It is a very thin corridor where the urban areas are. In the past two years we have had probably the worst bushfire seasons, even though, thank goodness, we did not lose a great deal of property or lives. They were probably two of the most serious times we have ever had. Just up the road here we have an emergency centre where all the emergency services are co-ordinated. Even then, one fire just up near there closed the highway and caused bedlam for a whole day. It is probably the closest thing you could get to some form of accident.

Mr IAN COHEN: Has your council been communicated with or consulted by any representatives of ANSTO or ARPANSA about notification of these plans?

Mr ANGEL: The only notification we have had is probably the Federal Minister, Peter McGauran, writing a letter to the council three months ago offering to send up what he termed a specialist expert explaining what would be transported. As yet we have not taken up that offer. The only other communication we have had is a couple of public meetings where representatives of the Federal science department gave an explanation. But that is about all I could say, really.

CHAIR: Thank you very much for taking time out to busy day to appear before the Committee.

(The witness withdrew.)

(The Committee concluded at 3.10 p.m.)