

[PROOF]



COMMONWEALTH OF AUSTRALIA

SENATE

SELECT COMMITTEE ON URANIUM MINING AND MILLING

Reference: Uranium mining and milling

PERTH

Monday, 20 January 1997

PROOF HANSARD REPORT

CONDITIONS OF DISTRIBUTION

This is an uncorrected proof of evidence taken before the Committee and it is made available under the condition that it is recognised as such.

CANBERRA

SENATE
SELECT COMMITTEE ON URANIUM MINING AND MILLING

Members:

Senator Chapman (Chair)
Senator Margetts (Deputy Chair)

Senator Bishop	Senator Sandy Macdonald
Senator Ferguson	Senator Reynolds
Senator Lees	

Matters referred for inquiry into and report on:

The environmental impact, health and safety and other implications and effectiveness of security agreements in relation to the mining, milling and export of Australian uranium.

In considering these terms of reference the Committee is to take into account, and where necessary report on, the following issues:

- (a) The environmental impact of uranium mining and milling in Australia and the effectiveness of environmental protection and monitoring in relation to existing and previous Australian uranium mining operations.
- (b) The role of the Office of the Supervising Scientist in monitoring Australian uranium mining and milling activities;
- (c) The health and safety implications of uranium mining and milling for workers at mining and milling sites and mining operations;
- (d) The health, safety and other effects of uranium mining and milling on communities adjacent to mine and mill sites and communities on existing or planned transport routes for uranium ore and uranium waste;
- (e) The effectiveness of Australia's bilateral agreements with countries importing Australian uranium in ensuring that Australian-sourced uranium is not used in military nuclear technology or nuclear weapons testing activities; and
- (f) The volume and location of Australian-obligated plutonium currently in existence in the international nuclear fuel cycle (produced as a result of the use of Australian uranium) in what form it exists (for example, separated or in spent nuclear fuel) and its intended end use.

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WITNESSES

CARR, Mr William Maxwell Bice, Manager Land Access Unit Policy and Planning Division, Department of Minerals and Energy, 100 Plain Street, East Perth, Western Australia 6004	865
CLOUGH, Mr Peter Michael, Executive Officer, Government Affairs, Chamber of Minerals and Energy Western Australia, 7th Floor, 12 St Georges Terrace, Perth, Western Australia	889
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GAUCI, Mr George, General Manager, Canning Resources Pty Ltd, Level 20, Central Park, 152-158 St Georges Terrace, Perth, Western Australia	889
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SENATE
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Monday, 20 January 1997

Present

Senator Chapman (Chair)

Senator Bishop

Senator Sandy Macdonald

Senator Ferguson

Senator Margetts

The committee met at 9.28 a.m.
Senator Chapman took the chair.

CHAIR—Ladies and gentlemen, I declare open this hearing of the Select Committee on Uranium Mining and Milling. The committee was established in May 1996 with terms of reference which specifically directed it to examine environmental health and safety and international safeguard dimensions of uranium mining and milling. Since its establishment, the committee has received more than 100 submissions from a wide range of the Australian community, including companies active in the uranium industry, government agencies responsible for the administration of policy concerning uranium mining, environmental, conservation and peace groups, shareholders of companies with interests in uranium mining and engineers and scientists.

The committee, as well as having conducted hearings in Canberra, has also visited the Ranger mine in the Northern Territory, the rehabilitated mines at Nabarlek and Rum Jungle and the Environmental Research Institute of the Supervising Scientist and has also conducted hearings in Darwin. Our inquiry has been supported by a research program embracing the role and responsibilities of the Supervising Scientist, the impact of uranium mining on Aboriginal communities, the health and safety of employees in the uranium industry and the international safeguard system, especially as it relates to accounting for Australian obligated nuclear material.

These hearings in Perth signal the formal start of our work for 1997 and, in particular, a week which will take us to Cotton Creek and Kintyre tomorrow and to the giant WMC mine at Roxby Downs in South Australia on Wednesday and Thursday and another day of hearings in Adelaide on Friday. The committee schedule is now very tight because the Senate has resolved that the report of the committee should be tabled by 31 March 1997.

I want to thank all of those in Western Australia who have taken the trouble to make a submission—especially those who are attending the hearings today to give additional evidence. Today we will be taking evidence from the Western Australia government, Canning Resources, the Chamber of Mines and Energy, Aerodata Holdings, the Hon Ian Viner QC and three community groups. Can I also add that, for those who are based back there and care to listen to the hearings today, with the wonders of modern technology, the proceedings are going back to Parliament House in Canberra. I open proceedings by welcoming officials of the Western Australian government.

[9.30 a.m.]

CARR, Mr William Maxwell Bice, Manager Land Access Unit Policy and Planning Division, Department of Minerals and Energy, 100 Plain Street, East Perth, Western Australia 6004

MARSHMAN, Mr Ian Warwick, Senior Scientific Officer, Mining Operations Division, Department of Minerals and Energy, 100 Plain Street, East Perth, Western Australia 6004

PRICE, Mr Kenneth Robert, Director, Explosives and Dangerous Goods Division, Department of Minerals and Energy, 100 Plain Street, East Perth, Western Australia

UPTON, Ms Hazel, Senior Scientific Officer, Department of Minerals and Energy, 100 Plain Street, East Perth, Western Australia

MURRAY, Mr Colin Jeffrey, Manager Resources Development, Department of Environmental Protection, 141, St George's Terrace, Perth

SUTTIE, Mr Robert Geoffrey, Director, Policy and Advisory Services, Department of Resources Development, Government of Western Australia, 7th Floor, 170 St George's Terrace, Perth, Western Australia 6000

CHAIR—We have before us the submission from the Department of Minerals and Energy. It has been numbered 47 and is to be published in a separate volume. Do you wish to make an opening statement?

Mr Suttie—Yes, I do, Mr Chairman.

CHAIR—I invite you to address the committee. At the conclusion of your remarks and the remarks of any of your colleagues who wish to add to that, the members of the committee will probably have some questions for you.

Mr Suttie—Thank you very much, Mr Chairman, and thank you for the opportunity to address the committee. I will not reiterate the recent history of uranium mining in Australia since I am sure other people have covered it a lot better than I can. Perhaps I need only to note that, from an historical point of view, the State Agreement Act of 1978 covering the Yeelirrie project is still current. I am also aware that nine other potential uranium mines have been identified to date in Western Australia.

The state government fully supports the immediate expansion of the Australian uranium industry and considers that the previous Commonwealth government's three mines policy discriminated against Western Australia. At the same time, the state government is fully committed to the strict safeguards that are in place for the mining,

treatment, transportation and storage of uranium products, by-products and wastes.

The Western Australian government has stated publicly that each state should be responsible for its own waste disposal. Therefore, the Western Australian site for intractable wastes is only available for waste generated in Western Australia.

The secretariat has been good enough to indicate to me some of the issues associated with uranium mining and milling which are of particular interest to the committee. I have, therefore, asked my colleagues from the relevant departments to appear here to answer your questions this morning.

Briefly, the state has in place a number of legislative, regulatory and other requirements in the areas of interest to the committee. For instance, the Mining Act 1978 and the Environmental Protection Act 1986 are the legislative base and are supported by legislation and regulations varying from the Radiation Safety Act 1975 and the Nuclear Activities Regulation Act 1978 to the various codes of practice that apply to radioactivity and radiation.

In Western Australia, if it is appropriate, the normal laws of the land may be supplemented by a state agreement act for a specific project. I have already referred to the Yeelirrie agreement, and it is possible that other agreements will be negotiated for any other proposed uranium mining projects in the state.

In passing, may I say that agreement acts have been successfully used by successive state governments in Western Australia since 1952. Currently, about 73 per cent of the total value of production from the resources sector is from projects covered by agreement acts.

Whilst Western Australia cannot point to any current uranium mining in the state to demonstrate current practice or to a track record in safety, public health, occupational health and the management of environmental protection, there is a wealth of experience in Western Australia in mining which can be immediately applied to uranium mining and gives strong grounds for confidence in the state's ability to reach the highest standards in these areas.

Also, the arrangements with the Commonwealth government have been in place for many years and allow joint assessments of projects. Hence, any requirements for the protection of the environment, public consultation and social impact can be agreed and introduced at an early stage in the project's life.

There seems to be some concern regarding the unnecessary overlap of Commonwealth and state bureaucratic functions and inefficient duplication of government roles. My experience has been that duplication does exist and, I believe, reduces Australia's international competitiveness. It is very difficult to prove the precise reduction

in competitiveness in international markets, but it does seem to be fairly obvious that duplication of bureaucracy must result in increased costs in Australia and these must be paid for at some stage by someone.

Areas of duplication which come to mind are the administration of the oil and gas industry in offshore waters and the protection of heritage values. Clearly, attempts can be made to minimise duplication. But, even so, its mere existence must seem inefficient and costly to the general public.

On the Kintyre project in Western Australia, last week I did receive a copy of the submission, which I understand is No. 52, that you received from the Western Desert Puntukurnuparna Aboriginal Corporation. I have to admit that I have not studied that submission in depth in the time available. I am also told that there are three native title claims over the Kintyre project area, so it may not be appropriate to comment in great detail.

I think it would be useful to the committee, however, if I were to say that my general impression of the corporation's concerns regarding mining at Kintyre are similar to the concerns that many communities express regarding the possible impacts of mining and the transportation of products to ports. I say this not to belittle the concerns of the people—that is certainly not my intention—but to place them squarely in the realm of concerns which we in Western Australia, as a significant mining community, must deal with whenever mining is proposed and carried out.

Mining impacts—whether they are physical, social or economic—must be managed responsibly and regulated effectively if the community is to be reassured and satisfied that the risks and impacts are under control. I have probably spoken too long. Can I invite your questions and involve my colleagues in the discussion.

CHAIR—Thank you for that statement, Mr Suttie. You have talked there a bit about the problems of duplication in the area of administration of uranium mining. From your perspective, do you believe the elimination of duplication is best achieved by leaving the responsibility for these areas in state hands or having some national control over these issues and thereby avoiding duplication? I raise that particularly in the context of your comment about the Office of the Supervising Scientist where you say that the state authority is the most appropriate agency to provide that sort of regulation that relates to the OSS.

But, more generally perhaps, given that uranium mining is, in a sense, a national industry—if it expands it will take place in more than one state, and already in the Northern Territory and South Australia it is in more than one location—in terms of ensuring that the necessary standards are maintained, from the perspective of the companies involved in mining so that they have one standard to which they have to adhere and do not find that different standards apply in different states, how do you see that in

terms of national regulation as against individual state regulation?

Mr Suttie—From my perspective, once legislation, whether Commonwealth or state, introduces an obligation on a minister, a department or a committee, you have a situation where they naturally seek the best information they can possibly get in discharging their responsibilities and tend to rely upon their own people, if you like, to provide them with the advice they need. So where you may find the state minister seeking advice under one piece of state legislation, you may find a Commonwealth minister seeking advice from his own department on another piece of legislation which might impinge on the same thing. For instance, in a mining project in Western Australia, you might find, quite legitimately I think, a federal minister seeking advice on the requirement upon him to issue an export licence perhaps, which is in the national arena, whereas a state minister would be looking for advice on the project from the technical point of view from his own department.

So I think the derivation of duplication is from the legislation rather than from the individuals or the departments involved. It may in fact merely indicate the extent and ramifications of the size of some of the projects that are proceeding that I have experienced. For instance, if we take the large North West Shelf project, the tenements are actually in Commonwealth waters. There is an arrangement on the particular tenement that was developed between the Commonwealth and the state, and the gas processing plant is in the state's bailiwick.

So I think it is almost a problem which derives from Federation. I think you would almost go as far as that. At the same time, the answers that we have are not necessarily always the best answers in terms of mirror legislation, agreements and so on. Some agreements work very well and some perhaps not as well as others. I think the agreement we have with the Commonwealth on environmental protection has worked very, very well over the years. Perhaps Colin can advise you on the details of that one. I am not sure exactly what the date of that agreement was. It the mid-1970s, was it?

Mr Murray—1976.

Mr Suttie—So we are looking at 20 years of successful agreement of various governments in Canberra, various governments in Perth, notwithstanding working at a bureaucratic level pretty well. In other areas, I think there is probably room for disagreement and sometimes a disagreement revolves around how cautious you might want to be. Also I think there are some misconceptions and perhaps some of the steps we could take to minimise duplication could possibly involve a lot more travel for some of the public servants in Canberra, perhaps even for ourselves.

CHAIR—So, in terms of environmental matters, you do not see any unnecessary duplication or overlap?

Mr Suttie—Colin, would you like to answer that one?

Mr Murray—As Geoff indicated, the state and the Commonwealth reached an agreement in 1976 in relation to assessments related to Commonwealth jurisdiction, state jurisdiction and where there is joint jurisdiction. The inter-governmental agreement on environmental impact assessment, which is still in draft and is still being negotiated, carries that flavour forward.

The Kintyre project specifically is being done as a joint environmental assessment with the state and the Commonwealth under their separate legislation. The state, through the Department of Environmental Protection, is in fact coordinating that assessment. So there is a single coordinator. All submissions will go through the Department of Environmental Protection in Western Australia, and that is based on an agreement between the state and the Commonwealth at ministerial level.

The idea of having a joint assessment, since the statutory procedures are very similar in many cases, is to use a single document and a single process to allow each jurisdiction to report to their respective ministers. So the level of duplication is in fact minimised under that process. At the end of the day, you have state legislation and Commonwealth legislation which applies to the Kintyre project, but in terms of the environmental impact assessment process it is essentially a single process. So a lot of that potential for duplication has already been removed.

Mr Suttie—May I ask whether there is a view from DME on that?

Mr Carr—From Minerals and Energy, in terms of duplication, the feeling is that the state government has a process for management of mining operations—not just uranium mines, because there is a new uranium mine being proposed, but all mining projects come under the Mining Act. A process has been established over many years for management of these operations. The other state governments have the same sort of approach in their states. There is a lot of consultation between states to ensure that the management processes that are under way are the best in the state-of-the-art processes.

If we start looking at particular industries and mining projects and managing them in a different way, we will end up with a lot of confusion as to how the mining industry in this state is operated, because suddenly you are starting to single out certain parts of the industry to be managed separately. This would be of major concern. There are so many different aspects to be managed with a particular mining operation, whether it is the environmental issues, safety issues or transport of materials that come from the site. These are all handled under the normal state processes now and we expect them to continue as a normal approach. It avoids duplication within our own system by doing it that way.

CHAIR—The submission we have received from Canning Resources claims that the Rudall River National Park was ‘defined arbitrarily by latitude and longitude rather

than by natural features'. Would you agree with that?

Mr Carr—It was a large area of land that was the subject of an EPA red book recommendation in the early 1970s. This was a time when information on the environment of Western Australia was not nearly as good as it is now. It was a very remote area and it was felt there was a need to conserve an area that had various vegetation communities as well as the geomorphic landform of the catchment of the Rudall River. As a result, in a very arbitrary sense, a boundary was established.

CHAIR—So that means there could be areas inside the park that do not have any great environmental significance?

Mr Carr—Probably all of Australia has some environmental significance. Whatever proposals come up, we need to look at each project on its merits. We do not go out and say that that particular area does not have great environmental significance whereas that one does. When we are looking at particular proposals in this state, we look at what the implications are of that particular project and, in particular, what the environmental implications are with the process the client is involved with.

Mr Murray—If I might add, the Environment Protection Authority made recommendations to the state government in 1975 which essentially tried to establish a wide range of reserves for national park and nature conservation. Within what was called the system 12, which is essentially the deserts region of Western Australia, it made a number of recommendations, of which Rudall River was one. The boundaries of almost all of those areas were in fact defined by latitude and longitude, given that it is so hard in that country to define anything else. The intention certainly was to include all of the Rudall River catchment, but through the reserve system it was also intended to establish a reserve system which tried to protect a representation of the broad range of ecosystems and species present in the desert.

Mr Suttie—We could provide the appropriate part of the system study, if that would be helpful to you.

Mr Murray—I have it here.

CHAIR—Thank you. Was the Kintyre ore body originally within the national park area?

Mr Carr—Yes, it was just inside the northern boundary of the park.

Mr Suttie—When you say the Kintyre ore body, I think you have to look in terms of tenements rather than ore bodies. I think there is more there than just that one ore body.

Senator MARGETTS—There are other bits that are inside the park.

Mr Suttie—There are tenements covering a lot of the park, yes.

CHAIR—When was that removed from the park and what was the sort of process that occurred for that to happen?

Mr Carr—The process was one of reviewing the existing boundaries by looking at the catchment of the river itself. The tenements that were prospective were looked at. The aim was to ensure that the area of the park did not decrease through the change. Parliament reviewed the changes, which involved an excision of an area on the northern side of the park plus an addition on the western side. I think the area increased by a square kilometre or something like that.

CHAIR—Was that a ministerial decision in the first instance?

Mr Carr—It was a government decision, but then that had to be ratified by parliament. It had to go to both houses of parliament for that to be put into effect.

Senator BISHOP—If the mine site went ahead up there, which port would be used as a point of exit from Australia? Would you come down to Fremantle or would it be one of the northern ports?

Mr Suttie—The question of the port—the most obvious one, I guess, is Port Hedland—has not been determined as yet. The company has asked us to negotiate an agreement act with them and as part of that negotiation we are looking at options, everything from Darwin to perhaps even air transport. There are a lot of problems with quality of road, for instance.

Senator BISHOP—They are not hardtop roads up there, are they?

Mr Suttie—No. The question is whether it is safe to transport tonnes of yellowcake across a gravel road for hundreds of kilometres where it is bouncing around in the back of a truck or whether it is better to think of something else, perhaps coming into Fremantle or whatever. That has really got to be worked out and we have to be satisfied that what the company is proposing is in fact the best solution.

Senator BISHOP—Has the company put a proposal to you as yet or is the company still examining the options?

Mr Suttie—We are in touch with the company all the time in the sense that they are associated with Hamersley and Hamersley have agreements. The proposals have been discussed in the sense that the informal proposals awaiting an agreement act have been discussed and are being negotiated. At this stage we still have to go to cabinet and get some sort of endorsement to actually negotiate. Part of our procedure before we even start negotiating formally is to go to cabinet and get permission to negotiate.

Senator BISHOP—What sort of time frame do you see being involved in that process of taking it to cabinet, getting authority and resolving the negotiations?

Mr Suttie—The cabinet submission was actually put up before the election but got lost in the election, so we are going to have to put it up again. It could go up any time, as soon as ministers come back from leave and so on. My minister is in fact on leave at the moment, so we would not put it up without him. That is written, it is drafted and it is ready to be signed, so that could go up very quickly. The minimum it would take to get through cabinet would be about two or maybe three weeks.

Senator BISHOP—The issue of the point of exit is just one of a whole range of issues that need to be concluded, isn't it?

Mr Suttie—Yes. The Yeelirrie agreement is actually a public document. To give you a flavour of the sorts of things that have to be covered, the table of contents goes on for a number of pages. On the actual infrastructure, there is at least one clause on electricity, there are about three subclauses on alternative routes to get the product out and so on. Perhaps I can give you this one. Do you want this one? It would give you an idea of the range of things. We have three pages on alternative transport routes. We have four clauses just on transport.

Senator SANDY MACDONALD—The Yeelirrie agreement not only deals with Kintyre but deals with other projects as well.

Mr Suttie—We have an agreement for each project.

Senator SANDY MACDONALD—And the Yeelirrie is the agreement for—

Mr Suttie—For Yeelirrie.

Senator SANDY MACDONALD—But not Kintyre.

Mr Suttie—No, not for Kintyre. We have to negotiate one for Kintyre yet.

Senator SANDY MACDONALD—Is that what the submission to cabinet is going to be about?

Mr Suttie—That is right. We are going to ask cabinet for permission to negotiate on their behalf an agreement to cover the Kintyre project. When that agreement is negotiated, it will go back to cabinet for endorsement. If they are happy with it, it will go to parliament for ratification.

Senator BISHOP—The entire agreement goes to parliament for ratification?

Mr Suttie—Yes.

Senator BISHOP—A document of that size?

Mr Suttie—This is actually an act of the Western Australian parliament which ratifies the schedule, which is the agreement. The agreement is actually a schedule to the act.

Senator BISHOP—Would that cover things like health and safety, mining, transport, Aboriginal issues and land use and land access issues?

Mr Suttie—It can cover anything we want to put in it. If it is an issue which the government or the company wants to cover so we know where we stand on that issue before we start, then it goes in.

Senator BISHOP—Things like taxes and royalties, costs and charges?

Mr Suttie—Yes. If the company wants us to do things, it is going to cost us money, and we want to know that they are going to do their bit on the day too. So it is an agreement. We are not legislating for a project; we are agreeing with the project developer as to how the project will proceed.

CHAIR—Is this similar to the indenture agreement the South Australian government has with WMC for Roxby?

Mr Suttie—Yes. We use them to a far greater extent than anybody else in Australia. We have about 60 in operation at the moment, covering all the major projects from iron ore right through to North West Shelf, diamonds and nickel—pretty well everything.

Senator BISHOP—Mineral sands.

Mr Suttie—Yes.

Senator BISHOP—So your department would have developed a fair degree of expertise over the years in, one, anticipating problems and, two, identifying them and coming up with solutions for development of whatever the particular metal might be in this state?

Mr Suttie—Yes. We have been doing it for 30 or 40 years. I think the first one was in 1952. It was not called the Department of Resources Development in those days—it was something else. The original agreement covers the BP oil refinery at Kwinana, which still operates.

Senator BISHOP—Have you done any cost benefit analysis, particularly in reference to the benefits to the state of the go-ahead of this uranium mine site?

Mr Suttie—We have not done any cost benefit on Kintyre.

Senator BISHOP—Do you have any ballpark figures?

Mr Suttie—Not really. We have spent the last couple of years developing a computer model with the University of Western Australia to try to get a reasonable answer out of the cost benefit analysis. The difficulty is that the data is very hard to come up with, and the assumptions are very hard to live with sometimes. Also, you find the project changes as time goes on, whether it is in size or technology or whatever. The nearest we have got in the past is probably in multiplier effects flowing from projects; in other words, if you create a job at Kintyre, how many jobs you create somewhere else—Kalgoorlie, Fremantle or Port Hedland.

Senator BISHOP—If you are going into negotiations to negotiate a fairly lengthy document, you must have some idea of the cost of development of the site, the cost of state services that are likely to be provided and the benefit overall, if any, to both the company and the state; otherwise why would you be involved in negotiations?

Mr Suttie—The negotiation starts from a position of ‘What do you want from us?’ versus ‘What are you going to do for us?’ Then you make decisions. Let’s say you are in the middle of nowhere and you want power. What are the power options? Do you want Western Power to run a line to you for however long—that is going to cost you so much—or do you want to put in a generator yourself? That is going to cost you something else.

If the company wants money from the state government, then it is a different situation. We have a different set of criteria for incentives and grants and all that sort of stuff. We do not deal in those as a department. The Department of Commerce and Trade usually deals with those, and they usually only apply to companies in the manufacturing area. The mining companies do not normally look for money; they look for access and facilities and the use of facilities rather than the government providing them particularly.

For instance, in this particular situation, I understand that there is a proposal for a shared use of a road. We would be asking the companies for a contribution to a road which Main Roads will build on behalf of maybe three or four companies. Then we will put in there our bit about the standard of the road and so on. Obviously, the better the standard of road, the more expensive it will be and the more the companies will have to pay.

If the companies, for instance, want to build a town, because the state might be up for providing police services, or hospitals or whatever, you have got to know how much

they cost. But to go from there to a cost benefit model which is satisfactory to the economists is a big jump. They talk about shadow pricing and opportunity costs. What is the price of labour if the price of labour to the government is unemployment benefit? Is it worth our while having somebody off unemployment benefit working for somebody? Only if there is somebody already on unemployment benefit. Do you see what I mean? If there is no unemployment in the area, there is no particular benefit. When you jump from the project analysis to the cost benefit for the state, then there are a lot of other assumptions which come into the equation. I am not really expert enough to describe them; you would have to talk to the economists about those.

Senator BISHOP—And your department does not do any work on that aspect?

Mr Suttie—Yes. We are trying to. We have commissioned the UWA—and Murdoch University had a go at it as well—to second-guess our model. We developed the model ourselves. We got it assessed by Murdoch and then we subsequently got it reassessed by UWA. We are using it on a couple of other projects at the moment. Eventually, I suppose, if Kintyre heads for a certain spot in the process, we will try to run that. But there are other projects occupying our time at the moment.

Senator MARGETTS—Your submission to the committee was fairly brief. The submission that I am referring to largely is the Department of Minerals and Energy submission. There is an abstract which is included on the regulation of radiation protection of mining in Australia. I gather, especially from point (b), that the Department of Minerals and Energy reported on the role and functions of the Office of the Supervising Scientist several years ago. The department's view has not changed. Briefly, you believe that pseudo regulatory agencies should not be constructed since companies needed clear regulation from a single authority; that state authorities are the most appropriate agencies to provide this regulation.

Given that the submission is brief and that the paper given in support of that was actually written by people from Darwin and South Australia, as well as by G.S. Hewson who, I gather, is no longer with the Department of Minerals and Energy, where is that body of expertise in Western Australia now that has the ability to oversee uranium mining?

Mr Suttie—Have you a view on that?

Mr Marshman—At the moment, Greg is off with Western Mining on 14 months secondment to them. That leaves Hazel and I looking after the radiation safety of mineral sands workers and prospective uranium mine workers. The Western Australian Department of Health also has people who are competent in radiation safety. They look after the industrial radiation safety and we look after the mining. Hazel has worked for some 10 years in radiation safety and I have worked for nearly 24 years which includes 10 years as radiation safety officer for Nabalek Mining.

Senator MARGETTS—One would think, to put a strong argument to the committee, that the Western Australian government bodies, including the Department of Minerals and Energy, were on top of the various community concerns in relation to uranium mining. One would think that you would have presented a submission to the committee which indicated the specific knowledge you have of the proposed uranium mines in Western Australia and how the various departments, particularly the Department of Minerals and Energy, were going to be handling it or be capable of handling that area. There does not seem to be that information provided to the committee.

Is there anything that can give weight to the claim that there is that knowledge, experience and background in the Department of Minerals and Energy and the resources to look after the levels of concern that people have about the various aspects of uranium mining?

Mr Marshman—For the last 10 years the Department of Minerals and Energy has been in control of the mineral sands operations which have a similar radioactive content to uranium mining. Since the department has taken that over the doses in the mineral sands industry have decreased tremendously. We have published data on this. I have some data with me at the moment which shows the doses over the last 10 years.

Most of the regulation of the mineral sands industry came under the Code of Practice on Radiation Protection and Mining and Milling which was amended in 1987. In 1994 the Mine Safety and Inspection Act was promulgated. In 1995 we got the Mine Safety (Inspection) Regulations. Previously, the 1987 code was part of the mine safety regulations. Because of some Ruben philosophy or something, you do not put codes of practice in regulations any more. So the whole Mine Safety (Inspection) Regulations were amended in 1995.

With radiation safety, we adopted the latest recommendations of the National Health and Medical Research Council and Worksafe. There is a document on the new dose limits and how to go about putting them into practice. We have taken the guts of that and put it into our regulations.

Mr Price—I do not think that was an answer to the Senator's question. Would it be sufficient for us to give you a statement detailing the competence of the people and the process followed by the department to manage radiation safety? I think that was what you were after, was it not?

Senator MARGETTS—Yes, and I think it is also, for me, some recognition of the kind of mining environment in Western Australia. Each mine proposal is different and there are different issues and different situations in each mine environment. I would have thought that part of what DME would be presenting to this committee is some sort of evidence of the thinking through of the process of how you are going to be handling this specific situation. I do not think 'We have worked in mineral sands mining' is quite what the community is looking for in terms of uranium.

One of the points that I am thinking about is that in this supporting document you have left it to the Northern Territory and, in part, South Australia to deal with their experience in uranium mining. The Department of Minerals and Energy in the Northern Territory has got three main objectives in monitoring the mining industry. Those three objectives are: ensure the current radiation protection monitoring program complies with relevant legislation; ensure that the company's monitoring program is implemented satisfactorily; and ensure that the company's application for changes consider adequately relevant aspects of radiation safety.

What that basically says to me is 'Do what we are required under legislation to do' whereas there have been statements by companies, including CRA, saying that they have done more than is necessary. When you look further at that you find that there has not been many specific tight environmental requirements. There is no actual individual monitoring of workers so that people know exactly how much dosage each uranium worker actually gets.

If what you end up with is a department whose role, if it is anything like the Northern Territory role—you have not been able to tell me any differently—is to abide by the level of government regulation, then basically it might simply be that we do the minimum. I understand that environmentally the inspectorate is very large in the north of Western Australia. There is not a very large budget for that inspectorate and not a very large travel allowance. Basically, environmentally the inspectorate can only visit the site perhaps a couple of times a year or maybe more, but you might be able to correct me on that.

I do not know what kind of resources or extra resources you would put in if there is a current uranium mine. None of that information is provided by you saying, 'Oh, it is very short, just one A4 page.' It is something that other states revolve with and none of those people are currently involved with the statement.

Mr Price—Correct me if I am wrong, but you would want from the department a statement to the effect, 'This is how we would administer. These are the statutes that we have. They cover these areas and this is how we would administer them. These are the competencies of the people who would be administering it.' Is that what you are after?

Senator MARGETTS—I do not think it is a matter of what I want. I just find it extraordinary that as a body you are arguing that the federal government or federal departments ought to stay out of uranium mining. There is nothing that you have presented here which has indicated that you are actually putting that argument strongly or that you are taking community concerns along and addressing those in the specific instance of the proposed uranium mine in Western Australia. There is no mention of the proposed uranium mine in Western Australia.

I do not know what extra resources would or should be provided or that you will

be providing in those sorts of instances. So it is not a matter of what I want. I am just wondering how you are going to argue to the community in Western Australia more strongly than that which you have presented in your submission.

Mr Marshman—My impression is that people come and go. So long as the regulations are there to control the operation of the mine and they regulate the health and safety of employees and the environmental concerns, that regulation is there. It is up to the government of the day to employ competent people to enforce those rules.

Senator MARGETTS—We have a very strong corporate sector in Western Australia. It is sometimes very difficult in a remote area for individual inspectors to make sure that companies are in fact abiding not only by the letter of the law but by the full spirit of the law. We have also had major changes federally which, in my opinion, make industrial work and safety harder to enforce but also harder for workers to report. Will there be any changes to the operations of workers' health and safety to accommodate those kinds of changes?

Mr Marshman—The main focus of the Mine Safety (Inspection) Regulations is on health and safety representatives. Each mine site has got committees which has got several members of the work force on it and they report back through to the mine manager in that way. The way that radiation safety is looked after on the mine sites is that each company has an authorised monitoring program. The inspectors go out and check that as often as necessary and we do audits on those measures.

Ms Upton—Not only do they have to report to us on their monitoring program which we then review but also we can go out and make our own measurements and independently confirm that measurements that we have got are the same within a statistical variation as the measurements the company are reporting to us. There is also the Radiological Council of Western Australian and the Occupational Radiation Health Section of the Department of Minerals and Energy also reports on an annual basis to the Radiological Council. So we do have another independent body who can oversee to a certain extent what we also do.

Senator MARGETTS—What sorts of measurements would you take of a mine involving radioactive material and how often would you do that?

Mr Marshman—It depends on the processes involved. Obviously, if it is a wet process, there is not going to be much dust. The main hazard from uranium mining is in the actual mining where there is possibly some dust in product handling. There is a possibility of dust. In sample preparation there is a possibility of dust. The normal process in the uranium mine is that is a wet process and the material is wet through most of that process. There is a possibility of gamma exposure, but if the mill is designed properly then that exposure is minimised.

Senator MARGETTS—And what about radon?

Mr Marshman—The radon measurements that have been taken in the processing plants and open-cut mines have been negligible.

Senator MARGETTS—No. I am asking what measurements you take. The question was: is there a danger? I am asking what measurements you take.

Mr Marshman—There will be airborne measurements or air concentrations taken for radon, but to my knowledge from the measurements that have been taken so far in the uranium mines the radon has not been a problem.

Senator MARGETTS—I am sorry, that is not the question I asked.

Ms Upton—We would independently check whatever measurements the company are required to undertake. So, if there are dust measurements in plants or personal dust measurements, we would also on inspection take those. The people who would be working on the mine would have one-monthly or three-monthly TLD badges. That would have to be organised at a later stage. Obviously we could not do anything like that on a one- or two-day inspection, but we would take gamma measurements using portable radiation monitors which can actually be correlated with TLD measurements at a later stage.

We would take radon measurements in one form or another. They may be slightly different to the way the company are required to do it, given the fact that they are there for 12 months of the year, but we could do one of the other forms of radon measurements to ensure that we were getting some other results.

Senator MARGETTS—And what about alpha measures? How would you check those?

Ms Upton—They are personal dust results or positional dust monitoring. You wait for a short time and then you count them on an alpha counter. The process that is currently in place with the mineral sands companies is that every three months we visit them and randomly take 20 of their samples that they have collected over the preceding three months. We then count them in our own alpha equipment, and again we undertake a statistical test to ensure that the results that we get are the same as theirs within 95 per cent competency.

Senator MARGETTS—But you are not doing your own primary testing?

Ms Upton—We will take our own dust samples as well.

Senator MARGETTS—Can I just get it right. You do not actually do your own radon testing?

Ms Upton—There is no need for us to do radon testing in the mineral sands industry at this stage.

Senator MARGETTS—No, but this is uranium mining.

Ms Upton—Yes.

Mr Marshman—We do not have any uranium mines in Western Australia at the moment.

Senator MARGETTS—I do know that, yes.

Ms Upton—If a uranium mine was to go ahead, we do have the facilities and equipment to undertake our own independent radon monitoring.

Senator MARGETTS—And how often would that take place, do you think?

Mr Marshman—As often as necessary.

Senator MARGETTS—Would there be extra resources provided to allow such testing to go on on a regular basis?

Mr Marshman—There would be no need for that because we would be auditing the company's monitoring system. We would go up with perhaps an integrating monitor which may last for a week and accept the results from that. The monitors we envisage using will be calibrated to an Australian standard.

Senator MARGETTS—And you have absolute confidence that companies will keep on their records any damaging information of readings that they may receive?

Mr Marshman—Yes.

Ms Upton—Yes, we do. We have confidence in the ability of the people who would be appointed as radiation safety officers for the site as we do with radiation safety officers we have at the mineral sands sites.

Senator MARGETTS—Evidence we received in relation to the Ranger uranium mine indicated that when an independent assessment took place at Ranger in terms of the level of radiation their assessment was in fact considerably higher than the mine's assessment. Could you account for the fact that an independent assessor came up with higher readings than the company was assessing?

Mr Marshman—It depends on the level of assessment they did. The frequency of monitoring programs that we give to mineral sands—if we could concentrate on that at the

moment—means that what they achieve is probably a lot more than an independent assessment would show up. What we rely on for mineral sands is what we call a worker category exposure where the exposure from a lot of employees within different work categories is assembled and then the mean dose or mean exposure for that work category is attributed to the whole work category. An independent assessment may go up and take one or two dust measurements which may indicate a higher assessment than the mean.

Senator MARGETTS—In terms of individual worker's health, however, do you think it is satisfactory that averages are used so often in this industry, rather than some idea of what an individual is exposed to?

Mr Marshman—In the system of recording the dust measurements, we can go back and look at each individual's dust exposure as well, as well as a work category. If it is such that an individual exceeds, say, three-tenths of the limit, then they are subject to an individual assessment.

Senator MARGETTS—But the dust measurements on an individual are only done about every three months, are they not?

Mr Marshman—No, they are not.

Senator MARGETTS—The sample dust breathing—

Mr Marshman—Dust samples, yes. They are not done every three months. A TLD is issued—that is an integrating device for gamma exposure—

Senator MARGETTS—That does not measure dust.

Mr Marshman—I know that. That is issued for up to three months. A personal dust sample is taken over a 10-hour shift and, depending on which work category it is, with the monitoring program we have got the frequency of monitoring is a lot more than one every three months.

Senator MARGETTS—Okay, so it might be one every month?

Mr Marshman—Yes, depending on what work category they are in. If they are subject to individual exposure, then they are required to be sampled for 20 per cent of the time, which is one sample per week.

Senator MARGETTS—What I am trying to establish is that there is no actual measurement of a person's actual radiation exposure. You are still, whether it is an individual worker or across the work force, working on averages.

Mr Marshman—You would not expect an individual to wear a dust pump for 100

per cent of his work time.

Senator MARGETTS—That is what I was trying to establish.

Ms Upton—However, research is being undertaken on behalf of the department looking into individual dust assessment. At this stage, it is primarily for the mineral sands industry, but if this research goes ahead that will be an individual assessment used for all the workers on mineral sands sites.

Senator MARGETTS—Thank you.

Senator SANDY MACDONALD—What was the date of the Yeelirrie agreement? When was it proposed and when was it finished?

Mr Suttie—I have given you my copies. It was actually passed by the parliament in 1978 and negotiations probably started a bit earlier.

Senator SANDY MACDONALD—So was it done during the previous Liberal-National Party government?

Mr Suttie—It was done before the three mines policy came in.

Senator SANDY MACDONALD—On the ore body at Kintyre, when questioned about whether the ore body was in the Rudall River National Park, you said some of the tenements were. Can you explain, if it is a national park, how there are tenements within the park?

Mr Carr—All land in Western Australia is open for mineral exploration and potentially for mining. Under the Mining Act, certain categories of land are recognised and different approaches are taken in terms of approval for access, depending on the type of land. For private land, you need to have the approval of the land-holder before the access is granted. For various crown lands, the manager of the land is involved in the discussions on access and the conditions that would apply.

For areas such as national parks, it requires the concurrence of the minister for the environment before mineral exploration or mining activities can take place. Any mining activity in a national park also requires the concurrence of parliament.

Senator SANDY MACDONALD—So the creation of a national park does not preclude the possibility of exploration and mining?

Mr Carr—That is right.

Senator SANDY MACDONALD—So why was a decision made to exclude those

tenements from the Rudall River National Park and add some more? You said that there was some change made.

Mr Suttie—No, a change was made to the boundaries of the national park.

Senator SANDY MACDONALD—For what reason?

Mr Carr—A choice had to be made at what stage it went to parliament and it was decided that that was an appropriate time, at an early stage in the feasibility studies for the project. But that still does not in any way reduce the degree of rigour on the environmental impact assessment work that would be being done for the project. That is done quite independently of the land tenure.

Senator SANDY MACDONALD—Is there anything unique about Kintyre that would make the Western Australian government provide special conditions for its development?

Mr Suttie—I think rather than being unique it contains a number of issues which are common to remote mining in Western Australia; for instance, the issue of whether there should be a town site or not. Twenty years ago there would probably have been no argument at all. There would have been a town site of some sort, whether it was a brand new one or an extension to an existing one. Nowadays, in the 1990s, because we have so many operations using a fly-in, fly-out method, we have now got to look at the consequences of fly-in, fly-out on that particular location and also the base location: would the base location be Perth, Geraldton, Paraburdoo or Hedland? We do not know at this stage if it is going to be fly-in, fly-out.

That sort of issue comes up continually nowadays in remote areas: how do we actually get the miners to site and away from site? It is very difficult to direct people to live in a particular place, so we tend to rely very much on the social impacts. It might, in certain circumstances, be very beneficial not to have people living in a certain community, for instance. It might be equally low cost to put in an airstrip and a set of portable single men's quarters or something like that and have the families somewhere else.

Senator SANDY MACDONALD—Mr Marshman is ideally qualified to explain the fly-in, fly-out at Narbalek.

Mr Marshman—Narbalek was the first fly-in, fly-out mine in Australia, I believe. Our families were in Darwin. We flew out to site, stayed there for six days at a time and went back to Darwin. There is a document which the department has published on the effects of fly-in, fly-out operations on the workers and their families. I do not have a copy of it at the moment, but it has been looked into, yes.

CHAIR—Can I interrupt? You have mentioned there may be benefits from fly-in,

fly-out in terms of aspects of the community, but obviously there are also some disadvantages, particularly in state development and decentralisation if the fly-in, fly-out technique is used. Have you got any on-balance attitude to that as it goes?

Mr Suttie—I think you are exactly right: it is a balance between the social impact and the economic impact. I think having 80 miners' families deposited in your community can be quite traumatic—whether it is a farming community or any other sort of community. Certainly, in an Aboriginal community trying to absorb such would be very difficult. On the economic side, you are looking at perhaps considerable savings versus setting up the sort of town site that we expect nowadays which might involve swimming pools, libraries, police stations, schools and so on.

Senator FERGUSON—Especially with the existing fringe benefits tax.

Mr Suttie—It is a factor, yes.

Senator SANDY MACDONALD—I have just one final question. Like most of the committee, I guess, I have an awareness of the number of competing Aboriginal interests in the Kintyre area. But is it a fair question to ask you whether Kintyre can proceed without Aboriginal agreement?

Mr Suttie—A fair question?

Senator SANDY MACDONALD—Whether it is a fair question or not, it is my question.

Mr Carr—Because this is subject to the Native Title Act, we have to go through a process of gaining agreement—either that or determination by the Native Title Tribunal. This whole process of looking at the grant of the mining leases that would be required before there can be any consideration of mining is one that is subject to negotiations under the Native Title Act at the moment. All the different issues that we have been raising today will probably be emerging through that process as well. The Western Australian government has been rigorous in following the detail of the Native Title Act to ensure there is no question when tenements are granted about the legalities of them. The only way you can do that is to gain the agreement of the Aboriginal people or have a determination by the tribunal. In this particular case, the tribunal is the mediator for negotiations.

Senator FERGUSON—We seem to have spent a lot of time talking about proposed or future proposed and prospective uranium sites or mines in Western Australia—I suppose we cannot talk about many others, because you have been precluded from mining uranium for a fair while—when, in fact, our terms of reference concentrate a lot on existing and previous mines, the environmental impact and the effects on health. I would like to continue along the line that we have been on because it seems as though

that is where many of the questions are.

I think you mentioned in your opening statement that nine uranium mines have already been identified. We have mostly only talked about Kintyre today. What is the extent of the uranium ore that has been discovered, and what sort of impact will that have if each of these nine mines were economically viable—I do not know whether you expect that or not? What sort of impact would that have on Australia's uranium production in total?

Mr Suttie—I was very careful to describe them as potential mines in my opening statement. We know the resource is indicated in certain locations across Western Australia, but at this stage it is very difficult to speculate about how or why any particular one might come on line.

The marketing of a product, whether it is uranium or whatever, tends to be slightly beyond our immediate expertise. Whilst we know the resource is in the ground, we rely on the private sector coming to us and saying, 'Now is the time' or 'Now is not the time to develop the resource.' Uranium is unusual in the sense that, with this particular resource, government has said that now is not the time to develop the resource in Western Australia. That is the three mines policy from the federal government.

Otherwise, in the absence of that policy, the assessment of whether it is a good idea to develop a particular resource comes from the private sector. Our job is to make sure they are financially sound enough—and a lot of other things about them—before we say it is okay to go ahead and develop that resource. We are not really in the business of saying that we have an expert judgment on markets. We have opinions and we independently check markets and so on, especially if it is very important to us, like Japanese steel production, but we are certainly not expert enough to say, 'This will develop at a particular time,' or not. We rely on companies coming to us and saying, 'We now want to develop.'

Senator FERGUSON—The reason I ask is that it would seem over recent times—you are talking about uranium deposits having been identified—that success, if you use Roxby Downs or Olympic Dam as a guide, is a copper mine that produces uranium. Eighty per cent of their production is copper, not uranium. When you say that nine potential uranium mines have been identified, are you talking about mines where the majority of their production would be uranium, or other minerals are present? Is there any knowledge of that at all?

Mr Suttie—No. All we are saying is that there are resources in the ground that could potentially lead to mining. Whether there is anything else there, I do not know.

Mr Carr—These are identified as uranium resources. A number of the deposits do have other metals associated with them, but they are identified as uranium resources and

they may be mined for their uranium.

Senator FERGUSON—In relation to Kintyre, I guess those sorts of questions would be better asked of Canning Resources.

Mr Suttie—We did an article in our magazine, which describes the situation better than I have described it. You might find it useful. I will get a copy for you. It is a very simple article which looks at Western Australia—Kintyre, Yeelirrie, Mulga Rock and all the other ones.

Senator FERGUSON—If the department is expected to have expertise in health and safety and other effects, is it fair to say that you would have to get all of that expertise currently from the experience of other mining sites throughout Australia or through your mineral sands? It is not the same, is it?

Mr Marshman—It is treated the same; the monitoring techniques are the same. In Western Australia the expertise has developed through modern uranium mining as opposed to the old methods of mining. Those people have filtered up through the system. In Western Australia several of those people have come through the mines department.

Senator FERGUSON—You have been involved in health and safety in regard to uranium mining for 25 years. How would you describe the current monitoring and health checks compared to what there was even 10 years ago?

Mr Marshman—The techniques are the same because you are dust sampling. Some of the tools that we are using are a lot better. We have discovered that you do your dust monitoring to identify possible areas of hazard and then you fix up those hazard areas. Monitoring of work is there to look at not only the doses they receive but how they are received. If there are situations where it can be excessive, we fix that before it does become a problem.

Senator BISHOP—Are there any Aboriginal groups or peoples resident at or around the proposed mine site currently? If not, what sort of time frame are we talking about in which they have left previously occupied lands? Who would be able to advise on that?

Mr Murray—I think you should talk to the company. My understanding is that there are no Aborigines who currently live on site. There are two communities within 120 kilometres. Both communities are within the Rudall River National Park. Whether and when Aborigines may have actually lived on that site previously, I could not advise you.

Senator BISHOP—Can anyone assist with whether Aboriginal communities have previously lived on the mine site?

Mr Marshman—In the Northern Territory at Nabarlek?

Senator BISHOP—No, in Kintyre.

Mr Carr—I am not aware of people living at the mine site. The thing about that country is that people might have migrated through there for thousands of years. In a way, it is an unnatural situation at the moment of two fixed communities. Normally Aboriginal people have moved through the desert. You may have heard of song lines or song cycles. People move through the country depending on the seasons and the resources. It is their way of surviving. That is why they have been able to have a good life for many thousands of years. It is basically by moving through all that country. That is really what is being recognised through the Native Title Act and claims. Hence, the Western Australian government, the company and three claimant groups are in negotiation at the moment because the claimant groups feel that this mine site or where these mining applications are is within that area that they move through.

Mr Suttie—Without expanding on what has been said, I think there are two or three communities that are certainly identifiable up there. The main concern is the groups now coming forward with native title claims being far more significant.

Senator BISHOP—What do you understand to be the concerns of those various Aboriginal communities that move through those areas? Have they given you that knowledge?

Mr Suttie—The only information I have personally is the Western Desert submission which, as I indicated in my opening statement, raised similar concerns to those that almost anybody who had a uranium mine starting up in their backyard would raise.

At the same time there is a responsibility on the state government to make sure, as it would for any community, that the community is reassured about what is happening and what information is provided. That is why we have categorised this particular project as requiring an environmental review and management program, which is the highest level of environmental assessment that the state provides in conjunction with the Commonwealth EIS, which I gather is the highest level the Commonwealth provides. A lot of our information in public consultation will come from that process. It is a very well-developed process which we have used previously on numerous occasions.

Senator MARGETTS—Can somebody update me on whether or not there was research? I gather this 1992 paper indicated that there was research being done on the use of bio-assay techniques for lung counting, thorium inbreath management and blood and urine monitoring in an endeavour to improve existing internal dose estimates. Can somebody give me an update on how far that has progressed?

Mr Marshman—We are improving it for the thorium inbreath technique. If a worker has inhaled any radioactive dust and deposits in the dust, the thorium is given off—in the case of uranium, it would be radon. We are improving that technique at the

moment to ensure that it gives us an accurate assessment of the worker's exposure. That is the only bio-assay stuff done at the moment. Back in 1992 they were looking at blood, urine and faeces. We have not done any more work on that. We are concentrating on the thorium inbreath, which is much less invasive to the privacy of the individuals.

Senator MARGETTS—Is that actually being used on mine sites now?

Mr Marshman—No, we are still proving it. We have gone through several mineral sands mines with the subsample of these individuals, but we have to prove the technique before we put it into practice.

Senator MARGETTS—It was my understanding that when the radiation levels were to go down to 20 millisieverts per year—which they have—they were hoping these processes would be in place.

Mr Marshman—I cannot say whether it would or not, but at the moment we are still proving that technique. The dose assessments are done by dust sampling and TLD measurements.

Ms Upton—There is a radiation working party under the Occupational Health and Safety Standing Committee, which has been set up with representatives from industry. There are representatives from the TLC and also the department. There is also an external person looking into what else needs to be done with the thorium inbreath technique before it can actually go into the mine sites for the use of dose assessment. So that is the state it is at now.

CHAIR—If there are no further questions, I thank all of you for appearing before the committee this morning and for the information you have provided. If there are any further issues that arise out of our consideration of your evidence, we will contact you and ask for a response in writing. Thank you.

[10.46 a.m.]

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CHAIR—I welcome representatives of the Western Australian Chamber of Minerals and Energy and, jointly appearing with them, representatives of Canning Resources Ltd. We have before us your submissions—in the case of Canning Resources, submission No. 65, and, in the case of the chamber, submission No. 51—which will be published in a separate volume. Do you wish to make opening statements?

Mr Gauci—We have submitted some extra documents to the committee, which you should all have a copy of. This includes a copy of my opening statement, plus a brochure which explains in detail some aspects of the Kintyre uranium project. There is a copy of the 1995 RTZ-CRA annual report. There is a copy of a report by Access Economics entitled *A new opportunity for Australia*, written in July 1994. We have also included the CRA's Aboriginal and Torres Strait Islander people policy, the CRA environmental policy and code of practice, and the CRA safe work philosophies.

Since the submission was made in July 1996 there have been some developments, so I would like to bring the committee up to date with the project with a brief opening statement. Canning Resources Pty Ltd is a wholly owned subsidiary of CRA and a member of the RTZ-CRA group. It was established in 1987 to develop the Kintyre uranium deposit. The deposit was discovered in 1985.

Project evaluation is through an extensive drilling program and metallurgical assessments culminated in a pre-feasibility study completed in 1989 at a cost of \$25 million. Sufficient resources were identified to justify at least a 10-year project. The Labor Party's three mines policy prevented further development of the project and drilling was terminated. The mineralisation is open at both ends and at depth with a strong possibility of increasing the resource with further drilling. Other developmental work ceased and the project was placed under care and maintenance in 1991.

Changing government in 1996 removed the major barrier to Kintyre's development,

and management approved the Kintyre advancement program to revisit the project evaluation and advance it to the stage of a full economic assessment sufficient to seek board approval to proceed to the development and production.

The Kintyre advancement program includes a complete review of the technical parameters and the completion of a full feasibility study. It also conducted an environmental program to seek approval from both state and federal governments. We wish to include accommodation with the Aboriginal traditional owners and the neighbouring communities. Finally, we needed to visit the utilities around the world hoping that we could interest them in purchasing our product.

The program is expected to be completed in the final quarter of 1997 when board approval will be sought to progress the project to the production phase in late 1999. The project is currently designed to produce 1,500 metric tonnes of U308 per year for a period of 15 years. The total export revenue over this period is estimated to be in excess of \$1 billion in today's dollars.

With respect to the environment, CRA has a corporate environmental management system based on international standard 14001. An environmental code of practice has been put in place throughout its entire operations. In 1991 our exploration team received the West Australian Minister of Mines Award of Excellence for their overall commitment to minimising the impact of exploration activities in the region.

Our experience in mining and milling of uranium dates back to 1955 with the Mary Kathleen project in Queensland. The mine was closed down in 1982. A rehabilitation program, costing \$19.5 million, was completed in 1985. Subsequently, it won the Institute of Engineers Award in 1986 for environmental excellence.

With respect to Aboriginal communities, it is CRA's policy of accommodating the interests of Aboriginal people, and I think this policy is well known. Argyle Diamonds and Hamersley Iron have set strong examples in Western Australia with programs of employment and training, cross-cultural awareness and assistance with business opportunities.

Canning Resources will use these models and seek input from Aboriginal people to develop and maintain a longstanding partnership with the Aboriginals in the region. Our relationship with Aboriginal people in the region has been one of friendship and mutual respect over the past 10 years. Through the current negotiations under the Native Title Act, we are confident that we can cement these relationships for the benefit of Australia, Canning Resources and the Aboriginal people in the region.

With respect to occupational health and safety, a comprehensive occupational health and safety system based on the National Occupational Safety Association—better known as NOSA—is being developed for the Kintyre project. The system incorporates

measurement of performance, review of systems, involvement of a total work force, periodic, internal and external audits, and reporting through to senior management and ultimately to the board of CRA.

The codes of practice governing radiation management will be integrated into the system to ensure involvement and accountability throughout the organisation. The Kintyre project will be a small, open pit mining operation similar in size to many of the small goldmining projects scattered throughout Western Australia. An innovative process flow sheet will ensure a compact processing facility covering an area of less than 10 hectares. The project will operate on a fly-in, fly-out mode and there will be a closed site with no private vehicles allowed on that site. This will ensure minimal contact with neighbouring communities, the closest of which is 80 kilometres from the project area. The permanent work force will be some 80 people plus 40 to 50 contract personnel.

Australia is among the world's best in environmental and radiation management in the mining and milling of uranium. This has been well demonstrated by both visits to international operations and by international experts commenting on our current operations. Canning Resources is resolved to maintain the record and will strive through its own personnel to continuously improve upon the current performances. That concludes my statement.

CHAIR—Mr Clough, do you wish to make an opening statement on behalf of the chamber?

Mr Clough—Yes. The Chamber of Minerals and Energy of Western Australia is the peak industry body for the minerals industry in this state. It represents the collective interests of more than 130 companies involved in minerals and energy exploration, production and processing in the state.

The WA minerals industry is a major contributor to the state economy. More than 50 different minerals are in commercial production in this state, with about 300 mining projects producing about \$15 billion in 1995. Furthermore, the industry accounts for approximately three-quarters of the states exports and two-thirds of WA private investment.

The WA community benefits financially and socially through employment and other economic activities that flow from mineral developments. Of every dollar spent by the mining industry, 54c goes to suppliers, 12c goes to state and federal governments in royalties and taxes, 12c goes to employees as after tax wages, 9c goes on depreciation and other losses, 3c goes to pay interest on borrowings and the remaining 10c goes to the industry by way of profit which is used for further mineral development or return to shareholders by way of dividends as a return on their investment. That is not specific to the uranium industry, but it gives some indication of the flow-on effects that mining produces.

Furthermore, a recent study by the Economic Research Centre at the University of WA has shown that, for each additional \$1 million in mineral output, a further \$1 million of output is generated in the non-mining sector. For each additional \$1 million in wages paid in the minerals industry, nearly \$2 million in wages is generated in other industries. For each new job in the minerals industry, three jobs are created elsewhere.

Access Economics has estimated that expansion of Australia's uranium industry under an open mine policy would see national exports increase from \$120 million in 1994 to \$1 billion in 2004. A significant proportion of that additional production could be provided from Western Australia. The chamber therefore believes that there are compelling reasons why new mineral developments which can comply with the necessary environmental, social and safety requirements should proceed.

Looking at uranium mining, there currently are no operating uranium mines in Western Australia. However, several deposits have been identified and at least one company, Canning Resources, is proposing to mine in the near future. Within Western Australia the environmental impact assessments carried out by the industry are extensive and the states approval processes are rigorous. The ability to comply with, and often exceed, the environmental and rehabilitation requirements is demonstrably evident throughout the minerals industry in this state. The environmental management records of the two existing uranium mines are excellent, and we believe any developments within Western Australia can only add to the industry's reputation as an excellent and responsible environmental manager.

The potential uranium mines in Western Australia are located in areas where Aboriginal relationships, employment, heritage and native title are important issues. The chamber is confident that these issues can be addressed in a cooperative manner between the companies and the communities involved, as they have been and continue to be at other sites throughout the state.

Other than the additional issue of radiation exposure, the uranium mining industry faces similar occupational health and safety issues to those faced by the rest of the Western Australian minerals industry. The industry in this state is widely acknowledged as a world leader in occupational health and safety. Over the last 30 years, injuries per 1,000 employees has fallen by a factor of 10. The industry now attracts the lowest workers compensation premium of any major industry sector in W.A. and, to our knowledge, it attracts the lowest premium of any mining industry in the world.

In assessing the issue of radiation exposure, it should be noted that the annual radiation exposure levels at both mines are in the order of five millisieverts for the most exposed workers, compared to the recommended annual limit of 20, averaged over five years. It should also be noted that Ranger holds a five-star safety rating from the National Safety Council of Australia and that Olympic Dam has been recognised for its safety achievements.

Within this state the Mine Safety Inspection Act and regulations and the Radiation Safety Inspection Act and regulations govern the management of radiation safety. The chamber believes that the uranium industry in Western Australia will achieve similar standards to those at existing mine sites. In summary, the chamber then believes that mining and milling of uranium in Western Australia will produce a significant benefit for this state, and that the processes involved can be carried out in an environmentally, socially and safe way.

CHAIR—Thank you. With regard to both Commonwealth and state processes for securing approval to mine uranium in relation to environmental and other matters, do you see any unnecessary overlap or duplication occurring?

Mr Gauci—Overlap of our requirements?

CHAIR—The requirements that you need to meet, at both the Commonwealth and state level, before you can proceed with mining.

Mr Gauci—No, there is no overlap. We will be providing an environmental review and management program to the state EPA for their approval, and that document will be an environmental impact statement for the federal EPA. Both these documents will be essentially the same.

CHAIR—So, from your perspective, there is nothing that can be done to improve the process that is required for approval?

Mr Gauci—No. In fact, when we applied for approval to proceed with the project, we recommended that this project be given the highest level of assessment, which is ERNP and EIS.

CHAIR—Is there any comment from the chamber on that? In terms of monitoring the impact of mining, milling and the other related activities of the mine, what arrangements will be put in place to monitor those impacts?

Mr Gauci—We now are in the process of developing our environmental review and management program. These procedures are still evolving in discussions with both the state and federal governments. We don't have set procedures in place, but we are going through those procedures to ensure that they do abide by the necessary legislation of both state and federal governments. They will be stringent because our first objective is to ensure that our own people working on the operation are not exposed to any unnecessary hazards, nor the country or community surrounding us be exposed to any unnecessary hazards or damage.

In addition to that, even within CRA the regulations, as you can see by those documents which we have provided, are very severe. I do appreciate the work of the CRA

and I would like to continue working with them. Keeping within the regulations provided by CRA, both internal audit and external audit, on the occupational health and safety environment, which are pretty excessive, will be a big challenge for us.

CHAIR—As you are probably aware, the Office of the Supervising Scientist has a particular role in the Kakadu region of the Northern Territory with regard to monitoring aspects of the uranium mines in that area. Do you believe that there should be a role for the Office of the Supervising Scientist beyond the Northern Territory in relation to uranium mining?

Mr Larson—We don't believe that there is any need for the Office of the Supervising Scientist to be involved in the process here in Western Australia principally because we have authorities here in Western Australia that have very strong proven track records in the management of the environment in Western Australia. There is also the control of the Mines Department which has the authority to ensure that those strict regulations are complied with.

In the case of the Northern Territory, the Office of the Supervising Scientist was put in there because at the time the Northern Territory had no regulatory authority and, being a territory, it was controlled by the Commonwealth. There was obviously a need to do something when uranium mining developed in an environmentally sensitive area. That was an appropriate action to take, but that does not necessarily mean that it should be taken and extended into other parts of Australia when you already have state government bodies in place to monitor that and that also then fit in with the Commonwealth regulations and processes.

I guess it is also fair to say that back in those times of the development there was a restrictive policy in place to prevent the development of uranium mining and a Labor government was controlling the export licences. There was no alternative but to have something like the Office of the Supervising Scientist put in place.

CHAIR—I take it from your submission that the expected life of the mine is 20 years?

Mr Gauci—With current resources we believe we have sufficient ore to run for 15 years, but we are quite confident that there is more ore there. Once we establish some sort of cash flow we will be looking to extend those resources. Currently, we are looking at 15 years, but it could possibly go past then.

CHAIR—What proposals do you have for rehabilitation of the mine site at the conclusion of mining, or will it be a progressive activity through the life of the mine? What proposals do you have for financing that rehabilitation?

Mr Gauci—We have already been pretty successful in our rehabilitation of our

drill areas and work which we conducted during the exploration phase. We will be proposing to both the state and federal governments a rehabilitation plan for the rehabilitation of the site either on the completion of our studies or, if the project goes ahead, at the completion of the project. We have already made allowances within our budget within the development to put aside certain funds that will accumulate to the end of the project or at the end of the mining to finance those rehabilitation programs.

CHAIR—I also note in your submission that you claim that the companies develop a positive relationship with the Aboriginal communities in the area. Is that your view of the relationship? Is that a view that would be jointly shared by the Aboriginal communities themselves?

Mr Gauci—Sure.

Mr Larson—We have had an ongoing program up there for many years working in consultation with the local Aboriginal people in carrying out fire trials. We have been burning the countryside, the spinifex, in a controlled manner through CALM and the CSIRO which monitor and program that to bring back positive rehabilitation of that environment and fire allows the climax vegetation to come back very strongly. We have been using the traditional burning practices of the Aboriginal communities.

We have developed an ongoing strong relationship with them in the context of environmental management and that relationship is strengthened through a number of other programs which we have been conducting; that is, assisting them in sporting activities, providing assistance to remote locations through the provision of water pumps on tracks that run through parts of the western desert and a whole range of other activities including the use of facilities at the camp, which have been in place since 1985-86—they come in and recreate in terms of swimming or simply get a meal and catch up with the local people. It would be fair to say that the relationship between all those parties has been extremely strong and probably stronger with the Nomad groups who rarely get recognised as the traditional owners of that area.

Mr Gauci—I would just like to add that there are two different groups of Aboriginal people within the Western Desert. One is controlled by the Western Desert Puntukurnuparna Aboriginal Corporation. The other group comes under the broad group of the Strelley Nomads Corporation. Our relationships have been stronger with the Nomads than they have been with the Western Desert corporation. More recently, I think we have been able to assist in bringing those two groups together.

Mr Larson—Particularly since the Western Desert corporation actually set up a community about 80 kilometres south of the project area. Parnngurr was not an area that was resided in by Aboriginal people prior to the discovery of Kintyre. It was established following that when they set up on one of our water bores and some drill sites. So the relationship has followed and developed since they set up camp there.

Senator FERGUSON—I noticed in your pamphlets you sent us some time ago in relation to the Kintyre project under ‘Aboriginal Issues’ you said:

Anthropological studies have established that Aboriginal people from four language groups have traditional association with the Rudall region. In recent years some aboriginal people have returned to the Rudall region and settled at . . . (Mount Cotten) and . . . (Lake Dora).

I find those names easier to pronounce than the other two. How recently did those Aboriginal people return to the area and what were the reasons for their return? Have you any idea?

Mr Larson—In the case of Parnngurr, they returned in about 1987. At that time—and this becomes a political question—they were looking for land rights. They were able to take possession of an area which we have covered by tenements right through that region, where we had a water bore and a significant drill hole which had also shown expressions of uranium. That was a position they took to provide leverage back through ourselves and the state government in their push for land rights.

Senator FERGUSON—In fact, they returned to the area after your activities, not prior?

Mr Larson—Yes. In the case of Lake Dora I cannot comment, but that was also fairly recent. They have probably gone back there because of some traditional association.

Senator FERGUSON—To the best of your knowledge, they had not been living in that area at all, apart from the nomadic people?

Mr Larson—No.

Mr Gauci—They have certainly wandered through that area over many years, but any permanent settlement was not until 1987 at Parnngurr or Mount Cotten. Those people were a breakaway group from the Tigalong community. I am quite sure that a lot of their reasons for going there were quite genuine—they wanted to take their children away from the bigger cities with the alcohol and other problems the young children were experiencing. They also wanted to take them out there and get them more involved in the cultural upbringing. I think they were very genuine reasons for them moving out.

Senator BISHOP—What group was that?

Mr Gauci—That was Parnngurr, at Mount Cotten. The other one at Punmu was a breakaway from the Strelley group. They moved there a bit earlier than that. This is about 120 kilometres away from where we are. They are a bit further away and further north-east.

CHAIR—If I can just refer to the Western Desert group submission, they say at one stage that all Martu people have grave concerns about the implications the project will have on their lands, their communities and their lives. However, at another point in their submission they say that the Martu people have no firm attitude to the mining of uranium at Kintyre. To a degree, those statements seem to be in conflict. Have you been able to get some sort of genuine assessment of the attitude to uranium mining of this Aboriginal community and the other communities to which you have referred?

Mr Larson—Because we have had ongoing relationships, we have been able to clearly understand their concerns. They have expressed their concerns to us, as they have a right to do and as we welcome. Obviously, a certain amount of issues are generated in the media about uranium mining and perceptions. Those perceptions are held by them as well. So we have gone to them on numerous occasions, explained what we are doing and sought their input in terms of those concerns so that they can be adequately addressed in the procedures and processes that we will undertake in developing this project.

We have also understood from them that they really are not opposed to mining. That has been stated in the media by people like Teddy Biljabu, who has been the chairman of the Western Desert group for some time. He is not opposed to mining but obviously wants to protect the interests of his people against the perceptions that are there. So it is our role and the role of others to make sure that we address those concerns and issues. We have gone about doing that over the last number of years, particularly during 1996, when we have had the opportunity to develop this project.

We have gone out and addressed the communities at Punmu, Parnngurr, on numerous occasions at Hedland and sites around Kintyre. We have recently come back from a trip where we have taken them to have a look at the Ranger operations in the Northern Territory. We allowed them to meet all the various players and parties, including the northern land councils. We have taken them to sites and rehabilitation projects to look at similar mining operations in other parts of Western Australia and the Northern Territory. We have had meetings at Kintyre with the elders and the traditional people all represented. They have expressed their concern for the project to go and for us to come together and negotiate.

CHAIR—Is it expected that you would pay royalties to the Aboriginal communities if mining proceeds? Do you have any views on what form or structure those royalties might take? In the Northern Territory, for instance, the royalties from one of the mines up there predominantly were paid direct to the people and—I think it would be fair to conclude this—were frittered away. In the case of Ranger, by and large the royalties have been paid into a corporation and invested for the long-term benefit of the community. Would you care to answer those questions?

Mr Larson—It is fair to say that, because the negotiations have progressed along fairly satisfactorily, we are talking about those sorts of issues with the communities. I

guess it is also fair to say that we have come to some understanding in terms of confidentiality. Those we will abide by.

We are not looking at an issue of royalties. We are certainly looking at compensation opportunities that will obviously benefit ourselves to enable us to get the project up and running, and certainly the Aboriginal communities not necessary in terms of just giving them a cash handout but in terms of providing structures and programs that will allow them to better their lifestyles, to develop skills and to allow them to have the lifestyle they want to have beyond the life of the mine.

Education, those sorts of funding programs and so on are all being considered. It is also fair to say that that process has begun and so far seems to be progressing pretty satisfactorily, but we still have a long way to go to resolve all these issues.

Mr Gauci—I might just add a point there. I think the work we have done with the Aboriginal people both at Argyle Diamonds and Hamersley Iron have been pretty well to the fore within Western Australia. We can learn a lot from those two companies. I have been involved in both those programs. In talking to the Aboriginal people, we can build on this model and at least get them started.

I must add that this Kintyre project is no bonanza. It is no Hamersley Iron, it is no Argyle Diamonds and it is no Ranger. It is about the size of a small gold mine operation like those scattered throughout Western Australia. So there are limited amounts. We would prefer to get them involved in projects which have longstanding and at least give them a start in getting some longstanding businesses or that type of operation going within the region.

Senator BISHOP—I just have two issues I wish to pursue. The government departments put in a very, very brief submission—one or two pages—and they have declined to provide any real assistance to the committee on the regulatory framework that exists for mining in this state, the methods of enforcement and the relationship between major companies in terms of development.

They have also put a very strong argument that there is in this state a very effective regime for the development of the mining and resources industries and they do not wish to have any additional or further Commonwealth involvement. Essentially, they say, 'We have developed a system through the various state agencies in Western Australia which is effective and efficient and encourages development in this state.' That may well be the case, and I do not necessarily argue against that, but they have not provided any information to us at all compared to the detailed information which has been provided in respect of the Northern Territory of the entire regulatory framework. As a consequence, I am certainly able to make an informed conclusion as to the worth of regulation in the Northern Territory.

Would your company be able to provide us with any information as to that framework, the relationship with the various government agencies, the personal practices and their efficiency so the committee could evaluate it and come to an informed decision as to the worth of maintaining state regulation in Western Australia or perhaps going down a different path of involving Commonwealth regulation, as is the practice in the Northern Territory? It is a key issue that has been raised. The various state agencies and the state government in declining to provide that information are leaving me without any mechanism on which an informed decision can be made. Obviously the company would not have the information here now, but if it were able to provide that it would be most useful.

Mr Larson—Certainly we can provide whatever information we can get hold of, and we will do so. There is no reason, to my knowledge, why that information is not readily available. That is something you would have to ask the state government.

Certainly we know that, through the process we are going through via the state, the RMP process and the EIS process, there are very strict processes that we have to now abide by in preparing that document and in time frames. Once those documents are signed, sealed and delivered, we have to conform to that documentation and those documents will include all the processes for all the issues and cover everything that is encompassed by that project, including things like social impact. We have already voluntarily begun a process to prepare it ready for that.

The guidelines for our environmental approval process are in the final stages of being determined—they have been out to the public for comment—so I would imagine within the next couple of weeks those final guidelines will be available. Once we have those, we will be able to forward those on. We will make every effort to get any other backup information that you feel is appropriate or that you are requesting now to support the mechanisms and processes that the Commonwealth EPA and the EIS have and we will forward them through.

Senator BISHOP—Thank you, Mr Larson. I was not offering any criticism of your company. I was just very surprised this morning when the various state agencies on behalf of the state government essentially told the Senate committee that they could not or would not provide that information. That makes it very difficult for the committee in its deliberations to do a proper evaluation.

CHAIR—Perhaps I can just advise the committee that, in discussions at the conclusion of their appearance before us, they offered to provide in writing further detailed information on the regulatory and administrative regime under which they operate.

Senator BISHOP—I was not aware of that, Senator Chapman.

CHAIR—I am just drawing it to your attention.

Senator BISHOP—Thank you. Will the Kintyre deposit be a low cost site?

Mr Gauci—Yes. We believe that we will be competitive with most of the mines in the world. Some of the ones in Canada will be pretty hard to beat. They are very high grade operations. We expect them to be coming on-stream at the turn of the century, about the same time we expect to come across. It will be very competitive.

We also have to compete against other mines which are expanding production rather than investing large capital. We have to be a low cost operation to survive in this environment. I think the key to that is our process, which I hope we will have an opportunity to explain to you tomorrow during your visit. Process is the key to the whole success of this project. Mining costs are just like every other mine. We think we can make up a bit of that with our very innovative process, which I hope to explain to you tomorrow when you are at the site.

Senator MARGETTS—In the information that you provided to the committee ahead of time—the Kintyre uranium project folder—in the second paragraph on page 5, under Kintyre and Rudall River Aboriginal groups, it says that Aboriginal groups with traditional and contemporary connections with the region have cleared the Kintyre area for exploration since there are no significant sites in the immediate area. Is there any qualification you would care to make to that statement?

Mr Larson—I am not quite sure where you are coming from.

Senator MARGETTS—I am just reading your statement.

Mr Larson—The statement stands. We consulted with the local Aboriginal people back in 1985 when the deposit was found. We went through all the appropriate authoritative channels to get that clearance, including having an agreement with the Aboriginal people. We have conducted those site clearance areas in consultation with the community people, not just from the Nomad group but also from the Western desert people with whom we have a signed and legally stamped agreement.

Senator MARGETTS—You may well have a signed and legally stamped agreement, but if we were to, as we will be, speak to the various Aboriginal groups when we go to the area would they be telling us that there are no significant sites in the immediate area? That is what I am asking you.

Mr Larson—They had not been identified in previous studies.

Senator MARGETTS—That is not what I am asking you. You have something on a piece of paper that says—

Mr Larson—I cannot speak for them; I can only tell what they have done in the

past. They have cleared those areas in past activities and past surveys.

Senator MARGETTS—They?

Mr Larson—The Aboriginal communities. When they have been consulted and carried out site clearance work over the project area, there have been no sites of significance identified in that project area.

Senator MARGETTS—You can understand that I will be following that up with the groups?

Mr Larson—Sure.

Senator MARGETTS—There was mention from state government bodies today about road systems. If I have it correctly, there will be a \$30 million contribution by government to assist with roads. Is that right?

Mr Larson—If you are referring to the road that is coming through the Rippon Hills, the state government has certainly made a contribution, along with a number of companies, to build a road through what is called the Rippon Hills area. That connects onto what is known as the Telfer Road, which is a private road. Our Kintyre project has a track that leads from Telfer south down to the project area. We are not part of the contribution to that road because we do not have a project in the area at this time. Should our project get up, we would be looking at making a contribution to that road, which is some 150 to 200 kilometres to the north away from the project area. It provides access into Telfer. It is those companies that operate the Telfer gold mine, such as Newcrest, that will gain the immediate benefit and some other small companies along the way.

Senator MARGETTS—There was some discussion today about the port which might be used. What has been the response from Port Hedland Council about the prospect of exporting uranium?

Mr Larson—Very positive. They have been very supportive. We have had a number of meetings and briefings with the Port Hedland Council and we have spoken to others who will be associated or involved in any possible exportation of U308 from Port Hedland. There has been nothing but support for it at this stage.

Senator MARGETTS—Can I get that clear—nothing but support?

Mr Larson—That is right. That includes addressing a full council.

Senator MARGETTS—They have not expressed any particular concerns to you?

Mr Larson—No. We have answered questions, as one would expect when there is a presentation to the council. Certainly, my impression when I left was that we had adequately covered the environmental issue and the issue of transport, the road from Kintyre through to the port.

Senator MARGETTS—To gain access to the entire 36,000 tonnes of uranium oxide, you would require further excision of the Rudall River National Park?

Mr Larson—No.

Mr Gauci—No. The area is well within the excision. The total excision is something like—

Mr Larson—It is 146 square kilometres to be precise.

Senator MARGETTS—So all the other tenements would be encompassed in your current—

Mr Gauci—No. The mining project area is well within that excision.

Senator MARGETTS—For the entire 36,000 tonnes?

Mr Gauci—Yes. It is all well within there. We do have other exploration licences which extend outside that excision.

Senator MARGETTS—Yes. So if you were to use your other exploration licences—

Mr Larson—It is possible that within the other exploration licences currently held further deposits of other materials could be found.

Senator MARGETTS—I am just reading from your first page of the same uranium project. It says:

By 1988 reserves of 36,000 tonnes of U₃O₂ had been delineated in the immediate Kintyre area, including the Kintyre, East Kintyre, Whale, East Whale, and Pioneer ore bodies.

Mr Gauci—They will all run alongside one another.

Senator MARGETTS—Yes. So they are all within your current excision?

Mr Gauci—Yes. Probably two square miles would cover the lot.

Senator MARGETTS—Can you tell me what the rainfall is in Kintyre?

Mr Gauci—Anything from zero to eight or nine—

Ms Gupanis—About 300 millimetres, average.

Mr Gauci—Three hundred millimetres would be average, but you can have zero. And you can have—

Senator MARGETTS—Floods.

Mr Gauci—For instance, in the last week, up there we had about—in old terms—six inches of rainfall.

Senator MARGETTS—What does that work out in millimetres?

Mr Gauci—It is 150 I think.

Senator FERGUSON—How many inches is that?

Mr Gauci—About 150 millimetres.

Senator MARGETTS—In an arid region, averages do not necessarily mean what they do in other areas of Australia. You can have entire years when there is nothing at all and you can have years when there are floods. How often have there been floods in recent years?

Mr Larson—As you can appreciate, being such an arid inland area, the rainfall tends to come from the tail end of cyclones which have moved into a low depression system and moved inland, so they do bring quite a lot of heavy rainfall from time to time when they come through. We are 500 kilometres inland from Port Hedland. It is quite a distance inland, so the cyclones have tended to break down quite a lot by that stage.

Depending on the number of cyclones a year and depending on the amount of rain, you would normally get two or three days or a day of fairly heavy rainfall. The creeks run because of the nature of the land and because the roads are not necessarily built to withstand that sort of rush of water coming down. The roads will get cut off for a day or so, but the water disperses and just simply soaks into the desert sands within a matter of days. You do not get flooding; you just get the creeks running fairly fast and fairly furious for a day and then the water just disappears.

Senator MARGETTS—But in recent years there have been more inland rain events, I believe.

Mr Larson—I do not think there is anything out of the ordinary. In fact, we have had a little bit of rain this year and we had a little bit of rain last year. Prior to that it had

been very dry. In fact, there had not been too much rain at all for the previous few years.

Senator MARGETTS—How much in-pit water are you expecting?

Mr Larson—Cathy could talk about that a little bit more. In-pit water from rainfall or purely because we are going into the watertable?

Senator MARGETTS—In total.

Ms Gupanis—There will be some de-watering required because the ground water is around about 20 metres from the general plain surface. There will be a fair amount of de-watering required for safe and efficient mining operations. The exact quantities are yet to be determined. That water will be used for dampening down the process flows as well. I am not quite sure if we have quantities of litres per day.

Mr Gauci—I do not have them offhand either. There is quite a wide range, and we have designed for the highest range. We will be confirming the exact amount of water for the program we will be conducting in the next two to three months.

Senator MARGETTS—The fact that there is in-pit watering and de-watering required during the mining process would indicate that there would be an aquifer through the pit in the long term. Is that right?

Mr Gauci—Yes. We will have to de-water that pit by drilling around the area of the mine so that there is actually no water in the mine itself.

Senator MARGETTS—No. I am talking about the long-term storage.

Mr Larson—The aquifers are isolated. There is a number of different little aquifers. We just happen to have a couple right where the ore body is at the same time. They are not extended aquifers and the Yantikuji area, which is the portion of the national park excise, has a watershed that runs north, which is why it does not form part of the national park or part of the river system. The underground water flow is also northwards as well. Most of the water is extremely potable. In fact, that is what we use in the camp for drinking and for household use. Some of it is not quite so good quality. All the water would be used for processing within the plant, dust suppression on the roads and in the pit mine. The aquifers are isolated.

Ms Gupanis—It is likely that de-watering will be required for the life of the mine. It will not just be an initial stage. It will probably be through the whole life of the project and close mining that the pits will be filled up. So there will not be a potential for any problems with the water. It will probably end up being back to 20 metres below the surface at the end of the lifeline.

Senator MARGETTS—You mention in your material that the waste dumps would be of the durability of the type at Ranger. What kinds of waste dumps would be required?

Mr Gauci—What size or what type?

Senator MARGETTS—What type.

Mr Gauci—It would just be normal barren ore which would be stockpiled around the mine site. That would be fairly typical of any mining operation.

Senator MARGETTS—What level of radioactivity would there be in those stockpiles? It is my understanding that the majority of the radioactivity actually remains in those stockpiles.

Mr Gauci—Not of the waste material. Our ore deposit is fairly unique. It is a veined operation, which contains areas of high grade uranium. There is no dissemination into the waste rock itself. So the majority of the waste which will be stockpiled will be barren of uranium.

Senator MARGETTS—You talk about the durability for waste disposal at Ranger. Will there be waste water storage?

Ms Gupanis—There will be some processed waste liquor from the process. There will be two sorts of waste: there will be the tailings, which is basically solid tailings, and then the waste liquor. They will be disposed of separately.

Senator MARGETTS—What do you mean by ‘disposed’?

Ms Gupanis—They will be stored or disposed—whatever terminology you may wish to use. The waste water will be directed to a pond, which will be lined and be designed for the containment of those waste liquors. The tailings at this stage will be put into a trench and covered and rehabilitated.

Senator MARGETTS—I am just trying to follow up on this. There is mention of the conditions related to the Ranger mine. I do not know whether you are aware, but I have asked a number of questions in relation to the Ranger mine. The engineering standards for Ranger were for a one in 10 rainfall event. Is that the same sort of engineering standard you are planning?

Ms Gupanis—We usually design one in 100. In Western Australia that is the current philosophy. We are on a one in 100 year design.

Senator MARGETTS—How many one in 100 rainfall events have we had in Western Australia in the last three years?

Mr Gauci—Do you mean in this area?

Senator MARGETTS—Western Australia, I suppose.

Mr Gauci—I do not know. I cannot answer that.

Ms Gupanis—Kalgoorlie would probably have experienced one, wouldn't they?

Senator MARGETTS—They have, yes.

Mr Larson—There is one interesting point that comes out of what you are asking there, and that is that the waste disposal coming from the processing, because of the ore type that George explained, allows us to greatly reduce the amount of ore that goes through for processing—a factor of something like 10 to one. That means that when you get into the wet process it is a smaller process and, therefore, a much smaller amount of waste comes out. That small amount of waste can be handled, as Cathy suggested, by being buried in trenches.

So we will not have a large tailings dam that you would normally expect to see under a similar project. Because of the unique ore, because of the unique processing, we are able to contain the waste into a small volume and dispose of it in properly designed pits rather than having open tailings dams.

Senator SANDY MACDONALD—What is the percentage of uranium oxide in the ore bearing body?

Mr Gauci—The overall global reserve is about 36,000 tonnes of U308 at an average grade of about two to four kilograms per tonne—0.2 per cent to 0.4 per cent. We believe that we can selectively mine that material and bring it out of the mine at about six to eight kilograms per tonne, or 0.6 per cent.

Senator SANDY MACDONALD—At Ranger, it is about—

Mr Gauci—Point three.

Senator SANDY MACDONALD—I was going to say 0.4.

Mr Gauci—Yes.

Senator SANDY MACDONALD—What other deposits of uranium do RTZ-CRA have worldwide?

Mr Gauci—The other deposit that they have currently is the Rossing uranium deposit in Namibia. That is a significant producer. It is currently producing at about 2,500

tonnes per annum but will increase over the next few years. That is the only operating mine. They used to be involved with Rio Algom in Canada but sold those out. We do have another deposit in Queensland at Westmoreland, which is near the Queensland-Northern Territory border, which is not as far developed as the Kintyre deposit but is probably about the same size. We have the one operating mine and the two potential mines at Kintyre and Westmoreland. They do have a share in an operation in the United States, which I think they are intending to develop within the next four or five years.

Senator SANDY MACDONALD—In your opening statement you said that, when you were putting together the project, part of your planning was to look at the worldwide requirements for uranium. I guess that, since you did the initial feasibility, the actual demand for uranium has increased and so has the price. What impact has this had on the bottom line from the original proposal to the proposal as it stands now?

Mr Gauci—The original proposal was done in the late 1980s, and the price of uranium was not too bad at that stage. The biggest barrier then, and the thing that stopped us, was the three-mine policy. During the 1990s the price of uranium decreased significantly, particularly as the ex-Soviet Union broke and allowed the export of uranium materials out of the CIS. They had a significant impact on the market.

Also, people saw this extra uranium and started to reduce their stockpiles quite significantly. That put a lot of excess uranium on the market. The price deteriorated quite significantly through the 1990s until about 1995, when we started to see a turnaround. There has been a significant increase in the uranium price since then. So it is really in the last two years that the uranium price has started to show some positive moves.

These stockpiles have now run out. There is more control over the export of uranium from the CIS, so the people can see the need for new uranium mines and new production between here and the turn of the century and beyond.

Senator SANDY MACDONALD—Do you think there is a special emphasis placed on CRA as to the potential for uranium, or does it, as a very major and diversified resources company, just believe that to have some uranium in its firepower and in its stockpile and the way it produces its income is an appropriate way to go? Do you see that there is a particular interest from CRA to develop a uranium mine?

Mr Gauci—As far as CRA is concerned, yes, they have experience in uranium mining at Mary Kathleen. It is a commodity which they know quite a bit about. The merger of RTZ and CRA gives that broader company some diversity in supply. They have supply from two different countries now. The general customers generally like to see this as an advantage of having some diversity in supply for a resource of this kind—fuel for power stations, et cetera. They see it as a good chance to get diversification of supply from country to country.

Mr Larson—The company is also a diversified minerals producer, so it is looking for a suite of commodities that can be traded on the international scene to provide income from difference sources when markets fluctuate. So whenever the opportunities present, they will move into whichever is available.

Senator SANDY MACDONALD—Particularly with Kintyre, I think you said in the papers you gave us initially that the closest permanent settlement was 80 kilometres away. What determines whether you negotiate with a particular group of Aboriginal people? Why would you negotiate if they live 80 kilometres away but not if they live 150 kilometres away? You say that you have a commitment and, I am sure, a very legitimate interest in providing assistance to them in terms of royalties. What determines whether you give them the status of having a negotiating position?

Mr Gauci—Whether or not there was a Native Title Act, we would still be negotiating with the Aboriginals. They are out there in the community and they are our closest neighbours.

Senator SANDY MACDONALD—I am not asking you whether it is good or bad, but why do you do it. I mean, you do not negotiate with me. I live a long way away and I am not Aboriginal, but you have to have a determining point to say whether you negotiate with somebody or whether you do not. Can you provide me with a reasonably simple answer as to why?

Mr Larson—Yes, it is the Native Title Act. Under the process of getting our mining leases granted, we make application for them. Through the process that is now in place throughout Australia there is an advertisement that goes out nationally that advises all parties that these mining leases are going to be applied for. There is a period of two months in which claimants can make application to be party to those negotiations or party to that process. In this particular case there were three claimants applying under the Native Title Act, and we are negotiating with all three parties as one collective body.

Senator SANDY MACDONALD—That is the Martu, the Nomads and the Ngolibardu?

Mr Larson—Yes.

Senator FERGUSON—I just want to follow up on that question. My initial question was: when do people come into the area? You said ‘after 1985’, which is when you first started doing your—

Mr Larson—On permanent settlements.

Senator FERGUSON—You also said in response to Senator Margetts that you negotiated with the Aboriginal people back in those times and there were no problems

with regard to sacred sites or other matters. I implied from Senator Margetts' question—I hope I have got it wrong—that perhaps there were now some considerations that might have arisen with regard to areas of interest. Are the people you are negotiating with today the same people that gave you a clean sheet in 1985?

Mr Larson—Yes, they are. We have got a copy of the agreement, as it turns out. The signature on the agreement is that of Teddy Biljabu, who is the executive director of Western Desert. He was involved back in those times. No issues have been brought to our attention at this point in time. The negotiations have been going on quite strongly and fairly—

Senator FERGUSON—Even recently?

Mr Larson—Very recently. Since May of this year we have had quite a lot of meetings with all of the participants and all of the parties to the native title claim process. We have not been aware of any sites of significance in that area.

Senator MARGETTS—Could I clarify that. I knew I had seen it and I have just found it. It relates to some initial drilling that took place at Mount Cotten. I was thinking of your first paragraph where it mentions taking great care to avoid the disturbance of significant sites in the Rudall region. So that would encompass Mount Cotten. It has been considered that Mount Cotten is a women's sacred site, and immediately behind it is their traditional burial ground that has been drilled, and part of the exploration process was a cause for grief amongst the people.

Mr Larson—Mount Cotten is, of course, 80 kilometres away from the project area. So that is where the community is now established. We understand that, since they have established the community, the people that have passed on have now been buried in that area at the back of that hill. Prior to that, we had exploration licences and clearances which allowed the drilling to occur before that time, but it is only in recent years that they have gone back to that area. As an agreement with the Aboriginal people, we have stayed away from enforcing any rights that we had to drill in that region and there has been a gentlemen's agreement of a buffer zone around Mount Cotten and we have not broken that agreement. There has been no drilling around that community at Mount Cotten since they established the community there.

Mr Gauci—I believe that the only drilling we were doing in the Mount Cotten area was a water bore we put down for an exploration camp. The drilling which was done at Mount Cotten was done by another company prior to us coming along. We found out there was uranium down there when we went back to the old core which was left around the place and put the scintillometer over it and it just about drove it off the scale.

Senator MARGETTS—So that would indicate that Mount Cotten might be—

Mr Gauci—There is a good potential for uranium. We have leases over that area and we have never bothered those people by going back to do any more exploration in the area, and we will not until they ask us to.

Senator MARGETTS—With all due respect, I think that I gave you plenty of opportunity to talk about those issues before. It just seems a bit disappointing to find that, and then you say that there was that.

Mr Larson—You were talking about Kintyre. You are now talking about Mount Cotten.

Senator MARGETTS—Okay. Your own leaflet refers to avoiding the disturbance of significant sites in the Rudall region. So, okay, it was not—

Mr Larson—I am sorry, I am talking about Kintyre. That is the project that we are concerned with. Mount Cotten is 80 kilometres away, from here to Northam away.

Senator MARGETTS—And have you currently got a lease over that area?

Mr Larson—Yes, we have.

Ms Gupanis—I think that the senator referred before to the immediate Kintyre area. That was the paragraph you read before.

Senator MARGETTS—Yes. But I was quoting from your own—

Ms Gupanis—That is right. It was in the immediate project area.

Mr Gauci—But I know that the people from the exploration working that area during the time took particular care to make sure when they were going into a drilling area that they took Aboriginal people along and cleared the sites in the vicinity where they were drilling to make sure that there were not any sites there. They have done that continuously. In fact, the exploration group has spent a lot of time going down and talking to the Aboriginals about different levels of exploration and showing videos to these people to make sure that they really do understand, whether it involved flying over the area or putting a drill down or just taking surface samples. So the people have gone to a lot of trouble to make sure that Aboriginals understand what the level of exploration is that we are going to do. We have always taken the Aboriginals, or some representatives, with us if we go into a certain area where they cleared the area that we were going to drill. That is right throughout that whole regional area. But, in particular, in the Kintyre area itself, you set up a specific site clearance area which covers the area right around the project and that has been cleared officially.

Senator FERGUSON—In the middle of last year, there was a letter written to you

from the solicitor for the Western Desert Aboriginal Corporation in which they asked an enormous number of very detailed questions about dust and weather projections of once in 100 years, once in 50 years, once in 20 years, meteorological events, dust minimisation and water contamination. In the letters that we have got, I do not see any particular answer to those questions, but I presume that the questions that were raised in the letter signed by their solicitor have all been answered?

Mr Larson—Yes, they have been. We have had numerous discussions with them and the correspondence was answered in fact on 15 August. I will give you a copy of the letter, if you wish.

Senator FERGUSON—I may have it.

Mr Larson—We have had ongoing discussions with the community and, particularly, with the office of the lawyers at Western Desert. We have been keeping them informed. We have been talking with them following the very first meeting that we had as a collective body with their legal representatives in May. We have been organising to get a representative group together to go to Ranger and have a look at other processes so we could carry out that information sharing. We have had a meeting at Punmu and meetings at the Parnngurr community.

We are in the environmental approval process. Of course, we did not have all of the guidelines. As I explained, we are just finalising those with the Commonwealth and the states. They will be available at the end of January, hopefully. We responded to indicate where we were at and that we wanted to pursue this opportunity of having a look at Ranger and also providing them with any answers outside of that formal process on other environmental issues and concerns and as we had the information come to hand. We have continued to do that. That letter went back to them on 15 August.

Senator FERGUSON—They are very detailed requests and some of them are in fairly legalistic terms. Have the questions been answered to the satisfaction of the Western Desert Aboriginal people or do they have ongoing concerns? Is it possible that the nature of the questions that have been asked of you by their solicitor on their behalf in this letter has caused unnecessary apprehension amongst the people?

Mr Larson—I do not think so. As I said, we have been back out to the communities with all of those issues and concerns. We have sat down with both the men and the women separately. We have had different other authoritative people with us to explain and walk through the processes involved in environmental management, radiation management and other issues. We have now taken that representative body to Ranger and had them sit down and talk to the environmentalists that were operating at Ranger. They have seen the conditions, the management programs and the processes. They have seen the badges and dust monitoring programs. They have sat down with the supervising scientists in the Northern Territory and had explained how they do the processing and management

in that part of the world. We have spoken with the Northern Land Council and their environmental people. We have had meetings back on site and we have been keeping them informed. I am not aware of any—

Senator FERGUSON—One of the questions they ask you is in relation to water and the effect of the contamination of water and where the ground water might go. You say in your literature quite clearly that the ground water flows away from the area. Yet in this letter they are still asking you questions and raising concerns about ground water possibilities when you have already said that it flows away.

Mr Gauci—I still believe they have some concerns and perceptions about that. We have been down to them on a number of occasions and explained the facts to them. The two things they talked about were water contamination and dust. We took maps down and explained to them that the water does not run that way and that it runs another way, that the prevailing wind blows in the opposite direction and it is 80 kilometres away. We explained that if the wind did blow that way the ground water would be very diluted by the time it got down there. We have explained all these things to them, but they still keep coming up with these two areas.

Mr Larson—We have talked about setting up wind monitoring programs and things like that which they can be involved in. We will be raising those issues and talking about them in more detail this coming week when we have some further meetings with them. Those issues have all been addressed but, like any members of the community, they have a right to be concerned. Until such time as our RMP and EIS documents are in place and they have the opportunity to be scrutinised and vetted by the public and then endorsed, then I think they still have that right to raise those issues.

Ms Gupanis—And after. There will still be individuals who will still raise those concerns, as has been experienced with other projects.

CHAIR—As there are no further questions, I thank each of you for appearing before the committee this morning and for the evidence you have given. If there are any further issues that arise in the course of our investigations, we will seek responses from you in writing.

VINER, Mr Ian QC, 23rd Floor, Allendale Square, 77 St Georges Terrace, Perth, Western Australia 6000

CHAIR—I call the committee to order and welcome Ian Viner QC. The purpose of Mr Viner appearing is that he was referred to unfavourably in evidence that we took in the Northern Territory. Therefore, under the standing orders of the Senate, he has the right to reply to those comments. So I introduce him to the committee and welcome his comments.

Mr Viner—Thank you for the opportunity given to me to respond to the remarks that have been made by Mr and Mrs Christophersen, which I have noted at pages 402, 403 and 506 of the committee's report. I would like to make a few observations to start off with. If there are any questions that any members would like to ask me, I would be happy to respond to them.

Firstly, I refer the committee to my ministerial statement to the House of Representatives on 7 November 1978, which appears in *Hansard* pages 2448 to 2452. I would say that over the weekend is the first time I have read the statement since I delivered it nearly 20 years ago. But it makes interesting reading. I hope that it provides members of the committee with both a context to the statements made by Mr and Mrs Christophersen and answers to it, together with some other observations that I will make. I note that some of the sentiments expressed by Mr and Mrs Christophersen mirror remarks by Dr Everingham, then responding on behalf of the opposition, in the *Hansard* following my statement.

My ministerial statement faithfully reports the events leading up to the making of the Ranger agreement and my involvement in it. I invite this committee to read that statement. I would like the text of it incorporated in the committee's report as part of my statement to the committee.

CHAIR—Is it the wish of the committee that that statement be incorporated in the transcript of evidence? There being no objection it is so ordered.

The statement read as follows—

AGREEMENT BETWEEN THE COMMONWEALTH OF AUSTRALIA AND THE
NORTHERN LAND COUNCIL

Paper and Ministerial Statement

Mr VINER (Stirling—Minister for Aboriginal Affairs)—For the information of honourable members I present an agreement under section 44 of the Aboriginal Land Rights (Northern Territory) Act 1976 between the Commonwealth of Australia and the Northern Land Council. I seek leave to make a statement regarding that agreement.

Leave granted.

Mr VINER—I table, for the information of honourable members, the agreement which includes details of the environmental conditions between the Northern Land Council and the Commonwealth which has been negotiated under section 44 of the Aboriginal Land Rights (Northern Territory) Act in respect of the Ranger uranium deposit and which was executed by the Northern Land Council and myself on behalf of the Government on Friday, 3 November. Annexed to the agreement are the proposed authority to mine under section 41 of the Atomic Energy Act and the determination of payments under section 63 sub-section (5) of the Aboriginal Land Rights (Northern Territory) Act.

In accordance with its policy of protecting existing interests in Aboriginal land or land that might become Aboriginal land, the Government in 1976, through section 41 sub-section (2) of the Aboriginal Land Rights (Northern Territory) Act, provided that Aboriginal consent was not a prerequisite to the development of Ranger. Nevertheless, section 44 of the Act required an agreement on terms and conditions relating to the development. As honourable members will be aware, an inquiry under the Environment Protection (Impact of Proposals) Act 1974 was established on 16 July 1975 to inquire into the development by the Atomic Energy Commission in association with Ranger uranium mines of uranium deposits in the Northern Territory.

In addition to the inquiry under the Environment Protection Act the present Government, during consideration of the Aboriginal Land Rights Bill in 1976, introduced an amendment expressly authorising the Ranger Uranium Environmental Inquiry to investigate and make a finding in relation to an Aboriginal land claim in the Alligator Rivers Region. The second and final report, in which the claim to the Ranger area was recommended, was presented to the Government on 17 May 1977. On 25 August 1977 the Government announced that it had accepted almost all of the Inquiry's principal recommendations. I also draw the attention of honourable members to one of the important statements made in the second report and would like to quote directly from it. The Commission stated, at page 9 of the second report, in respect of Aboriginal views that uranium mining should not proceed:

. . . we have given careful attention to all that has been put before us by them or on their behalf. In the end, we formed the conclusion that their opposition should not be allowed to prevail.

The Commission went on to say:

After consideration of all factors, we propose a solution which, if a decision is made that uranium mining is to proceed, provides a reasonably satisfactory accommodation between competing interests and the conflicting uses to which land in the Region can be put. This is subject to one qualification. The principal threat to the welfare of the Aboriginal people, and the one they most fear, is constituted by the large numbers of people who can be expected to enter the area. We make a number of recommendations designed to minimise this risk.

In following the solution proposed by the Ranger Uranium Environmental Inquiry, the Government announced that it had accepted all of the principal recommendations in respect of Aboriginals. I refer honourable members to the statements made by the Prime Minister (Mr Malcolm Fraser), other Ministers and myself in August 1977 which clearly set out the history of the Ranger project and the decisions of the Government in respect of the Ranger Uranium Environmental Inquiry. The Aboriginal Land Rights Act has been of direct benefit to Aboriginals in a number of ways. If the Act had not been passed, then there would have been no mechanism allowing Aboriginals to impose special conditions on the development of the Ranger project or to receive any benefits from it. The land upon which the Ranger deposit is located is not land that was historically set aside for the use and benefit of Aboriginals. The good faith of the Government was demonstrated by firstly allowing a claim to the land to be determined by the Ranger Inquiry and secondly by granting title to the land which was recommended.

At Yirrkala on 6 September of this year, I delivered the title deed to the land which includes the Ranger project area but the negotiations which have now been completed actually commenced in October 1977 as if the land had already been granted to Aboriginals. In accordance with the Memorandum of Understanding concerning Ranger entered into by the previous Government, the deposit will be mined under the Atomic Energy Act and by the Commonwealth in partnership with Peko-EZ. Thus it has been the Commonwealth which has been obliged to negotiate with the Northern Land Council. The agreement that I have just tabled has been the result of a lengthy negotiating process with the Commonwealth within the terms of section 44 sub-section (2) of the Land Rights Act. Six major negotiating sessions were held between the Northern Land Council and the Commonwealth negotiators culminating in the initialling, on 25 August 1978, of the agreement known as the Ranger agreement, which I have tabled.

The Northern Land Council has, at all times, acted on the instructions of the traditional owners. Three major meetings of traditional owners were held—at Mudginberri in March 1978, at Murganella in July 1978, and Red Lillies in September 1978. There were, furthermore, during this period four meetings of the full Northern Land Council and five meetings of the executive. During the course of the negotiations sessions were attended by members of the Northern Land Council, apart from the Chairman, Mr

Yunupingu, and the Deputy Chairman, Mr Blitner, and at least two important traditional owners. At the same time as the negotiations on the Ranger mining agreement were proceeding, detailed negotiations to settle the terms of the agreement associated with the lease of the National Park were being pursued. The Commonwealth advanced funds to the Council to cover the costs associated with the negotiations and consultation process, with no strings attached as to whom the Council might consult. Thus, Mr Deputy Speaker, honourable members will see that negotiations have been carried out exhaustively and completely with the direct involvement of Northern Land Council members and traditional owners.

I must pay tribute to the work done by the Northern Land Council in what was a completely new experience for that body. Since 25 August the Northern Land Council has had a number of further meetings and discussions which have been widely reported. It is sufficient for me to say that the end result of these discussions and actions was a request from the Chairman of the Northern Land Council for me to attend a meeting at Bamyili on 2 November to speak on behalf of the Government. I explained to the Council that the Commonwealth was ready to sign the agreement as providing fair and reasonable terms for both parties. There was no talk of arbitration or of any other action by the Government. After a full day's discussion, the full meeting of the Northern Land Council agreed to accept the Ranger agreement, and in the event that the traditional owners gave their consent then the documents would be signed.

Members of the Northern Land Council were conscious in making this decision that they were making a decision not only for themselves but for the whole of Australia. They also felt that the time for decision-making had come and that the conclusion of the Ranger agreement would be a foundation for the future upon which they could build. The next day I travelled with the executive to Oenpelli to meet with the traditional owners. At the meeting there, the traditional owners gave their consent and, thereupon, the Ranger Uranium Mining Agreement and the lease of the Kakadu National Park were signed. In fulfilment of its statutory responsibilities, the Ranger Uranium Mining Agreement was signed on behalf of the Northern Land Council by the Chairman, Mr Galarrwuy Yunupingu, Mr Dick Malwagu from Croker Island and Mr John Gwadbu from Goulburn Island. The agreement for the lease of the Kakadu National Park was also signed and the Chairman and members of the Kakadu Land Trust executed the lease documents. The signatures on the lease included Toby Ganggali, a senior traditional owner for the Ranger project area and a member of the Mirrarr Gudjeimbi clan.

This short undramatised outline of events cannot portray the personal effort of so many people within the Northern Land Council over many months in most difficult circumstances in dealing with negotiations and decisions representing a new experience in Aboriginal affairs. In the course of time, the real story will become known and the distortions, both deliberate and out of ignorance, will be put to rest.

I would now like to focus attention upon a number of significant actions taken by

the Government which enhance the position of Aboriginals in relation to uranium mining. On 9 February 1978, the Prime Minister announced that the Aboriginal people who had submitted land claims over the Stage II area of the Kakadu National Park had been assured that mining interests would not be granted in the area without prior consultation and agreement. Similarly, assurances were given to the Northern Land Council two months ago that, unless the Council agrees, no construction on the extension of the Arnhem Highway would be permitted before a final decision is made by the Government on the development of the Pancontinental project at Jabiluka. Through an amendment to the Aboriginal Land Rights Act, the Northern Land Council has been given standing in the Northern Territory Supreme Court to seek an injunction against the mining operation should it feel that environmental conditions are not being observed. It has been given rights of inspection of operations and documents and is entitled to information so that it may assess whether environmental conditions are being rigidly enforced. This is very important and a major concession to Aboriginal interests as they themselves will have the means to be satisfied that the environment protection measures are being observed.

The Ranger Uranium Environmental Inquiry highlighted the deleterious effects upon Aboriginal society caused by alcohol in the region and specifically pointed to the Border Store on the East Alligator River as a major factor in this process. The Government recognised the problems being created by the operation of this local outlet and has assisted the Gunbalanya Council at Oenpelli to purchase the store and thus cease the sale of alcohol from this source. As announced on 20 July 1978, the Government has decided that, from 1 July 1979, revenues received by Aboriginal groups from mining operations anywhere in Australia will be taxed on the basis of the standard rate of personal income tax - 32 per cent - applied to 20 per cent of gross revenues. The tax will be collected by the withholding system, that is, it will be deducted before payments are made. This decision removes the uncertainty of the tax law in its application to revenues received by Aboriginal bodies from mining operations on Aboriginal land and applies a reasonable rate in light of the community and social purposes to which the revenue will be applied.

The Commonwealth is presently completing arrangements with the Ranger joint venturers on the terms of the agreement to implement the Memorandum of Understanding signed with the companies by the Whitlam Government in October 1975. That agreement will, in addition, need to take into account the obligations entered into by the Commonwealth in the agreement signed by the Northern Land Council and the Commonwealth last Friday. I expect that these negotiations with the companies will be concluded at an early date when the authority to mine under the Atomic Energy Act will issue. The Government expects that commercial production will be able to start in 1981-82. I now turn to some of the specific aspects of the agreement which will be of direct benefit to the Aboriginal population.

Environmental Requirements

Environmental protection measures relating to the project were as important to the Northern Land Council as anything else, including financial arrangements. My colleague, the Minister for Environment, Housing and Community Development (Mr Groom), will follow me in making a statement concerning the lease of Aboriginal land to the Director of National Parks and Wildlife, and the environment protection arrangements. It has been said, and I believe correctly, that these environmental requirements are as stringent as any others imposed on uranium mining elsewhere in the world. They certainly reflect the firm views of the NLC expressed during the negotiations.

Financial Returns

A payment equivalent to a royalty rate of 4½ per cent on the value of production has been determined under section 63(5) of the Aboriginal Land Rights Act and will result in substantial financial returns to the Aboriginal people of the Northern Territory. The amount of money that will be applied for the benefit of Aboriginals in the Northern Territory, using a calculation based on the sale of 3,000 tonnes of U308 at \$30 per pound, should amount to something in the order of \$8m per annum. In addition, there are a number of other substantial payments which will be obtained for the benefit of Aboriginals.

In addition to the annual payments of \$200,000 during the currency of the agreement, a further \$1,300,000 is payable as follows: \$200,000 within 7 days of the agreement's execution—this sum has already been paid to the Council; \$200,000 within 30 days of the issue of the authority to mine; \$300,000 within 30 days of the completion of the crushing plant; \$300,000 within 30 days of the completion of the power plant; \$300,000 within 30 days of the first production of stipulated quantities of uranium oxide. These moneys are to be applied in accordance with the Aboriginal Land Rights Act for the benefit of communities and groups and will meet the administrative costs of the Northern Land Council, Tiwi Land Council and Central Land Council. These payments will naturally prove of great benefit to the Aboriginal people of the Northern Territory for social and community purposes and for investment in the future of the Northern Territory.

Instruction in Aboriginal Culture

Under this part of the agreement, the joint venturers will be required to promote among non-Aboriginal employed by them an understanding and respect for the traditions, languages and culture of the Aboriginal people. This will mean that all employees are given appropriate instruction on aspects of Aboriginal history and culture by way of background and orientation. I regard this innovative provision as most important as it is a direct reflection of the need of people working in the area to gain an understanding and appreciation of the traditional background of the people on whose land they are mining.

Liaison

An Aboriginal liaison committee will be appointed to assist in the relationship between Aboriginals and the mining operators and will help to overcome any difficulties that may arise. The company will be obliged to employ an Aboriginal liaison officer whose specific function will be to facilitate communications between the manager of the project and the Aboriginals in the region. This committee will have equal representation of Aboriginals and the mine management and provision is made for the resolution of disputes that cannot be resolved by the committee. I ask honourable members to study closely the functions given to the Committee under the agreement as they will note the real power that is accorded to the Committee and hence the protection that is afforded to Aboriginal interests.

Employment and Training

The joint venturers will be required to ensure that as many local Aboriginals as is practicable are employed where they are capable of carrying out, in a satisfactory manner, the work required. In addition, an operator training scheme will be developed to train Aboriginals in the use of machinery so that they are capable of taking advantage of the employment opportunities offered. The Commonwealth through its own agencies will also do everything possible to assist Aboriginals to take advantage of employment opportunities.

Control of Alcohol

Under the agreement strict control of the consumption of alcohol will be rigidly enforced within the construction camp in the Ranger project area. This is a matter of prime importance to Aboriginals and every effort has been made to accommodate their wishes. Given the controls imposed by the agreement and the joint approach of the mine operators and the NLC in dealing with the question of alcohol consumption, we may well see the emergence of some new solutions to the alcohol problem.

Rights of Traditional Owners

Although the Ranger project area represents only a small part of the area controlled by Aboriginals, the rights of traditional owners to enter upon that land is specifically safeguarded by the agreement. I have also given my assurance that the Government will support the establishment of outstations in the Kakadu Park area.

Sacred Sites

Honourable members should take note of the sacred site protection measures. This is a matter of particular concern to Aboriginals and the agreement imposes an obligation, at the request of the NLC, upon the Commonwealth to consider the protection of sacred sites should those sites not be adequately protected by existing legislation.

Local Business Development

This section obliges the Commonwealth, acting upon the wishes of Aboriginals, to encourage local business involving Aboriginals and the mine operators. This will allow Aboriginals to take advantage of the opportunities offered but will not impose an obligation on the Aboriginal people to undertake functions should they not wish to do so.

In conclusion, I would like to urge honourable members to examine this agreement as part of a whole scheme. It will then be seen for what it is—a unique package of measures which reconcile the interests of Aboriginals, conservationists and miners. Future generations of Australians will be able to look back on it with pride. As Mr Yunupingu and I said in Darwin:

This was an historic and significant occasion. The creation of a great national park was a gift by the Aboriginal people of their traditional land to the Australian nation.

I must express some personal satisfaction that the agreement has been concluded within the framework of the Aboriginal Land Rights Act. The scheme as laid down in the Act has been put to a searching test, not without its trials and tribulations, from which has emerged an agreement which is fair and reasonable in its terms to both parties and which will bear the scrutiny of all fair minded persons. Perhaps it is in many ways a good thing that the Act had to be tested by a complex agreement in a controversial area so early in its operation.

As Mr Yunupingu and I said in Darwin—

The Ranger Uranium Agreement marks the first agreement of its kind ever signed by an Aboriginal body independently and in the interests of Aboriginals with respect to their traditional land.

By this Agreement, the Aboriginal people of the Northern Territory will work in partnership with the Commonwealth in a great national enterprise.

I commend the agreement to honourable members.

Mr Viner—Two fundamental things need to be said. Firstly, the negotiations between the NLC and the Commonwealth were entirely at arms-length from myself as minister. The NLC was deliberately put in the position where it could choose its own advisers and negotiators, which it did, and conduct the negotiations free of any influence from me, which it did.

There was only one occasion when I attended a negotiating session, which, as I recall, was in Darwin—and this is a recollection going back some 20 years—that concerned an environmental matter and at which the NLC chairman at the time, Mr Galarrwuy Yunupingu, and the chief negotiator for the NLC, Mr Stephen Zorn, were present. I recall also the negotiator for the Commonwealth was present. Apart from that single attendance at a negotiating session—and, as I recall, it was a fairly short one—I played no part in the direct negotiations that were going on.

I was a member of the cabinet subcommittee which provided negotiating instructions to the Commonwealth negotiator. However, the Commonwealth negotiator acted entirely independently at the negotiating table from myself and any other member of the cabinet subcommittee. That cabinet subcommittee was headed by the Hon. Doug Anthony, the then Minister for Trade. So far as that subcommittee was concerned, the negotiations were conducted entirely at arms-length from the subcommittee with the Commonwealth negotiator only reporting back as he felt it was necessary and in order to obtain fresh instructions, having regard to what had gone on in the course of the negotiations.

The reason for the Commonwealth's involvement is summarised at page 2449 of my ministerial statement. The Commonwealth's legal position was a legacy of the contractual and legal arrangements which the Whitlam government had put in place under the memorandum of understanding, which is referred to in that relevant passage of my statement, which is column two, page 2449. I noted also that the nature of those arrangements are referred to in the submission of the Northern Land Council, starting at what appears to be page 350. They were somewhat complex having regard to that legacy, as the NLC has stated.

The second fundamental point that I would like to say today is that the NLC's statutory consultation with traditional owners was carried out entirely at arms-length from myself and, so far as I was aware, in full discharge of the council's statutory obligations under the Northern Territory Land Rights Act. The meetings held by the NLC with traditional owners are summarised at pages 2449 and 2450 of my statement.

I attended two meetings at the specific request of the NLC, one at Bamyili on 2 November 1978 and at Oenpelli the next day. Both meetings are referred to at page 2450 of my statement. I might observe, by way of reflection, that I flew direct from the Torres Strait to Bamyili to attend that meeting, having been in the Torres Strait with Andrew Peacock and Mr Bjelke-Petersen completing negotiations on the seabed boundary between

Papua New Guinea and Australia.

All arrangements for those meetings and the decision to hold each of those meetings were made by the NLC. I was invited to attend by the chairman, Mr Galarrwuy Yunupingu. I, and the present chairperson of ATSIC, Mr Gatjil Djerrkura, were the only two non-NLC members attending the meeting at Bamyili. Mr Djerrkura did not attend the meeting at Oenpelli. I had understood Mr Djerrkura had been invited by the council to assist the council in its discussions on the Ranger agreement.

At Bamyili, I was invited to address the NLC and explain the government's position, which I did. Then I was asked to leave the meeting whilst council members discussed the issues in private. I addressed the meeting, as I recall, for about half an hour. I believe I answered questions as put to me and I spent the rest of the day cooling my heels and waiting outside the meeting whilst the council conducted their own private deliberations.

At the end of the day I was invited in to be told that the council had agreed to recommend to the traditional owners that the Ranger agreement be consented to. A corroboree was held that night. The next day I flew to Oenpelli, the plane arrangements having been made by the NLC. I attended a meeting of traditional owners which had been organised by the NLC and I addressed them. The chairperson of the council, Mr Yunupingu, and a number of traditional owners addressed the meeting. The meeting was addressed by me in English and, as I recall, the traditional owners addressed each other in their own language.

The meeting agreed to consent to the Ranger agreement and also the lease of the Kakadu National Park to the Australian National Parks and Wildlife Service under an arrangement by which previously a land rights title had been granted to the traditional owners and they, by agreement, had agreed to lease back what is now the Kakadu National Park for the benefit of the people of Australia. At page 2450 of my statement, I report these meetings, the agreement and the signing of the agreement and the lease by Aboriginal leaders, NLC and traditional owners.

There is another important matter to mention, which may also put a number of matters into context. As I have said, the NLC arranged both of the Bamyili and Oenpelli meetings, but they also arranged it so that the media was excluded in order that the NLC and the traditional owners could conduct their meetings in private and free from outside influence. If you have gone back over the public records of the day, you will have observed, as one would have expected, that the prospect of a Ranger uranium agreement was a matter of great national public contention by anti-uranium forces, MAUM I think it was at the time, and persons concerned in Aboriginal matters and the operation of the Northern Territory Land Rights Act.

The exclusion of the media was honoured at Bamyili. There was no media at all

there. At Oenpelli, if I recall, one member of the press, whom I knew, met us at the gate leading into the Oenpelli community, much to the surprise of everybody, but he was not allowed in and he honoured that.

At the meeting place at Oenpelli, however, totally unknown to myself and to Mr Yunupingu and, so far as I am aware, to other members of the NLC who were present, an unknown television crew was there. They were advised that the meeting was a private one and asked to leave. They left the particular meeting place, but hung around some distance beyond it. That, as events subsequently disclosed, is the television crew which later produced *Dirt Cheap*.

Apparently, they videoed events from a distance, including events after the signing of the agreements. We met at a particular community meeting place under a shelter at which all the discussions and the speeches were made, and at which the decision was made by the traditional owners to agree to the signing of the agreement and the lease. We then went to the office of the Oenpelli community where the agreements were signed in the presence of the persons who are mentioned in my statement, including, as I have referred to there, not only Mr Yunupingu, but Mr Dick Malwagu from Croker Islander, a Mr John Gwadbu from Goulbourn Island and Mr Toby Ganggali, a senior traditional owner for the Ranger project area.

This particular television crew was not inside the office in which the agreements were signed and apparently they filmed us as we left the office. This film has, over the years, gained some notoriety of use within anti-uranium circles, but I can assure you it could not have faithfully recorded or reported upon either the Bamyili or the Oenpelli meetings. So far as I know, the *Dirt Cheap* crew did not record anything spoken at the Oenpelli meeting. There is, however, a video recording of that particular meeting—both of what was spoken and the people there—and that was a recording taken and held by the Northern Land Council.

I refer the committee to my concluding words at page 2452 of my statement. The whole of the package of measures by which Kakadu National Park was created, the Ranger Uranium agreement was entered into and the Northern Territory land rights act operated and the legislative structure for management of the Ranger uranium mine, including the Office of the Supervising Scientist was, as I said at that part of my statement, a unique package of measures which reconciled the interests of Aboriginals, conservationists and miners. I said that future generations of Australians would be able to look back on it with pride. I believe to this day that Australia can look back on what was done and the way it was done and what it has given to Australia with considerable pride.

I have noted what the NLC has said about alleged unconscionable pressure from the Commonwealth upon the NLC to sign the Ranger agreement. I categorically deny there was ever any such pressure. Had the NLC litigation gone to trial, I would have been giving evidence to answer all the allegations. I had indeed been briefed by the

Commonwealth solicitors and returned to many of the records, both cabinet and public, to fortify me in my opinion that there was absolutely no pressure at all, undue or otherwise, placed upon the NLC to enter into a particular agreement.

As I have said, the NLC was very deliberately put in a position at arms-length from the Commonwealth and equipped so as to engage negotiators and advisers of its choice to conduct the negotiations. At that time I personally regarded it as very important, having regard not only to the contention of the issue of uranium mining but also to the implementation and operation of the Northern Territory Land Rights Act that the NLC be very firmly placed in that position of independence.

I would also add by way of final observation that by an express amendment introduced by me to the land rights act at the time—and this is specifically referred to in my ministerial statement—the NLC was given standing in the Northern Territory Supreme Court so that it could, if it thought advisable, seek injunctive orders against the mining operations should it feel that environmental conditions were not being observed. That appears at page 2450.

That the NLC availed itself of that standing with regard to water discharge, which is referred to in the NLC statement, shows, if I might put it this way, the foresight of the government of the day and of the NLC—because it was upon their representations that that amendment was made before the bill was passed—to be provided with certainty of legal standing from which to protect the interests of the traditional owners with regard to environmental conditions.

I might add to what has been said about the position of the Office of the Supervising Scientist. That statutory office was created as a statutory office very deliberately so as to provide the Supervising Scientist with independence and particularly not as part of what was then the Australian National Parks and Wildlife Service. The service, as I recall, was agitating considerably that it should be the one responsible for management of the environment and the government very deliberately placed this statutory officer between the service and the Northern Territory government and the NLC and the traditional owners.

I can understand, therefore, the comments that are made by the NLC in its submissions regarding the role of the Office of the Supervising Scientist and the particular difficulties that they had had, notwithstanding their membership of the coordinating committee and other ties that they had to the OSS, in having direct participation in the management of the environment. As I remember, effective management of the environment, not only according to scientific standards but also according to the interests of the traditional owners, was a paramount matter both in the negotiations of the traditional owners and of the NLC. I would make those remarks by way of answer to the statements by Mr and Mrs Christophersen.

CHAIR—Thank you very much, Mr Viner. Were Mr or Mrs Christophersen present at any of those meetings?

Mr Viner—I do not recall. I do not recall a name at all. Neither of them were members of the NLC. I was not in attendance at any of the meetings of traditional owners and wider Aboriginal community participants at any of the meetings such as Red Lily Lagoon and the other meetings. I do not know if they were in attendance there. I cannot recall specifically if by that or some other traditional name they were in attendance at Oenpelli.

CHAIR—I was just asking in the context of this purported direct quote from you.

Mr Viner—Yes.

CHAIR—I know it is with a sad heart that you are here. I know you do not want the mine, but in the national interest you are going to have it.

Mr Viner—I do not know. I looked at that and I cannot recall my saying that. It may well have been noted by the committee already that the government accepted the recommendation of the Fox committee of inquiry that the objections of the Aboriginal people to uranium mining should not prevail. That was a specific recommendation of the Fox inquiry, and the government accepted that. Negotiations were held against the background that the government desired uranium mining to proceed, but not unless and until satisfactory negotiations had been conducted and agreement entered into under the land rights act. I may well at some time have made comments upon that in the context of the negotiations, but I do not know where the purported direct quote comes from that is referred to there.

Senator MARGETTS—Was Big Bill their relative? Were you familiar with Big Bill?

Mr Viner—I remember the name. He was not, as I recall, on the Northern Land Council. Toby Ganggali is mentioned in my statement. I remember Toby Ganggali at Oenpelli. I do not remember Bill Neidjie or whether he was at Oenpelli as well.

Senator MARGETTS—He was not actually part of the agreement. Basically, they were expressing concerns with approval from Big Bill.

Mr Viner—That is a matter that was within the ‘jurisdiction’ of the Northern Land Council because they were responsible under the act for consulting with the traditional owners and being satisfied that they consented.

Senator MARGETTS—No, I was just clarifying. They were not there, but they were acting on information they received from somebody who was.

Mr Viner—If it came out dirt cheap, there was a lot of third-hand information that went into that. As you could imagine, there was a lot of third-hand information around at that time. As I say, I do not dispute that I may well have said something as minister about the context in which the Commonwealth was approaching the negotiations, given the recommendation of the Fox committee of inquiry.

Senator MARGETTS—One of the Fox reports. There were two.

Mr Viner—Yes, that is right. We as a government and I as a minister very deliberately ensured that the Aboriginal issues, both as to attitude towards mining and concern for the environment, were brought before the Fox inquiry. It was something we were very concerned about—both that it was brought before the inquiry and to ensure that they were given every opportunity, which I believe they were.

CHAIR—As there are no further questions, I thank you very much, Mr Viner, for appearing before the committee and taking the opportunity to correct the record.

Mr Viner—Thank you for the opportunity to do so.

[12.43 p.m.]

CUNNEEN, Mr James Patrick, Managing Director, Aerodata Holdings Ltd, 65 Brockway Road, Floreat, Western Australia 6014

ROOCKE, Mr Paul Andrew, Director of ALF and Radiometric Technologies, Aerodata Holdings Ltd, 65 Brockway Road, Floreat, Western Australia 6014

CHAIR—I would like to welcome the representatives of Aerodata Holdings, Mr Pat Cunneen and Mr Paul Roocke. Would you like to make an opening statement?

Mr Cunneen—Yes, thank you. We are in the business of monitoring uranium mines and other types of nuclear waste. We thank you for the opportunity to present to you and to hopefully make you aware that there is a capability in Australia which is second to none in the world in this business of monitoring these background radiation levels, which are pretty important. I do believe that that awareness is not very generally spread. The reason I say this is that at the time of the Mururoa fracas there was no indication that Australia knew it had this level of capability. The first item I would like to show is a video from news reports. It is not necessarily a bullseye in terms of relevancy for the business of monitoring uranium and uranium waste, but it certainly refers to that. So I beg your indulgence on those areas where it discusses other matters.

A video was then shown—

Mr Cunneen—As I said, we began to develop this system after Chernobyl. We believe it is the only system in the world that has been designed to monitor dosage, in terms of the human body, of nuclear waste which can be measured from airborne systems, allowing very rapid and very general and repeated flyovers and also baseline studies before development begins. This is where this system is thrust.

The people involved have been our subsidiaries in Canada and the Czech Republic and in Australia, and we have involved the University of Prague very heavily in working up models for human dosage units from airborne gamma ray spectroscopy. We have some examples here that you may wish to look at. We have a healthy background near Perth in the Gin Gin area, showing what natural radiation levels the human body is exposed to in different geological environments in any case. We have examples of natural radiation from Namibia, including the Rossing mine that the CRA people were talking about earlier, and we have some examples from Rum Jungle.

We have worked around the world for various authorities in this area. We have worked for Ontario Hydro in Canada. We are at the moment working for the Royal Meteorological Society of Hong Kong to provide a radiometric baseline for Hong Kong. When I say 'radiometric baseline' I mean a three-dimensional picture of what the background radiation is in a normal situation to enable people to examine very quickly

situations which become abnormal—if there is a nuclear accident in communist China in this case.

We think that this is a fairly prudent monitoring approach and methodology for Australia's present uranium mines and future uranium mines. Because we became aware that we were not getting the message across, we went to ANSTO and suggested to them that we develop a joint methodology that could be used in the future. I would like to table this report from ANSTO on the Rum Jungle mine which also includes a report from the Meteorological Society of the Czech Republic.

My wish is that the committee becomes aware of this technology. It is leading, world-class technology; there is no other technology to do this. It is Australian owned and controlled through our company. Admittedly our company is small, but it leads the world in airborne geoscience and this is a particular tool that we would like you to be aware of.

CHAIR—Thank you, Mr Cunneen. The technology, I note in your submission, was developed in cooperation with the University of Prague. Is it European technology or is it Australian technology? Where did it originate?

Mr Cunneen—Mr Bob Pavlik was a Czech citizen until the Prague spring and he then became a Canadian citizen. He heads up our Canadian company, our instrument company in Toronto. With the re-opening of the Czech Republic, we moved in there and set up a subsidiary—Picodas, Prague. We now have 11 people working in Prague. They are almost entirely devoted to monitoring old uranium mines left behind by the Russians and, as you see, by nuclear power accidents so that the Czech authorities can get a full appreciation of their cleanup problems. We have worked in East Germany as well from Prague and in one of the Balkan states—I have forgotten which one. The company in Prague is entirely devoted to this activity.

CHAIR—I can see the relevance of it to situations like Chernobyl and circumstances like that. Could you perhaps just give us a bit more of a view on how it would be specifically relevant to uranium mining?

Mr Cunneen—Uranium mines clearly have the potential to expose people to above the recommended level of one millisieverts per year. This will change probably on a week by week and month by month basis as the deposit gets exploited. At this stage I do not believe anybody knows, in and around surrounding uranium mines and future deposits, what the so-called natural background levels are. They may already exceed the recommended dose, before mining begins. This obviously will increase and needs to be closely monitored.

Our report with ANSTO shows that it cannot be done simply on the ground, because there are lots of distortions. There are distortions also in the air, from the airborne system. You need to marry airborne and ground systems to get the real picture of radiation

exposure to employees and to personnel.

CHAIR—Would it be a most cost effective means of measuring the dosage that personnel are receiving?

Mr Cunneen—It is very cost effective because aircraft collect a lot of data very quickly. They fly at 120 knots and the complete, holistic picture of a reasonably large area in and around the workings and the dams and the surrounds could be monitored.

CHAIR—Would it replace some of the existing data sources that are currently used for monitoring? Or will it simply be an additional source of data?

Mr Cunneen—I think it would complement what is being done in the existing processes and would certainly enhance, in lots of instances, the value of the information already collected.

CHAIR—So in a sense it would, by potentially enhancing the safety of uranium mining, enhance its viability?

Mr Cunneen—Yes. You need to know what you are doing. It is very difficult to know what you are doing at present, I believe.

CHAIR—Have you had discussions with mining companies about the technology?

Mr Cunneen—This is a reasonably new technology and its applicability is general. We are looking mainly at nuclear power plants and waste dumps in and around nuclear power plants. Uranium mining, in a way, is a sort of secondary order problem for us. We have spoken to some mining companies and we have done some work for a mining company.

CHAIR—What has been the reaction in regard to discussions that you have had?

Mr Cunneen—Very favourable, I do believe. It has been integrated with other information sets they have. On a one-to-one commercial level, there is not a problem.

Senator FERGUSON—Did you say you have done some monitoring in East Germany?

Mr Cunneen—Yes, we did some monitoring in East Germany.

Senator FERGUSON—Is that monitoring of nuclear power plants or of the former open cut mining operations that have taken place there?

Mr Cunneen—The former open cut mining operations, particularly around

Dresden.

Senator FERGUSON—What about Ronneburg? Ronneburg is not far from Dresden.

Mr Cunneen—I think that rings a bell. That was done in association with the Berlin University.

Senator FERGUSON—What were the findings? Was there a tremendous amount of radiation around the old open cut mines?

Mr Cunneen—Yes, there is, but it is not only that. The waste material from the mines has been used for road material in and throughout Dresden. Dresden is pretty generally contaminated with uranium waste material, and this shows very clearly.

Senator FERGUSON—And lots of other things, I might add, like lignite coal.

Mr Cunneen—Maybe. I am not sure.

Senator BISHOP—Would technology be of use in former sites like Rum Jungle or Mary Kathleen which, we are told, are in the process of rehabilitation?

Mr Cunneen—I believe so. ANSTO, for instance, has been working at Rum Jungle for many years without the benefit of this technology. Now ANSTO does have it, in association with us. I believe for the first time that the full extent of the problem is exposed. On the remedial work I know very little, but it is pretty obvious that in the case of Rum Jungle it is almost overwhelming. I know nothing about Mary Kathleen.

Senator MARGETTS—It was their data that we were shown by the Northern Territory DOME. So it was that map. It was extremely interesting because the interpretation from the Northern Territory DOME is quite different from the report that is in here. Basically, he initially told the committee that the map indicated that there was no residual radiation at Rum Jungle, that radiation was not a problem and that it had been dealt with. Your analysis here is somewhat different from that initial statement.

Mr Cunneen—It is their analysis, dare I say it. I am not aware of the report that they put in. I think they were talking about—

Senator MARGETTS—This is ANSTO's analysis?

Mr Cunneen—Yes. They were talking about a very specific area around the mine. But the more general area is obviously contaminated and will probably remain so.

Senator BISHOP—At Rum Jungle we looked at the former mine site, the affected

creeks and then that lagoon or whatever that was created.

Senator MARGETTS—Rum Jungle south.

Senator BISHOP—My recollection is that they said to us that the whole area was now open for public use. Indeed, the lagoon they had created was used by citizens on the weekend for picnic activities and the like. Whilst we were there, there were two or three groups of young men on the outskirts of the lagoon. You use the word ‘contaminated’ repeatedly. What do you mean by that in the context of Rum Jungle’s former mine areas being open for public access and ongoing public use?

Mr Cunneen—I am new to this in terms of the contamination. I referred to the standards set by the International Atomic Energy Organisation. I believe that they have limited 20 millisieverts per year for any one person if they work in the nuclear industry or one millisievert per year if they are just the general public. I do not know why there is an ambiguity there. In terms of one millisievert per year, if you stayed at Rum Jungle for a year, our examinations, which have converted the dosage rate into millisieverts per year, would say that you exceed the dose. Is that right, Paul?

Mr Roocke—That is correct.

Mr Cunneen—I have to add that there are many areas in the hills of Perth and so on where you could also exceed the recommended international dose of one millisievert per year. I guess the story is that you may go there and swim but you must not camp or stay there for very long.

Mr Roocke—It should be pointed out that the regions around Rum Jungle consist of granites and are quite heavy in potassium and thorium, which have quite a high background radiation associated with it.

Senator MARGETTS—It would be really useful to have some sort of overlay so that we could actually put in the parts of the Rum Jungle mine and show which was what, where Rum Jungle south is, et cetera. Would Rum Jungle south be on this map or off the map?

Mr Roocke—It is not on this map. It is outside the bounds of that map.

Senator MARGETTS—Did you survey that area as well?

Mr Roocke—We did. This is not an absorbed dose rate map. It can be very confusing because in the ANSTO report they are the absorbed dose rates now; they are not the effective dose rates now. They are given in nanogrades per annum, whereas the one that Tony McGill probably showed you was an effective dose rate, so that would have been in millisieverts.

Senator MARGETTS—That had the highest levels and was white, whereas this one is obviously different.

Mr Roocke—That is all in the colour scaling of the image production. This is for your reference. This lower portion down here is the Rum Jungle south region, which is where the pool is where people go swimming in the tailings dam. It should be pointed out that there are other regions of high radioactivity in uranium. They are natural outcropping. As part of our study, we went up to Rum Jungle and went out and did some ground sampling at those points. Our immediate concern was that there were additional channels of leaking of uranium outside.

Senator BISHOP—The naturally occurring outcrop and the tailings dam are both in the red and both showing the same levels of radiation. Is that what your map shows?

Mr Roocke—Getting to the same degree, yes.

Senator FERGUSON—In actual fact, you are talking about areas that are supposedly ‘hot spots’, as Senator Margetts calls them, where the radiation level is the same as that which is naturally occurring anyway.

Mr Roocke—That is correct. The only thing is that it is very hard to determine from these images what is the containment of the mining process being there.

Senator FERGUSON—You can read what you like into it.

Senator MARGETTS—And you do not go swimming in it.

Senator FERGUSON—I understand that, but people are obviously in the vicinity of the granite.

Senator BISHOP—If the tailings dam or pond in the naturally occurring areas—the two red spots—shows the same level of radiation, what does that mean to human beings? Is it dangerous or not dangerous outside the limit? Is the limit very high or very low?

Mr Roocke—The natural outcropping can be dangerous if you choose to live there.

Senator SANDY MACDONALD—As determined by international standards.

Mr Cunneen—Yes. The problem is that the earth is radioactive and nobody knows quite where it is radioactive. You can maybe be living in your house and absorbing well above the international standards.

Senator FERGUSON—You can read whatever you like into a map like that

unless you have some standard to set it by or some indicator of what the varying rates are, when you reach the limit and when it is over the recommended levels.

Mr Cunneen—That is the whole point of this process. We do calibrate it in terms of the international units so that you can determine whether or not you are exceeding the international limits. At the same time, I have to point out that there are many areas of natural radiation where this is the case. I do not know what the conclusion is. One conclusion is that we should know more about natural radiation background levels. In fact, I might get an example of one near Perth to give you—

Senator MARGETTS—You could do a before and after picture of an area that is being explored or a prospective area to look and see what the disturbance level is and how the radiation has been redistributed?

Mr Roocke—Doing a baseline study enables you to determine what is the fact or the influence of any mining operation.

Senator FERGUSON—A before and after you mean?

Mr Roocke—Yes.

Mr Cunneen—This is to the north of Perth, Gin Gin. Some nice wines come from there—and Brook. This is the sand plain and this is the edge of the Darling escarpment. The units here are millisieverts per year and the yellow is the so-called safe international standard. The red goes to 1.3 and, therefore, if you stayed there for a year you would exceed what the international people call the ‘safe limit’.

Senator MARGETTS—Is that the side of the hill?

Mr Cunneen—Yes. This is the escarpment. When you hit the escarpment the radiation levels—because the granite gets exposed—go up very high.

Senator MARGETTS—So do not build your house on a lump of granite.

Mr Cunneen—Or do not read the international reports. I am not sure what that means, but it is clear to me that nobody really has a good handle on what constitutes a safe level of radiation. I am sure you are aware that in some cases in the United States the cellars fill up with radon and the incidence of cancer in those areas is very high, particularly in Pennsylvania. There is an industry pumping out the cellars of radon with little meters. When the meters get tripped the pump goes on and pumps out the cellars.

Senator MARGETTS—I suppose there might be an industry in Aberdeen for that too.

Mr Cunneen—Yes. I think we are at the beginning of our understanding of these problems.

CHAIR—I thank Mr Cunneen and Mr Roocke for appearing before the committee, providing information to us and answering our questions. If there are any follow-up matters we want to raise with you, we will contact you in writing. Thank you very much.

Luncheon adjournment

[2.05 p.m.]

COHEN, Dr Harry, National President, Medical Association for Prevention of War, 121 Railway Road, Subiaco 6008, Western Australia

MASTERS, Dr Peter, Member, Medical Association for Prevention of War, PO Box 1093, Subiaco 6008, Western Australia

ROY, Ms Brenda, Coordinator, People for Nuclear Disarmament, PO Box 186, Northbridge 6865, Western Australia

VALLENTINE, Ms Jo, Coordinator, People for Nuclear Disarmament, PO Box 186, Northbridge 6865, Western Australia

JENNINGS, Dr Philip, Treasurer, Conservation Council of Western Australia, 79 Stirling Street, Perth, Western Australia

SIEWERT, Ms Rachel, Coordinator, Conservation Council of Western Australia, 79 Stirling Street, Perth, Western Australia

CHAIR—Welcome. We have before us your respective submissions—No. 2 from the People for Nuclear Disarmament, No. 79 from the Medical Association for Prevention of War, and No. 59 from the Conservation Council of Western Australia—which will be published in a separate volume. I now invite a representative from each organisation to make an opening statement.

Dr Cohen—I am National President of MAPW. We are affiliated with International Physicians Against Nuclear War, a worldwide organisation of doctors from about 75 countries. Our organisation is very concerned about all aspects of the uranium cycle. Even though we mine uranium here, that should not be our sole concern. We are concerned about the medical implications of the whole nuclear fuel cycle. We are particularly concerned about the opening up of more uranium mines because the mining of uranium is a health hazard to miners. That has been well documented in many places in the past. The incidence of lung cancer and other radiation induced diseases is certainly significantly higher.

One of the problems in this country is that we are the only Western nation that has not had a registry of workers working in radiation industries. It has therefore been difficult, if not impossible, to follow up these workers over a period of time to see whether they have developed any illnesses which may be put down to the work that they do. We have not had a registry and it is very difficult, therefore, to be able to say, as I have heard said, that safeguards and the like are stringent and that there is no evidence to suggest that workers will in any way be affected. We cannot really say that because we

have not been able to demonstrate one way or the other. We know that radiation is dangerous. We know its effects and we know that we have to adopt the precautionary principle which is one of keeping radiation absorption down to the absolute minimum if possible.

We are particularly concerned about the new process which is going to be introduced, if it is introduced, at Kintyre, because this is a dry process. It is not possible, with any accuracy, to measure radiation which is ingested or inhaled by workers. There is a likelihood that there will be a considerable amount of inhalation of radioactive dust which is potentially dangerous because of the emissions of alpha particles. We can measure, and do measure, gamma radiation which is measured in the badges which these workers wear but it is not possible to measure what they may ingest. This is an incredibly dry area. The process is a dry one and it is not going to be possible to measure this with any accuracy.

As I said, it is difficult to monitor them because we do not have a registry. These people are often itinerant workers. They stay in one job for some time and then they move on to other jobs. They need to be followed up very carefully and it is perhaps something that this committee should look at at some stage in the future. The absence of a registry is of great concern.

There is another thing that our international organisation has touched on. I just want to draw my comments to a conclusion by talking about this. I do not believe and those of us who are working in this area do not believe that we can simply adopt an attitude to, or an opinion about, uranium mining and its consequences in this country. We have to look at the broader holistic issues about what happens to uranium, which is only made for two purposes. One is to go into nuclear reactors and the other is to go into nuclear weapons. The mining and reprocessing of uranium will finish up in those two areas.

It has been said and maintained several times that the safeguards laid down by the International Atomic Energy Association will see to it that our uranium or the end products of it, which includes the reprocessed plutonium, will not finish up in anything other than nuclear reactors for peaceful purposes.

I simply want to draw the committee's attention to this document which is entitled *Crude nuclear weapons: proliferation and the terrorist threat*, which was put out by the international group of which I am member. The Office of Technology Assessment of the US Congress concluded:

. . . use of more sophisticated statistical analysis—many analysts have concluded that measurements are incapable of reliably detecting diversions of one or even several significant quantities of safeguarded materials from large processing plants.

.

The . . . safeguards methods now in use by the IAEA appear unable to assure that the diversion of a bomb's worth of plutonium per year from a large reprocessing facility . . . would be detected with high confidence.

We are therefore very, very much concerned about where our uranium goes. We do not believe that the so-called safeguards are sufficient to rule out that very serious risk.

Thank you, Mr Chairman.

Dr Masters—I would like to see the Australian government play a positive role in relation to energy production—that is, in developing renewable energy rather than trying to make a fast buck on a dying industry. I say a dying industry because the nuclear industry was born out of guilt about nuclear weapons and was touted as a cheap source of energy. But as time has passed, it has proved to be much more expensive, mainly because the capital costs have escalated as people try to make sure that no malfunction leading to a catastrophic accident occurs.

So what was supposed to be a cheap source of energy is now more expensive than the conventional ones. This was shown particularly clearly when Margaret Thatcher tried to sell off the nuclear power industry in Britain. One of the main problems there was that they did not know how much it was going to cost to decommission these power stations. This is a problem which is only just coming up as the power stations age. One of the problems there is that the intense radioactivity in the core actually affects the structure of these power stations so that they become possibly dangerous from the point of view of their structural integrity. There was an article in the *New Scientist* that I have just read, saying that they were worrying about keeping up the research on this aspect because if they do not, they really will not know when they should be decommissioning them. When is it safe to allow a nuclear power station to go on? It is going to be an increasing issue as they age.

There are also the social effects of nuclear power. They are large stations and they encourage a centralised source of energy. They also encourage secrecy because of its link to nuclear weapons. This leads to poor accountability, which was certainly demonstrated in Britain. I feel that it is very important that Australia should be promoting the renewable non-polluting energy sources—solar energy and biomass—and in certain areas geothermal energy, tidal energy and hydro-electric energy.

Dr Jennings—I represent the Conservation Council of Western Australia. We have more than 60 affiliated groups representing about 10,000 active conservationists in Western Australia. Our policy is, and has been for a long time, to oppose the mining of uranium, primarily for moral and ethical reasons. We believe it is an industry which you cannot separate from the nuclear weapons industry. It is an industry which has hazards and which, despite reassurances by a number of people over a number of years, has been demonstrated to be unsafe and to lead to the production of wastes for which we have no technology currently available for safely and permanently storing. Despite assurances that

have been given to us for at least 25 years, that situation still has not been resolved.

The mining of uranium leads to contamination of the neighbouring areas. That has occurred even in Australia with the Rum Jungle operations and with releases of radioactive water from the Ranger mine and from a number of the trial mines in other parts of Australia. Transport of radioactive materials poses hazards for the population, with the possibility of accidents and the irradiation of the workers involved in the transport.

We are particularly opposed to proposals for mining in national parks and World Heritage areas, and a number of the proposed mines in Australia happen to be in those areas. In fact Kungarra is in the centre of a World Heritage area and we are totally opposed to that. I think it would bring Australia into national disrepute if that went ahead.

We are particularly concerned about the proposed mining in Western Australia at Rudall River because that area was excised by the government from a national park in a blatant act of just removing it by saying that it was not a national park any more. We regard the proposed Kintyre mine as being within the Rudall River National Park. It is certainly right on the boundary. Mining in national parks is contrary to the ANZEC definition of national parks and to the IUCN definition of national parks, which are supposed to be free from all forms of human exploitation. Mining in the Kakadu World Heritage area is also contrary to the spirit of the World Heritage convention.

We are particularly concerned about problems related to radioactive tailings. The history in this state of handling of radioactive tailings has been very bad. There have been problems with contamination in the south west and also in the mid-west of this state of radioactive tailings from the mineral sands industry having left mine sites and having been deposited in towns and spread along roadways. When that was revealed about 15 years ago, a cleanup was commenced and it still has not been completed. So the history of regulation of radioactive tailings in this state is highly unsatisfactory.

A further development which has occurred there which gives us even less confidence that this state could manage uranium mining is that the mines department has reorganised the arrangements so that the health department is no longer involved in the regulation of radiation hazards in the mining industry. They now have a one-stop shop, but the amount of expertise they have on staff is very limited. In fact, the one person that they had who was very highly qualified has now resigned and has gone to South Australia to work on the Roxby project. So we are quite unhappy with the mines department's ability to manage radioactive industries in this state. The historical record demonstrates that they have been unable to do it successfully over the long term.

I mentioned that our concerns were primarily ethical. This is not the sort of industry that Australia should be getting involved with, particularly at this point of time when there is so much evidence around to suggest that it is unsafe and that it also leads to the proliferation of nuclear weapons. As a physicist, I am quite aware of the very great

difficulty there is to distinguish in any way between uranium used for so-called peaceful purposes and the uranium used for nuclear weapons.

A number of countries have demonstrated through so-called peaceful nuclear technology that they were able to produce nuclear weapons from reactors that were supposed to have been used for peaceful purposes. The more uranium there is available on the international scene, there will be more likelihood of nuclear proliferation and there will be more likelihood of these weapons falling into the hands of terrorist groups. Does Australia want to have that on its conscience? I do not believe that is an ethical position we can countenance and I do not believe that we should get involved in this industry for that purpose alone, although there are many others I have mentioned which are important.

Nuclear power itself, as Peter mentioned, is a technology which basically has failed. It is in decline in the United States. The French have big problems with it. Large parts of France are contaminated. There are also big problems in the former Soviet Union with it. It is a technology which had its opportunities and basically, I believe, it is on the way out.

It is certainly not a sustainable technology in the longer run, except by resorting to the plutonium economy, which raises all sorts of dangers that I do not really believe the world is equipped to handle, because plutonium is such a dangerous material both from a radio-toxic point of view and from a weapons point of view. The only way in which nuclear power could be regarded as anything other than a short-term stopgap power supply option is by going to breeding and producing large amounts of plutonium, which I doubt—and I have never seen anyone able to demonstrate this—we can handle safely in the sort of international climate that we have at the present time.

Finally, from an Australian point of view, I think we need to ask ourselves very carefully about the economics of uranium mining and whether the costs that the companies are actually incurring for uranium mining are the real costs or whether we are subsidising them to a large extent. We are paying the companies quite substantial subsidies through the tax arrangements that this country has, particularly things like the diesel fuel rebate, the negative gearing arrangements and the infrastructure development costs that state governments are putting in.

The state government of Western Australia has just announced it is going to build a road that runs right past the Kintyre prospect with the 4c a litre fuel levy that we all pay. Those sorts of subsidies are not included in the cost of the uranium as it is sold by those companies. The taxpayer of Australia is subsidising that industry in order for it to be able to compete internationally. It is an industry I do not think we really should be part of and certainly the taxpayers of Australia should not be subsidising it.

CHAIR—Thank you.

Ms Vallentine—If you have looked at the submission which PND sent in last year, you will see that we basically made eight points. Most of those have already been touched on by the three previous speakers, so I will not go into them in a lot of detail. But I will say a little bit about the international situation and then I will focus on point 8, which was about accidents and the fact that the nuclear industry from its inception has routinely lied to governments and communities especially about accidents and faulty operations.

Before I get on to the subject of accidents, it is important that we look at the situation that has developed in the last 12 months. A lot has happened in the field of nuclear disarmament which the general community does not seem to have really cottoned on to. The media has not given nuclear disarmament big press. But some significant things have happened and Australia has, I am glad to say, been part of some of those which are quite significant. The most significant one in this context, I believe, is the International Court of Justice's advisory opinion which was handed down in July last year which said that the use of nuclear weapons was against humanitarian law and against international law. That is it in a very short summary.

If Australia sells uranium to any country which has the capability of making nuclear weapons, I believe it is in contravention of that ICJ finding. On behalf of PND I have repeatedly written to the government asking, 'What is Australia's response to the International Court of Justice's advisory opinion?' Silence has been the reply—virtually nothing.

It was the previous government that at the very last moment decided to actually participate in that whole process. Gareth Evans made a very stirring speech before the International Court of Justice in the November before the election. The present government, to its credit, continued with the Canberra Commission, which was set up by the Keating government. A lot of people thought that that was just a pre-election sop and so on, but in fact it came out with some very, very interesting findings. As I said, the Howard government, to its credit continued with that.

But linked to the International Court of Justice advisory opinion are the recommendations of the Canberra Commission and the signing of the nuclear non-proliferation treaty in April last year and, more recently, the comprehensive test ban treaty. All of these events in the last 12 months point significantly to the fact that the world's people are now demanding nuclear disarmament in the way that they have not done before. It is on the agenda; it is an inexorable role. How quickly it goes is a matter of conjecture and how far the Australian government supports it is another matter of conjecture. But the point is that we should not be doing anything in any way to contribute towards nuclear weapons being made more possible rather than less possible. We should be on the side of the angels with this one and form nuclear disarmament. I think that the government has recognised that.

I was very amused when the nuclear testing fuss in the Pacific was on in 1995

that we had politicians of all colours, each clamouring over the rest to be more anti-nuclear. There was newly found anti-nuclear activism that was wonderful to see. Where has that gone? It has kind of evaporated, it seems to me, if we have got a government that can even consider allowing more uranium mines to open up in this country.

Other speakers have said that there is a link between the civilian reactors and the military use of nuclear technology. That was proved in 1988 beyond a shadow of doubt with the flag swapping scandal—and you can look up all kinds of Senate records on that. Peter Milton, a Labor member from Victoria; Norm Sanders, a Democrat senator from Tasmania, and I, as the Western Australian senator at that time, were involved in exposing that flag swapping scandal. It was proved beyond a shadow of doubt that the Tricastin nuclear plant in France was linked into the nuclear industry, and that Australian atoms, as Phil Jennings has said, cannot be separated out once they enter the nuclear fuel cycle. There is no way that we can say that our uranium does not enter into the nuclear weapon cycle of a country like France.

You remember that Jacques Chirac threatened to boycott Australian uranium when the anti-French bizzo was at its height in this country. That was amazing. He was threatening to boycott us because we were selling France the stuff with which they could make their nuclear weapons which we were then protesting about in the Pacific. It did not make sense even to him.

So, we do have this huge problem about our anti-nuclear stand, if you like, if we continue to expand the uranium industry. The other point that has also been mentioned in passing is that the International Atomic Energy Agency does not have the capacity to really keep tabs on the movement of uranium oxides from one country to another. It all goes into a melting pot. They have not got the facilities to actually keep a close tab on what happens with the transport of nuclear materials around the globe. Their surprise visits to nuclear reactors are not really surprise visits because they do not have enough inspectors to really do that surprise visit tactic. If they did, that would create quite a lot of disquiet perhaps amongst the operators of nuclear power plants. They get very good warning when the inspectors are around and they try to cover up.

That brings me to the next point: the situation is full of lies and deliberate discrepancies. I think that we did send you this document. Do you recognise that? I hope that you have actually had a cursory look at it at least. It is too much to read in one hit. It is pages long with hundreds of accidents, leaks, failures and other ‘incidents’—as the nuclear industry likes to call them—in the nuclear industry, industrial and military.

This goes back to 1947 and, unfortunately, goes up to only 21 October 1991. Nobody has actually collated, as far as I know, another set of accidents and incidents like this since 1991, but this is a pretty considerable document. A lot of the accidents that are contained in here have their ongoing sagas. The Chernobyl reactor incident of course you have all heard about. You could not have escaped that. But there are many from many

different countries. You really need to look at some of these well documented stories of the nuclear industry which lies routinely, as we said in our submission, in order to cover its tracks.

I will just give you a couple of examples. In October 1990, there was an incident in Hanford, Washington State. This has been one of the really troublesome ones in the United States. A potentially explosive situation was reported by safety inspectors at a nuclear waste tank at Hanford. The waste slurry had formed a thick crust which was trapping hydrogen being continuously generated underneath. One calculation had it that an explosion equivalent to 230 kilograms of TNT could occur. The tank had uncertain chemistry and contents. Up to 66 tanks at Hanford were believed to be leaking, 22 were accumulating hydrogen, and a further 22 were potentially explosive. This came from the *New Scientist* in October 1990. They do not make such claims lightly.

Hanford has actually been closed down since then, with the exception of one of its reactors, which is still working. Hazel O'Leary, the current energy minister in the United States, wants to keep this one reactor going, especially constructed, because they get the tritium out of that which is essential for their nuclear weapons program. It enhances the blast effect, I believe. Phil would be more capable of commenting on that. The point is that that is a direct link between the nuclear industry, so called for peaceful purposes, and the weapons industry.

The plutonium from the weapons that they are trying to decommission in the United States—that is going on east and west—is the worst of the waste products, which is very difficult to dispose of. They are trying to burn it up in their nuclear power plants, making the waste that comes out of the power plants even more high level than it has been before and more dangerous. It again exposes this undeniable link between the civilian and military uses of uranium in its end result. You cannot get the plutonium without the uranium and you cannot have nuclear weapons without plutonium. There is this big chain. We are part of it at the very beginning if we allow these uranium mines to expand in Australia, and I do not think we should.

Ms Roy—I think Jo has put our position, so I just want to make one additional point about where uranium from Australia is likely to go. It is likely to go to Indonesia. A lot of people are not aware of the risks that that poses, coming back again. I was doing some reading a couple of days ago on this matter as well and came across an account of the problem that the Austrian government were having in 1990. They were concerned about what was happening over their border in Czechoslovakia. There was a reactor which was coming to the end of its life, there had been a leak and they had problems with that. But Czechoslovakia was saying, 'We don't have any money to fix it.' So they asked the European Community to find money to help them do that.

I am concerned that we may have similar problems. If we are the people who export our uranium, we may say, 'Well, the problems are not on our shore; we don't have

nuclear reactors here, so we don't have the problem.' But if Indonesia, or another country which is not too far away from us, takes our uranium, uses it and then further down the track says, 'We don't have any money to fix up the problems', they come back to us via the wind, particularly in Western Australia.

Ms Vallentine—Perhaps this would be a good time to show this next film.

Dr Jennings—Maybe committee members would like to have a look at this. This shows the earthquake epicentres in the vicinity of Australia between 1856 and 1992. It illustrates the situation in Indonesia. Virtually the whole area is earthquake prone. One of the reasons for our concern about nuclear reactors in Indonesia is the possibility of a severe earthquake damaging the reactor in the vicinity of Australia. If you are not aware of this one, you might like to have a look at it.

Ms Vallentine—Could we table that one?

CHAIR—Yes. Are you making a statement?

Ms Siewert—I have one quick statement. I understand that this morning there was comment made about taking uranium out of Port Hedland. I understand that the Port Hedland Shire Council passed a motion which is still on their books in 1989, stating that they are opposed to transport of nuclear materials through their shire. I would like to put that on the record.

Senator MARGETTS—And it has not been rescinded?

Ms Siewert—It has not been rescinded.

CHAIR—Thank you for your opening statements. Dr Cohen and Dr Masters, what is your attitude to nuclear medicine in the light of your comments generally about the nuclear industry?

Dr Cohen—There is certainly no question that nuclear medicine and radioactive nucleotides have a very important part to play in certain illnesses and the treatment of cancers, non-fatal cancers and so on. Most of the nucleotides which are used can be made in a cyclotron. The new technology is likely to therefore supersede the need for nucleotides being developed in reactors.

Currently, of course, many of the nucleotides that Australia uses are manufactured in the Lucas Heights reactor, but the use of cyclotrons is certainly very much cheaper. It is envisaged in the not too distant future, and it may have already happened, that some of the larger teaching hospitals in Australia will have their own facilities for manufacturing their own nucleotides. Dr Masters might be able to elaborate on that.

Dr Masters—I believe there is a cyclotron in Singapore, is there not, Phil, from which we have obtained material of this nature?

Dr Jennings—We have the capacity in Australia. This was part of the submission that we made to the inquiry into the replacement reactor for Lucas Heights which occurred a couple of years ago. The PET approach is now preferred because the nuclides are not as long lived as technetium-99 and some of the others that have been used in the past. Gradually, the reactor materials will be replaced by positron emitters produced in synchrotrons, and Australia is already moving in this direction and certainly many of our neighbours are doing so.

CHAIR—Ms Vallentine, in regard to the list of incidents which you include in your submission I notice that a number of them are certainly not what I would describe as incidents in the sense of them being some occurrence that has caused some danger. For instance, I notice that one of them here, and this is from just perusing them, is in relation to residents being unhappy that nuclear waste was going to be stored in a disused chemical mine.

Ms Vallentine—What page are you looking at there?

CHAIR—Page 39, No. 610. There is another one here, 600, in which it is simply claimed by a private research group that US nuclear ships have leaked radiation 37 times but the US Navy rebutted the claims. They are not confirmed incidents are they? They are just newspaper reports of occurrences of claims.

Ms Vallentine—Some of them are newspaper reports, yes. A number of them are reported in a variety of papers in different parts of the world. I suppose we have to ask them, 'How do you know anything? How do you know if they are not true?' There is a lot of concern if people are living near these plants and there is a lot more anecdotal evidence, which I actually mentioned in our paper, that is not really verifiable. There have been a few stories that have got through as far as the mainstream media, and there are many more that do not get as far as the mainstream media, and we have not included those. So I suppose you can say, 'Do you believe anything you read in the media? How do we know that they are not true?'

A lot of these have come from people whose health has been affected, but these people are often discredited. These people—the downwinders—are often discredited, and I used that anecdotal evidence in our paper. They are the people who have lived downwind. They often cannot even get the medical people to say that there is a direct link, and it is very hard to prove. Just as Harry Cohen said, you have these longitudinal studies which actually show that someone has worked in a plant or they have lived downwind of a plant therefore there is some link. We have not got that kind of data in Australia, even where it does exist in some places, for example, in the States. It is about people who have worked in the industry but not people who have lived near plants. So it is very difficult to prove

the links with these cancers and so on.

CHAIR—I raised it because, in relation to the Ranger mine, we were given evidence that there had been X number of incidents that had occurred at the Ranger mine.

Ms Vallentine—Almost every wet season.

CHAIR—When we queried the Ranger mine officers about that it turned out that included in this supposedly enormous list of incidents were things like minor seepages from pipes which had been virtually immediately discovered and repaired.

Ms Vallentine—I think it is still worth noting, don't you? They must be reported.

CHAIR—Yes, but there have been no untoward consequences of those sorts of things.

Ms Vallentine—What if they had not been found? A tiny seepage here and a tiny seepage there leads to a cumulative effect.

CHAIR—But they were found and they were found because there are safeguards in place to guard against that. There needs to be a distinction drawn between occurrences that are likely to cause damage and those that are, if you like, incidental and unlikely to cause any significant damage.

Ms Vallentine—I do not think anything is incidental when you are dealing with radiation. When you are dealing with any radioactive materials I think any incident or possible accident is really to be taken very seriously. I am sure that in the industry to some extent to raise the issue of opening up new uranium mines they have to have a kind of cavalier attitude towards these things and downplay them. They are really very serious.

CHAIR—In relation to the criticisms that your submissions make of the international safeguards regime, is there any point in having an international safeguards regime, given your criticisms of it? Is it dispensable? Is there any point to it?

Ms Vallentine—I suppose it is better having it than not having it, but I think it is not watertight—there are a lot of loopholes.

Ms Roy—Surely the point of criticising something or asking for it to be better is that you ask for those safeguards to be tightened up and to be looked at so people can see if they are in fact efficient safeguards. We are not saying, 'Well, these safeguards don't work, so let's not have any.'

CHAIR—That was not the point made in the submission.

Ms Vallentine—That the International Atomic Energy Agency safeguards and our own national safeguards are not—

CHAIR—Your submission did not make the point that they should be tightened up. It was simply—

Ms Vallentine—We were saying that they are not valuable as they are at the moment.

Ms Roy—Yes. That is right. I was just replying to what you were saying about not having them at all. We would say that if you are going to have an industry, certainly you have to have safeguards. We are just saying that we have problems with them and that certainly the safeguards are not as stringent as we feel they should be.

Senator MARGETTS—It has been quite difficult for me to get a handle on exactly what kind of information is available on, first of all, workers' health and safety, and then on community health and safety. But we have got potentially three different types of radiation from uranium mines. Can I have any comment about the level of monitoring? You have said that there should be epidemiological studies on workers in the industry and, if I recall correctly, of communities surrounding such a facility.

The industry and government bodies so far are saying that it is impractical to have constant monitoring of workers. I guess that would mean impossible for constant monitoring of the community. Do you know of anywhere where there is actually an accurate cumulative record of the amount of radiation that workers receive in other countries, for instance, in the nuclear industry?

Dr Masters—I would think there are, but I cannot quote examples. I think there is more work being done in the USA on that. The point is that it is a long-term hazard and therefore you have to follow up these workers over their lifetime and compare the incidence of cancer in them with the incidence of cancer in the general public. That is the problem. You cannot just look at the workers that are there to see how much cancer they get because cancer usually takes many years to develop. That is the problem.

Senator MARGETTS—Part of the submission by the Western Australian Department of Minerals and Energy included a report that was produced by G.S. Hewson from WA, J. Kvasnicka from Darwin and A.D. Johnston from Adelaide. They suggested that there was work being done then on being able to get more accurate information from individual workers. I guess this was in the early 1990s.

Dr Jennings—I used to chair the Mines Radiation Safety Board before it was abolished by the state government. When the Mines Radiation Safety Board was in operation we set up a register in the late 1980s. Prior to that no records had been kept. That may or may not still be operating; I have had no contact with that branch of the

mines department since the board was abolished in 1993. But at the time the board was in operation a register was set up of every worker in the mineral sands industry—and that would be extended to the uranium industry if we had one. Those records would have been kept.

Another thing the board was looking at was the possibility of carrying out an epidemiological study. However, we were told by the industry that they had no records and that they did not keep the records after the workers left the industry. So no epidemiological study was ever carried out even though the mineral sands industry has been operating in Western Australia for over 40 years.

Senator MARGETTS—Back in 1990, a report by Hewson and Hartley indicated that research at that time was being directed towards the use of personal integrating dosimeters and the use of bioassay techniques such as lung counting, thorium breath measurement and blood and urine monitoring in an endeavour to improve existing internal dose estimates. This was saying at the time that, when the average dose was likely to be reduced, which it is now for 20 millisieverts per year, they were preparing for when this was likely to happen. We were advised this morning that they are still looking at the thorium breath measurement, but there has not been progress on most of those other methods. Has anybody got any further data on that?

Dr Jennings—I know that study quite well. It was financed by Worksafe Australia when the mines department carried it out. Greg Hewson was the principal investigator involved. The study revealed that the thoron levels in the breath of the workers in the mineral sands industry were higher than would have been expected from the doses they were assessed to have received from the dosimeters that they were wearing.

This is a very interesting piece of science because it suggests that there is either something wrong with the dosimeters or with the technique for measuring thoron in breath or something wrong with the model that the ICRP uses—the so-called lung model for determining how dust, once it is inhaled, is taken up to the blood and to the breath and how it is absorbed into the body.

This underlines the whole question of the uncertainties that exist in the dose estimates because a worker breathes in dust and you calculate a dose for that worker. It involves 20 or 30 different assumptions about what the nature of the dust is, how much of it is absorbed, whether it goes to the bone, whether it goes to the blood and how quickly it is excreted from the body. That is what Hewson was trying to determine. He found, in the measurements that he carried out, that there were some quite substantial discrepancies between the measured external doses and the doses he would have expected to have produced the thoron levels he measured. As far as I know, that issue has still not been resolved.

Senator MARGETTS—Given that it is seven years on, that there is a lot more

pressure to open new uranium mines and that we have even more pressure for mineral sands in Western Australia as well, has there not been considerable funding put into this kind of research in WA?

Dr Jennings—I think you need to look at the history of the ICRP's approach dose assessment. If you look back over the last 15 years you will find that there have been at least four major changes in the protocol and in the limits. It is not an exact science. The numbers change all the time as more research is done. One of the reasons the doses of the mineral sands industry in Western Australia are now assessed as being much lower than they were in the mid-1980s is that the model has changed and the parameters have changed. Where the same amount of dust in 1985 might have given you a certain dose, the same amount now will give you a dose that is about a third of what it was at that stage as a result of the refinements that have resulted from research.

These numbers in the model are being changed all the time. That is the reason why we need epidemiological studies. The field is by no means mature. The assessments that are carried out are perhaps the best we can do at the present time, but in 15 or 20 years time we may assess those doses as being quite different.

Senator MARGETTS—Can anyone give me a comment in relation to radon? The indications are that in the industry in Australia historical averages are used as a rationale for, say, the Department of Minerals and Energy not doing radon monitoring on a regular basis because they would indicate that it is not significant enough for them to monitor.

Dr Jennings—We do not have a uranium mining industry in this state, so I have to speak about the mineral sands industry. But the situation is similar. The radioactivity in the radon and thoron levels in comparison to the dust levels is a lot lower. The emphasis has been on getting the dust levels down. As Harry said, this is a real concern about Kintyre because it is the dust which carries the radioactive particles adhering to it. The alpha particles attach themselves to this fine dust. It is breathed in through the lungs, even through respiratory protection devices. This is the real concern.

Radon has been a problem in the uranium mining industry in deep mines. The history of uranium mining is well documented. Lung cancer was originally discovered in uranium miners—it was called 'Mountain sickness'—in the last century because the uranium miners in Czechoslovakia were all coming down with this disease in their youth. Radon is a potent carcinogen. However, in open-cut mining, it is the dust rather than the radon that is the primary cause of concern.

Senator MARGETTS—If it is only dust that is measured or only certain types of radiation that is measured—they are not actually measured per person; they are averaged and you get the badges, as you know, and you give a high reading rather than a cumulative reading—are you not then likely to have only the statistics that are available used for an accumulative reading for a person rather than the various types of radiation,

some of which might be less, all being added into the equation?

Dr Jennings—There are lots of problems along the way. There is a possibility that in certain aspects of the operation, for example, in storage areas where drums of yellowcake may be stored where the air circulation is not particularly good or in holds of ships, you could get significant accumulations of radon. Radon also is present even in open-cut mines, and in milling operations radon levels can be elevated by the crushing of the rock.

It is a significant factor. What we have in the mineral sands industry, where it is likewise a significant factor, is estimates of how significant it is. There has not been a lot of research done on it. The estimates indicate that it is fairly low. Likewise, for example, the ingestion of this material is normally taken into account because the models suggest that the effect on the gastrointestinal tract is likely to be much less than the effect on the bronchial tract and the lungs because it resides there for a lot longer.

A lot of these factors are not taken into account in the calculations that are done because estimates indicate that they are relatively insignificant. But it does not mean that they are always insignificant. You have to be on your guard all the time and you have to certainly be careful that workers are not being exposed unnecessarily to the ingestion of materials or to the inhalation of radon and thoron.

Dr Masters—In relation to the inhalation risk, I should draw attention to the catastrophe that we have already experienced in Western Australia—that is, asbestos mining in Wittenoom and the inhalation of asbestos. There was a lot of neglect involved in that. We do not want to see this repeated in relation to uranium mining. We are now just beginning to see the effects of this.

CHAIR—But hasn't technology advanced a lot since those days?

Dr Masters—I do not think technology necessarily means that you can stop a thing. Admittedly, we should know how to better how prevent inhalation. I am just saying that it is a risk that we cannot be completely confident we can eliminate. We may be able to reduce it, but how much I do not know. I am not an expert.

Senator BISHOP—Following up the point you raised, Dr Jennings, is radon gas pervious through steel containers?

Dr Jennings—No.

Senator BISHOP—So if you had steel containers of yellowcake put into storage—in a warehouse or in the hold of a ship—how would workers be affected if there was no breach of the container material?

Dr Jennings—They would not, unless the containers were opened. The radon would build up in the containers. If a container was opened or spilt or the lid was dislodged, the radon would escape. The only radiation associated with the steel containers if they are not opened is the gamma radiation that passes through the steel.

Senator BISHOP—Could you tell me a bit about the Conservation Council. You said that it had 60 affiliated groups. Does the Conservation Council act as an umbrella organisation?

Dr Jennings—Yes.

Senator BISHOP—Does it then in its decision making process act on a consensus basis or some form of voting?

Dr Jennings—Harry is the president, but I guess I could speak on this. We do have policies which are adopted by the council. It rarely comes to a vote. They are generally consensus policies. If consensus cannot be reached, a vote is held. Our uranium policy—as I remember, Rachel was at the meeting too when it was adopted about a decade ago—was a consensus view.

Senator BISHOP—It is interesting because CRA indicated earlier today that they were quite advanced in their negotiations with a range of interest groups involved with Kintyre, whether it was land owners or environmental groups, the council or whatever. I noted in the submission here that your organisation—and I think most of them—was totally opposed to any involvement in any facets of what you described as the nuclear industry. It is an absolute position as opposed to a relative position.

If the land rights issue was resolved with the land owners over there, if the transport issue by air or road to ports could be accommodated and if the council was satisfied that the shipping and worker issues in terms of health and safety were satisfactorily resolved, that would then satisfy each of the concerns of the interest groups who have become involved in this debate, many of whose submissions you have adopted in principal submissions in the various submissions. If those interest groups' arguments are satisfied to the extent of the interest groups that press them—the land owners, for example—what then is the position of the groups here at this table? Are you still totally opposed to the further development of places such as Kintyre?

Dr Jennings—As I said in my submission, for us it is primarily an ethical issue—putting more uranium into the international market is going to increase the international insecurity, it will increase the threat of nuclear weapons proliferation and it adds to the nuclear waste stockpile for which we do not have any effective means of disposing at present. Primarily our concerns are ethical. It does not mean that we do not have concerns about anyone who might be employed in the industry. We do. We are concerned about workers. We are concerned about indigenous peoples' rights as well. But we are opposed

to the mining of uranium on ethical grounds and we are particularly opposed to the mining of uranium in national parks.

Senator BISHOP—If the different interest groups' arguments—whether it is worker interests or indigenous peoples' interests or council interests—are satisfied, as sometimes they are satisfied in these debates, you still maintain a position of absolute opposition.

Dr Jennings—Our policy has always been a 'no mines' policy.

Ms Siewert—None of those groups are members of ours. Is that the link that you are trying to make? None of those groups are our members.

Dr Jennings—None of those are affiliated with the Conservation Council. The Port Hedland Council and the Aboriginal groups and the workers groups out there are not affiliated with the Conservation Council.

Senator BISHOP—Sometimes environmental issues can be addressed satisfactorily.

Ms Vallentine—These cannot, I do not think, in terms particularly of the waste. I think it comes down to that as a baseline for all of the groups that you see represented here at the table. We are producing a legacy of waste which cannot be addressed and we are leaving that to future generations. Scientists have had over 50 years now to figure this one out and they have not come up with an answer. What do you do with the radioactive leftovers? There is no answer to that. Until there is an answer to that, people from nuclear disarmament will not be revisiting this as an issue. We are absolutely opposed.

Senator BISHOP—That is PND. It is a different organisation to the Conservation Council. I am trying to find out the internal dynamics because I am told by a range of interest groups that their interests are satisfied; they will not oppose the development of this particular mine site or others in the Northern Territory. That was made clear to us by the unions in the Northern Territory, by various Aboriginal groupings in the Northern Territory and, indeed, by some of the environmental groups. That is a different position to what you are putting. I just want to make sure I understand it, that is all.

Dr Jennings—There may be environmental groups in Western Australia not affiliated with the council, or even affiliated with the council, that might support Kintyre. I am not aware of any. They certainly have not told us that. The council has had a policy for over a decade of opposition to uranium mining for the reasons I outlined, and we have had no calls from any groups to change it.

Senator MARGETTS—As an extension of that, would you take it that it is not legitimate for you as a group to participate in the process of uranium negotiations if you

have this ethical opposition to the—

Dr Jennings—We will be participating in the environmental review of management program because we feel that it is important that the EPA's attention is drawn to the environmental concerns we have about the proposal, just as we do with any other proposal. We will certainly be letting the EPA know why we do not believe that the Kintyre mine should go ahead.

Ms Siewert—If a proposal is damaging to the environment, whether we oppose it or not—as we would in this case—we want to see that it is at the highest standard it can be, despite our fundamental opposition to it. Just because we do not support a mine does not mean that we think it should be allowed to proceed in an unsafe way.

Dr Cohen—As I mentioned, we are affiliated with an international organisation which is also opposed to every phase of the uranium cycle. We adopt a global view and, hopefully, a vision of the future that we do not have anywhere else to go, that we only have one tiny planet and that we have not solved the problems of radioactive waste with all its inherent major concerns and that we do have a duty to future generations. We may never come up with a solution to what to do with plutonium, of which we have something like 1,500 tonnes around the world.

Plutonium has a half-life, as you know, of 23,000 years, which means it is going to be around for 500,000 years. One-millionth of a gram of plutonium is enough to cause lung cancer. As an organisation, we feel that adding to that load of plutonium in the biosphere, which is what will happen if we mine more uranium, is something which we cannot countenance and do not approve of. So we are totally opposed.

We believe that we need to take the global view. Even if every little organisation around Kintyre, or the mining group, or certain Aboriginal groups, or the unions, felt that there was some short-term gain to be made out of mining uranium, we believe that the long-term consequences far outweigh any potential short-term benefit. That is the attitude we believe we must take, and that everybody should take.

CHAIR—Dr Jennings, you said that there were countries where reactor grade uranium has been converted to weapons grade uranium. Can you tell me what countries they are?

Dr Jennings—India, Israel and South Africa—there are just three. There was a concern about Pakistan and North Korea only a couple of years ago. The path to production of weapons grade plutonium from reactor grade plutonium is quite straightforward. I can present documentation, if you want it. It is outlined in any number of university level texts about how to do it. You just have to change the operating parameters of your reactor in order to produce the appropriate type of plutonium. If you want plutonium-239, rather than 238, it is easy enough to do. India demonstrated how to do it at least 20 years ago. Israel has produced something like 200 nuclear bombs, as far

as we know. If you interviewed Mordecai Vanunu, he could probably tell you the exact number. Certainly, South Africa has done likewise.

Senator MARGETTS—We have heard a slightly more conservative viewpoint. I think it was said that there was a much more qualitative leap between what can be produced by the nuclear power cycle and the weapons cycle. Are you suggesting that it is potentially possible?

Dr Jennings—Yes. If you are operating a reactor for power purposes, it is difficult to produce weapons grade plutonium. You tend to get the wrong isotope. But, if you deliberately set out to produce weapons grade plutonium, you can do it with a nuclear power reactor. India used a can-do reactor and natural uranium in order to produce their first nuclear device.

CHAIR—None of those countries you identified are signatories to the non-proliferation treaty, are they?

Dr Jennings—The non-proliferation treaty does not really help you when you are dealing with a terrorist group. North Korea is a signatory and it is believed that they are about to withdraw from the treaty—you have to give three months notice. That does not help the supplier. If you have been supplying North Korea with uranium for 20 years and then they say, ‘We have to produce a weapon, we are pulling out in three months time’, you cannot go and recover all that uranium. So that is a defect in the NPT. Sure, it signals that they are going to do something but it is too late for you to do anything about it.

Senator BISHOP—We have not supplied them with—

Dr Jennings—No, I was just taking that as a hypothetical example. It could be supplied. There was some discussion back in the 1970s—I can show it to you—in some of the ANSTO bulletins of supplying Iran with uranium.

Senator BISHOP—We were told by the Department of Foreign Affairs that Australia insisted upon additional standards for countries we supplied uranium to that overcame some of those problems. In fact, we added on quite detailed requirements to host countries.

Dr Jennings—Yes, we have certainly supplied it to countries that are non-signatories. Australia has supplied uranium to countries that are non-signatories, such as France, and it has insisted on additional safeguards, which I think is the least you could do by supplying it to a non-signatory.

Senator FERGUSON—If you were to get your way and there were to be no future uranium mines in Australia, and the existing mines were to continue, or even if you were somehow able to stop them from producing tomorrow, there would still be a

significant amount of uranium available to the world market for the foreseeable future and as much uranium as was required by that world market would be able to be supplied in the near future. So what you are really saying is that you do not want us to sell the Australian uranium to the rest of the world but we cannot stop other people from selling uranium in the world. So it is the ethical reason that we are going to be clean in Australia and we will not sell any uranium but it does not matter if they get it from everywhere else.

Dr Jennings—But you could equally use that sort of argument about opium or heroin. There is plenty of fat on the world market so why shouldn't we get into the game too? That argument does not wash really.

Senator FERGUSON—Uranium is not an illegal substance as far as I know.

Dr Jennings—It should be.

Dr Masters—We are talking about ethics.

Senator FERGUSON—You are saying that ethically you would like no Australian uranium to be produced but you can do absolutely nothing about the amount of uranium that is available on the world market from other countries in the short-term future because the uranium is there to be mined in those countries.

Ms Vallentine—We might not be able to do a lot about it but there is a very strong anti-nuclear movement in Canada which is trying to pressure its government to do exactly the same as we are.

Senator FERGUSON—They have not been very successful.

Ms Vallentine—No, they have not because they have a big chunk of the world market. It is the case with the former Soviet Union also and various countries in Africa. But this is increasingly becoming a global issue. The Internet now puts a little tiny group like People for Nuclear Disarmament in touch with 600 groups worldwide that are arguing the same position. We are arguing for an end to the uranium industry internationally. So it is on the nose internationally.

Senator FERGUSON—Amongst a certain number of people.

Ms Vallentine—That is right, but against an increasing number of people. Look at the huge pressure against the nuclear weapons industry. It is a matter of time before that continues into the nuclear power industry. As you know, the nuclear power industry is on the decline in many countries. In the United States they have not had an order for a new reactor since 1979 and they are trying to sell their technology off to Third World countries. That is why they are going for Indonesia. They can flog off their unwanted technology from a First World country. It is immoral whichever way you look at it. From

a First World country they flog off their inferior technology.

Senator FERGUSON—It is immoral in your opinion.

Ms Vallentine—In my opinion and in the opinion of many citizens worldwide, they are flogging off their unwanted technology to the Third World countries. It is not ethical, whichever way you look at it. To argue that it is all right for us to sell our uranium because if we do not somebody else will—

Senator FERGUSON—It was not the exact argument that I put. I just said that if we were to stop selling tomorrow, there would still be the uranium available in the short-term future to supply the world's needs, whether it came from here or anywhere else.

Dr Masters—Nobody can deny that. We are taking an ethical stand here and hoping that other people will follow our example.

Senator FERGUSON—That depends on the number of people who support your opinion. You made a very short statement about the Port Hedland Council. Mr Larson from Canning Resources gave us evidence this morning, which I do not think you were here for. The information must have only been passed on to you. In his evidence he said that in negotiations with the council—presumably he is talking about the current council—there would be no objections if uranium were to be shipped from Port Hedland by the current council.

The question I ask you is: there may be a motion on the books in 1989, but if they had been negotiating with the current council, certainly I would presume you would agree that there would be no reason to rescind an existing motion while there was no likelihood of any uranium ever going through there because of the existing or the previous government's three-mine uranium policy, which meant there would be no uranium mine in Western Australia anyway. So why would they rescind the motion?

Ms Siewert—I think they would have to consider the motion that is on their books and also go out to the community to see if the community still wants them to support that motion. The fact is that the council passed a motion in 1989 that they had not rescinded and that is in my—

Senator FERGUSON—It may not be the same council. Let us face it. There may be different people and the people that are negotiating now are the current council. I do not believe that the company could be expected to do more than talk to the existing council and see whether there are any objections.

Ms Vallentine—But I bet the existing council has not put it to their constituents recently.

Senator FERGUSON—I am not saying that.

Ms Vallentine—But they will need to, won't they?

Senator FERGUSON—But the company cannot go and talk to every existing constituent, it can only talk to the council.

Dr Jennings—We will check with the council and get back to you on that one. You are believing the company's point of view. Rachel has put a different point of view. We can easily check it.

Senator FERGUSON—She did not put a different point of view. All she said was that there was an existing resolution on the books that went through in 1989.

Ms Siewert—Yes, but that policy is still on their books and the community still believes that policies in the books—

Senator FERGUSON—It is not a policy, it is a motion.

Ms Siewert—A motion, which was passed and the community still sees that as standing.

Senator FERGUSON—I do not think it is something that we ought to be concerned about unless we get evidence contrary to what was put to us by the company. Someone else would have to give us evidence to the contrary to say the council is not in favour of this motion.

CHAIR—A motion on the books is simply a statement of the opinion of the council at that time. It is not like a council by-law or anything that has any legal effect.

Ms Siewert—It is still expressing the community concern.

CHAIR—At that time. Well, it may not be, it may be a concern of the councillors at that time. You do not know that it is a community concern.

Ms Siewert—We will certainly check that out.

Dr Cohen—I wonder if the company consulted the council or the community since Cyclone Rachel went through Port Hedland. They might have a different opinion.

Senator FERGUSON—The company cannot be consulted every day of the week and Cyclone Rachel has not been that frequent has it?

Dr Jennings—No, but it may have some implications though.

CHAIR—I thank each of you for your attendance and for the evidence that you have presented to us. If there are any further issues that arise in the course of our inquiries that we need to follow up with you, we will contact you in writing.

Committee adjourned at 3.11 p.m.